

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

BOARD OF DIRECTORS REGULAR MEETING AGENDA  
MARCH 27, 2009 (Fourth Friday of Each Month)  
\*\*SANTA CRUZ CITY COUNCIL CHAMBERS\*\*  
\*809 CENTER STREET\*  
SANTA CRUZ, CALIFORNIA  
9:00 a.m. – 12:00 p.m.

THE BOARD AGENDA PACKET CAN BE FOUND ONLINE AT [WWW.SCMTD.COM](http://WWW.SCMTD.COM) OR  
AT METRO'S ADMINISTRATIVE OFFICES LOCATED AT 370 ENCINAL STREET, SUITE  
100, SANTA CRUZ, CA

**NOTE: THE BOARD CHAIR MAY TAKE ITEMS OUT OF ORDER**

## SECTION I: OPEN SESSION - 9:00 a.m.

1. ROLL CALL
2. ORAL AND WRITTEN COMMUNICATION TO THE BOARD OF DIRECTORS
  - a. Nikki Simpson & Jerry Walters Re: Bus Stop Relocation Request
3. LABOR ORGANIZATION COMMUNICATIONS
4. ADDITIONAL DOCUMENTATION TO SUPPORT EXISTING AGENDA ITEMS

## CONSENT AGENDA

- 5-1. ACCEPT AND FILE PRELIMINARILY APPROVED CLAIMS FOR THE MONTH OF FEBRUARY 2009
- 5-2. ACCEPT AND FILE MONTHLY BUDGET STATUS REPORT FOR JANUARY 2009
- 5-3. CONSIDERATION OF TORT CLAIMS:  
DENY THE CLAIM OF JOE BLAIR, CLAIM #09-0005;  
DENY THE CLAIM OF CSAA (SUBROGATING FOR B. SCOTT, CLAIM #09-0008
- 5-4. ACCEPT AND FILE THE METRO ADVISORY COMMITTEE (MAC) AGENDA FOR MARCH 18, 2009 AND MINUTES OF JANUARY 21, 2009
- 5-5. ACCEPT AND FILE PARACRUZ OPERATIONS STATUS REPORT FOR THE MONTH OF DECEMBER 2008
- 5-6. ACCEPT AND FILE HIGHWAY 17 STATUS REPORT FOR JANUARY 2009
- 5-7. ACCEPT AND FILE JANUARY 2009 RIDERSHIP REPORT

- 5-8. ACCEPT AND FILE UNIVERSITY OF CALIFORNIA, SANTA CRUZ SERVICE UPDATE FOR THE MONTH OF JANUARY 2009
- 5-9. ACCEPT AND FILE METROBASE PROJECT STATUS REPORT
- 5-10. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT RENEWAL WITH BROWN ARMSTRONG FOR FINANCIAL AUDIT AND TAX PREPARATION SERVICES
- 5-11. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A 5-YEAR LEASE EXTENSION FOR PROPERTY LOCATED AT 2880 RESEARCH PARK DRIVE IN SOQUEL
- 5-12. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE AN AMENDMENT TO THE CONTRACT FOR THE SUPPLY AND DELIVERY OF LNG FUEL WITH CLEAN ENERGY
- 5-13. ACCEPT AND FILE MINUTES REFLECTING VOTING RESULTS FROM APPOINTEES TO THE SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION FOR THE FEBRUARY 2009 MEETING(S)
- 5-14. CONSIDERATION OF PROVIDING A LETTER SUPPORTING THE APPLICATION OF THE SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION TO THE ASSOCIATION OF MONTEREY AREA GOVERNMENTS FOR FUNDING FOR A MONTEREY BAY AREA 511 TRAVELER INFORMATION SYSTEM FEASIBILITY AND PLANNING STUDY
- 5-15. CONSIDERATION OF INFORMATION REGARDING REQUEST TO RELOCATE BUS STOP AT 41<sup>st</sup> AVENUE AND SOQUEL DRIVE
- 5-16. APPROVE REGULAR BOARD MEETING MINUTES OF FEBRUARY 13 & 27, 2009

#### **REGULAR AGENDA**

- 6. PRESENTATION OF EMPLOYEE LONGEVITY AWARDS  
Presented by: Chair Bustichi
- 7. CONSIDERATION OF APPROVAL OF RESOLUTION OF APPRECIATION FOR THE SERVICES OF IAN MCFADDEN AS TRANSIT PLANNER FOR THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
Presented by: Chair Bustichi
- 8. CONSIDERATION OF MODIFICATIONS TO METRO'S DISCOUNT FARE POLICY IMPLEMENTING NEW SECTIONS AND REVISING THE VERIFICATION OF DISABILITY STATUS FORM AND CHANGING THE FORMAT  
Presented By: Margaret Gallagher, District Counsel

9. CONSIDERATION OF APPROVAL OF RESOLUTION OF POSTHUMOUS APPRECIATION AND REMEMBRANCE FOR THE SERVICES OF DALE SKILLICORN AS A MEMBER OF THE BOARD OF DIRECTORS FOR THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
Presented by: Chair Bustichi
10. CONSIDERATION OF APPROVAL OF RESOLUTION OF POSTHUMOUS APPRECIATION AND REMEMBRANCE FOR THE SERVICES OF FRANCISCO DEVILLIRES AS ADMINISTRATIVE SECRETARY AND CUSTODIAL SERVICE WORKER FOR THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
Presented by: Chair Bustichi
11. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT WITH SJB GLOBALNET, INC. FOR A NEW VOIP TELEPHONE SYSTEM  
Presented By: Angela Aitken, Finance Manager
12. CONSIDERATION OF STATUS OF FEDERAL LEGISLATION AND REPORT REGARDING THE AMERICAN PUBLIC TRANSPORTATION ASSOCIATION 2009 LEGISLATIVE CONFERENCE  
Presented By: Dene Bustichi, Board Chair; Ellen Pirie, Board Vice Chair; and Leslie R. White, General Manager
13. RECEIVE ORAL PRESENTATION REGARDING SANTA CRUZ METRO BEING AWARDED OUTSTANDING COMMUNITY SERVICE AWARD BY SECOND HARVEST FOOD BANK FOR PARTICIPATION IN THE 2008 HOLIDAY FOOD DRIVE FILLTHE BUS EVENT  
Presented By: Director Rotkin
14. REVIEW OF ITEMS TO BE DISCUSSED IN CLOSED SESSION: District Counsel
15. ORAL AND WRITTEN COMMUNICATIONS REGARDING CLOSED SESSION

**SECTION II: CLOSED SESSION**

1. CONFERENCE WITH LABOR NEGOTIATORS  
(Pursuant to Government Code Section 54957.6)
  - a. Agency Negotiators: Robyn Slater, Human Resources Manager,  
Chief Spokesperson  
Ciro Aguirre, Operations Manager  
Angela Aitken, Finance Manager
  1. Employee Organization: Service Employees International Union  
(SEIU), Local 521

- b. Agency Negotiators      Robyn Slater, Human Resources Manager,  
Chief Spokesperson  
Ciro Aguirre, Operations Manager  
Angela Aitken, Finance Manager  
April Warnock, Paratransit Superintendent
- 1. Employee Organization      United Transportation Union (UTU), Local  
23, ParaCruz Division
- 2. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION  
(Pursuant to Government Code Section 54956.9)
  - a. Name of Case:      Claim of Macerich Partnership, L.P.

**SECTION III: RECONVENE TO OPEN SESSION**

16. REPORT OF CLOSED SESSION

**ADJOURN**

**NOTICE TO PUBLIC**

Members of the public may address the Board of Directors on a topic not on the agenda but within the jurisdiction of the Board of Directors or on the consent agenda by approaching the Board during consideration of Agenda Item #2 “Oral and Written Communications”, under Section I. Presentations will be limited in time in accordance with District Resolution 69-2-1.

When addressing the Board, the individual may, but is not required to, provide his/her name and address in an audible tone for the record.

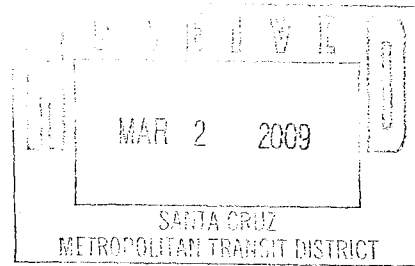
Members of the public may address the Board of Directors on a topic on the agenda by approaching the Board immediately after presentation of the staff report but before the Board of Directors’ deliberation on the topic to be addressed. Presentations will be limited in time in accordance with District Resolution 69-2-1.

The Santa Cruz Metropolitan Transit District does not discriminate on the basis of disability. The City Council Chambers is located in an accessible facility. Any person who requires an accommodation or an auxiliary aid or service to participate in the meeting, please contact Cindi Thomas at 831-426-6080 as soon as possible in advance of the Board of Directors meeting. Hearing impaired individuals should call 711 for assistance in contacting METRO regarding special requirements to participate in the Board meeting. A Spanish Language Interpreter will be available during "Oral Communications" and for any other agenda item for which these services are needed. This meeting will be broadcast live by Community Television of Santa Cruz on Channel 26.

# Attachment A

February 20, 2009

Board of Directors  
c/o Administrative Services Coordinator  
Santa Cruz Metropolitan Transit District  
370 Encinal, Suite 100  
Santa Cruz, CA 95060



Re: Request to Relocate Bus Stop at 41<sup>st</sup> Avenue and Soquel Drive

To Members of the Board:

We are writing on behalf of the residents of Greenbrae Lane to express our long-standing concerns about the safety hazards posed by the bus stop at 41<sup>st</sup> and Soquel Drive. The bus stops several yards from the entrance/exit to Greenbrae Lane which carries traffic from multiple households and six businesses, including a towing service and building contractor. A driver wishing to enter Greenbrae Lane from 41<sup>st</sup> Avenue must make a left turn on Soquel Drive followed by an immediate right turn. This must be done very quickly because of the volume and speed of traffic "pushing" from behind. If a bus is at the stop, the choice is to stop nearly in the center of this extremely busy intersection and wait for the bus to leave (with traffic building up behind or pulling around to pass in a dangerous fashion), or to quickly turn right in front of the bus and hope it won't pull out as you are turning. This dangerous situation is further complicated by passengers running to catch the bus or exiting the bus, and bicyclists in the bike lane on Soquel Drive that runs in front of Greenbrae Lane. The bus stop also lacks a pull-out, which increases the dangers for the bus driver, motorists and pedestrians. There have been numerous fender-benders at this location, and we fear it is only a matter of time before a fatal or crippling accident occurs.

In 2006 when we approached the Board of Supervisors with these concerns, they and planning staff agreed with us and attempted to relocate the bus stop before more development occurred. However, efforts made by Honda to buy the land to move the bus stop failed, and the county deemed that use of eminent domain would not be appropriate in this situation.

Since this plan for relocating the bus stop failed, we propose that the bus stop be removed temporarily until it can be relocated to a safer location, or removed permanently if nearby bus stops provide adequate coverage for this area. We feel strongly that action should be taken now, since the hazards at this site will only worsen in the coming months. First, traffic will increase with the opening of the new Honda dealership and Store More. Second, Bei-Scott is moving forward with plans to develop its parcel at 41<sup>st</sup> Avenue and Soquel Drive. This parcel is located directly behind the bus stop; it may even include the land the bus stop is on. Revised drawings for the Bei-Scott development will be submitted within a month, and once construction begins the congestion at this location will increase dramatically as heavy equipment and trucks move in and out of the site.

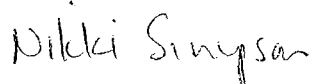
2-a.1

We asked the County Board of Supervisors at its meeting of February 10, 2009, to consider our proposal to remove the bus stop. Although the Board agreed to look into this matter further and to consult with Metro, it was suggested that we submit our concerns and proposal directly to the Metro Board as well.

We understand that there may be future area-wide Redevelopment Agency and Public Works projects that could include relocation of this bus stop, but we feel that more immediate action should be taken to address this dangerous situation. We strongly urge removal of the bus stop while future plans are considered.

The residents of Greenbrae Lane thank you for considering our concerns, and for your prompt attention to this matter.

Sincerely,



Nikki Simpson



Jerry Walters

cc: John Leopold, Supervisor District 1  
Steve Kennedy, Analyst for Supervisor Leopold

2-a.2

SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
 CHECK JOURNAL DETAIL BY CHECK NUMBER  
 ALL CHECKS FOR ACCOUNTS PAYABLE

DATE: 02/01/09 THRU 02/28/09

CHECK NUMBER	CHECK DATE	CHECK AMOUNT	VENDOR	VENDOR NAME	VENDOR TYPE	TRANS. NUMBER	TRANSACTION DESCRIPTION	TRANSACTION AMOUNT	COMMENT
31810	02/13/09	-315.33	017	SUN MICROSYSTEMS, INC.		25150	SOFT/HARDWARE/IT	-315.33	**VOID
31830	02/06/09	75.00	001062	ALLTERRA ENVIRONMENTAL INC.		24994	JAN INSPECTIONS	75.00	
31831	02/06/09	204.59	002861	AMERICAN MESSAGING SVCS, LLC		25327	FEB PAGERS	204.59	
31832	02/06/09	18,260.48	941	ASSURANT EMPLOYEE BENEFITS		25300	FEB LTD INS	18,260.48	
31833	02/06/09	4,319.64	001B	AT&T/MCI		25312	DEC PHONES	4,319.64	
31834	02/06/09	1,795.75	R543	BOYAJIAN, JULIANNE		25319	SETTLEMENT/RISK	1,795.75	
31835	02/06/09	20.00	014	CABRILLO COLLEGE		25321	DEC FINGERPRINTING	20.00	
31836	02/06/09	1,146.95	002627	CDW GOVERNMENT, INC.		25151	OFFICE SUPPLY/IT	726.40	
						25152	OFFICE SUPPLY/IT	420.55	
31837	02/06/09	189.00	990	CIDDIO-MORRIS ASSOCIATES		25157	JOB ANALYSIS/PT	189.00	
31838	02/06/09	10,532.77	001124	CLEAN ENERGY		25212	JAN LNG/FLT	10,532.77	
31839	02/06/09	571.84	002063	COSTCO		24946	PHOTO PROCESS/OPS	3.52	
						24947	PHOTO PROCESS/OPS	2.53	
						24948	PHOTO PROCESS/OPS	5.10	
						24949	PHOTO PROCESS/OPS	3.18	
						25162	PHOTO PROCESS/OPS	1.29	
						25163	PHOTO PROCESS/OPS	2.15	
						25164	PHOTO PROCESS/OPS	3.18	
						25165	PHOTO PROCESS/OPS	8.57	
						25166	PHOTO PROCESS/OPS	7.91	
						25167	PHOTO PROCESS/OPS	6.58	
						25187	BLINDS/1217 RIVER ST	527.83	
31840	02/06/09	2.01	418	COUNTY OF SANTA CRUZ		24980	JAN CNG/FLT	2.01	
31841	02/06/09	155.91	001000	DAIMLER BUSES N. AMERICA INC.		25132	REV VEH PARTS	155.91	
31842	02/06/09	364.71	157	DELL MARKETING L.P.		25336	OFFICE SUPPLY/IT	212.39	
						25337	OFFICE SUPPLY/IT	152.32	
31843	02/06/09	36,545.03	800	DELTA DENTAL PLAN		25298	FEB DENTAL	36,545.03	
31844	02/06/09	32.00	002567	DEPARTMENT OF JUSTICE		25322	DEC FINGERPRINTING	32.00	
31845	02/06/09	1,157.50	001492	EVERGREEN OIL INC.		25351	HAZ WASTE DISP	1,157.50	
31846	02/06/09	742.50	432	EXPRESS EMPLOYMENT PROS		25311	TEMP/FAC W/E 1/18/09	742.50	
31847	02/06/09	721.94	002865	FLINT TRADING INC.		25236	REPAIRS/MAINTENANCE	721.94	
31848	02/06/09	1.50	T175	GOTTESMAN, DONALD		25318	FAREBOX REFUND	1.50	
31849	02/06/09	602.50	282	GRAINGER		25317	SHELVING UNIT/MB	602.50	
31850	02/06/09	963.99	M016	HICKLIN, DONALD KENT	0	25358	MED PYMT SUPP	963.99	
31851	02/06/09	224.45	215	IKON OFFICE SOLUTIONS		25354	12/19-1/18 MAINT/ADM	224.45	
31852	02/06/09	33.64	1117	KELLEY'S SERVICE INC.		25128	REV VEH PARTS	33.64	
31853	02/06/09	960.00	878	KELLY SERVICES, INC.		25329	TEMP/OPS W/E 1/18	960.00	
31854	02/06/09	14.97	074	KENVILLE LOCKSMITHS	7	25068	REPAIRS/MAINTENANCE	14.97	
31855	02/06/09	228.08	001233	KIMBALL MIDWEST		25066	PARTS & SUPPLIES	25.61	
						25135	PARTS & SUPPLIES	125.43	
						25302	CREDIT MEMO	-279.93	
						25303	PARTS & SUPPLIES	356.97	
31856	02/06/09	255.00	852	LAW OFFICES OF MARIE F. SANG	7	25077	WORKERS COMP CLAIM	255.00	
31857	02/06/09	1,000.00	001235	LOCATELLI MOVING & STORAGE INC		25353	110 VERNON MOVE	1,000.00	
31858	02/06/09	40.00	E410	LONA, SERGIO GONZALEZ		25348	DMV FEES	40.00	
31859	02/06/09	2,695.00	001217	M3 ENVIRONMENTAL CONSULTING		25316	INSPECT/1200 RIVER	2,695.00	
31860	02/06/09	834.60	001145	MANAGED HEALTH NETWORK		25301	FEB EAP PREMIUM	834.60	
31861	02/06/09	2,161.41	764	MERCURY METALS		25177	OUT RPR REV VEH	650.00	
						25178	OUT RPR REV VEH	430.48	
						25179	OUT RPR REV VEH	650.00	

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SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
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DATE: 02/01/09 THRU 02/28/09

CHECK NUMBER	CHECK DATE	CHECK AMOUNT	VENDOR	VENDOR NAME	VENDOR TRANS. TYPE	TRANS. NUMBER	TRANSACTION DESCRIPTION	TRANSACTION AMOUNT	COMMENT
31862	02/06/09	534.13	041	MISSION UNIFORM		25180	OUT RPR REV VEH	430.93	
						24986	UNIF/LAUNDRY/FLT	50.60	
						24987	UNIF/LAUNDRY/FLT	132.11	
						24988	UNIF/LAUNDRY/FLT	43.26	
						24989	UNIF/LAUNDRY/FLT	214.51	
						25074	UNIF/LAUNDRY/FAC	58.23	
						25170	UNIF/LAUNDRY/PT	35.42	
31863	02/06/09	49.80	001711	MOHAWK MFG. & SUPPLY CO.		25134	REV VEH PARTS	49.80	
31864	02/06/09	292.22	001627	NEW PIG CORPORATION		25133	SAFETY SUPPLIES	292.22	
31865	02/06/09	15,262.17	001176	NORTHSTAR, INC.		25126	DEC MAINT/RPRS	14,842.00	
						25310	SVC/REBUILT FIRE EYE	420.17	
31866	02/06/09	38.00	E088	O'DONNELL, SHAWN		25320	LOCAL MTG EXP	38.00	
31867	02/06/09	6,442.98	009	PACIFIC GAS & ELECTRIC		25338	12/25-1/26	261.64	
						25339	12/25-1/26 DUBOIS	15.66	
						25340	12/25-1/26 DUBOIS	18.41	
						25341	12/25-1/26 DUBOIS	194.51	
						25342	12/25-1/26 ENCINAL	3,164.15	
						25343	12/25-1/26 RIVER	1,683.38	
						25345	12/25-1/26 VERNON	1,105.23	
31868	02/06/09	241.09	872	PACIFIC MATERIAL HANDLING SOL.		25205	PARTS & SUPPLIES	241.09	
31869	02/06/09	3.24	043	PALACE ART & OFFICE SUPPLY		24990	OFFICE SUPPLY/FLT	3.24	
31870	02/06/09	75.00	T178	PAVACICH, GENA		25347	REFUND 3 PASSES	75.00	
31871	02/06/09	62.86	107A	PROBUILD		24979	PARTS & SUPPLIES	19.80	
						25072	REPAIRS/MAINTENANCE	13.78	
						25073	REPAIRS/MAINTENANCE	29.28	
31872	02/06/09	210.00	592	R & S ERECTION OF		25350	MB REPAIR/MAINT	210.00	
31873	02/06/09	118.54	135	SANTA CRUZ AUTO PARTS, INC.		25171	REV VEH PARTS	118.54	
31874	02/06/09	472.44	079	SANTA CRUZ MUNICIPAL UTILITIES		25344	11/22-1/23 RESEARCH	227.22	
						25359	12/16-01/16 RIVER/MB	245.22	
31875	02/06/09	805.14	149	SANTA CRUZ SENTINEL	0	25356	CLASSIFIED ADS	593.52	
						25357	CLASSIFIED ADS	211.62	
31876	02/06/09	193.75	002447	SETON IDENTIFICATION PRODUCTS		25313	ANODIZED TAGS	26.29	
						25314	ENGRAVED TAGS	44.59	
						25315	POLYURETHANE TAGS	122.87	
31877	02/06/09	535.91	001232	SPECIALIZED AUTO AND		25062	OUT RPR REV VEH	192.74	
						25173	OUT RPR REV VEH	182.09	
						25174	OUT RPR REV VEH	161.08	
31878	02/06/09	1,932.25	002607	STAVELEY SERVICES FLUIDS		25125	OUT RPR REV VEH	1,932.25	
31879	02/06/09	150.00	989	STUCKER, NANCY K.	7	25324	JAN BILINGUAL TESTS	150.00	
31880	02/06/09	1,816.00	001857	SWRCB FEES		25308	STORM WATER/GOLF CLB	908.00	
						25309	STORM WATER/RIVER	908.00	
31881	02/06/09	95.18	E526	WARNOCK, APRIL		25299	HOLIDAY PARTY 08	95.18	
31882	02/06/09	942.19	001223	WATSONVILLE CADILLAC, BUICK,		25056	REV VEH PARTS	942.19	
31883	02/06/09	72.75	002028	WESTCOAST LEGAL SERVICE	7	25239	PROF SVCS/RISK	72.75	
31884	02/13/09	281.96	763	ALEXANDER ELECTRIC		25433	SVC/CAFE LENA	281.96	
31885	02/13/09	177.75	192	ALWAYS UNDER PRESSURE		25455	OUT RPR EQUIP	177.75	
31886	02/13/09	249.63	001856	BAY COMMUNICATIONS	7	25402	JAN SVC/MTC	66.75	
						25403	JAN SVC/GOLF CLUB	116.13	
						25415	SVC/ENCINAL	66.75	
31887	02/13/09	774.00	011	BEWLEYS CLEANING	7	25404	JAN SVC/RESEARCH PRK	774.00	

5-1.2



SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
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 ALL CHECKS FOR ACCOUNTS PAYABLE

DATE: 02/01/09 THRU 02/28/09

CHECK NUMBER	CHECK DATE	CHECK AMOUNT	VENDOR	VENDOR NAME	VENDOR TRANS. TYPE	TRANS. NUMBER	TRANSACTION DESCRIPTION	TRANSACTION AMOUNT	COMMENT
31888	02/13/09	51.75	001047	BOBBY'S PIT STOP		25204	SMOG # 209	51.75	
31889	02/13/09	174.86	002898	CEB		25355	CA GOV 4TH UPDATE	174.86	
31890	02/13/09	1,188.00	172	CENTRAL WELDER'S SUPPLY, INC.		25462	EQUIP RENTAL/FLT	1,188.00	
31891	02/13/09	16.65	001346	CITY OF SANTA CRUZ		25474	JAN LANDFILL	16.65	
31892	02/13/09	4,105.48	909	CLASSIC GRAPHICS		25119	OUT RPR # 9828	3,539.38	
						25217	OUT RPR # 121	566.10	
31893	02/13/09	30,496.65	001124	CLEAN ENERGY		25461	JAN LNG/FLT	30,496.65	
31894	02/13/09	41,676.35	002569	COMERICA BANK		25323	WORK COMP FUND	41,676.35	
31895	02/13/09	13,266.04	163	COMMUNITY PRINTERS, INC.		25364	PRINTING/MTC	11,744.04	
						25393	PRINTING/PT	1,522.00	
31896	02/13/09	38.86	002063	COSTCO		25191	LOCAL MTG EXP	17.24	
						25192	LOCAL MTG EXP	6.59	
						25440	PHOTO PROCESS/OPS	4.15	
						25441	PHOTO PROCESS/OPS	3.96	
						25442	PHOTO PROCESS/OPS	6.92	
31897	02/13/09	1,495.06	001048	CRUZ CAR WASH		25453	OUT RPR REV VEH	1,495.06	
31898	02/13/09	7,745.96	504	CUMMINS WEST, INC.		25118	OUT RPR # 2204	4,921.28	
						25232	PARTS & SUPPLIES/FLT	2,824.68	
31899	02/13/09	4,402.30	001316	DEVCO OIL		25432	JAN FUEL/FLT	4,402.30	
31900	02/13/09	1,247.75	480	DIESEL MARINE ELECTRIC, INC.		25459	REV VEH PARTS	1,247.75	
31901	02/13/09	969.87	085	DIXON & SON TIRE, INC.		25448	TIRES & TUBES/PT	109.38	
						25485	TIRES & TUBES	860.49	
31902	02/13/09	45.00	002388	DOGHERRA'S	7	25449	OUT RPR REV VEH	45.00	
31903	02/13/09	4,462.23	001492	EVERGREEN OIL INC.		25397	HAZ WASTE DISP	2,749.95	
						25398	HAZ WASTE DISP	758.36	
						25469	HAZ WASTE DISP	335.00	
						25470	HAZ WASTE DISP	618.92	
31904	02/13/09	121.99	001172	FERGUSON ENTERPRISES INC.		25399	TOOLS/REPAIRS/FAC	121.99	
31905	02/13/09	625.64	117	GILLIG LLC		25306	REV VEH PARTS	625.64	
31906	02/13/09	139.59	282	GRAINGER		25437	REPAIRS/MAINTENANCE	139.59	
31907	02/13/09	5,950.00	341	GRANITE CONSTRUCTION CO.		25436	OUT RPR- BLDGS & IMP	5,950.00	
31908	02/13/09	475.24	001097	GREENWASTE RECOVERY, INC.		25465	JAN GARB/KINS VLG	176.77	
						25466	JAN GARB/RESEARCH	210.52	
						25467	JAN GARB/GREEN VLY	17.50	
						25468	JAN GARB/MT HERMON	70.45	
31909	02/13/09	89.87	510A	HASLER, INC.		25450	MAR EQUIP RENTAL/PT	41.04	
						25478	3/1-3/31 RENTAL/ADM	48.83	
31910	02/13/09	30,000.00	002116	HINSHAW, EDWARD & BARBARA	7	25482	370 ENCINAL RENT	30,000.00	
31911	02/13/09	15,308.20	002117	IULIANO	7	25480	115 DUBOIS RENT	3,271.61	
						25481	111 DUBOIS RENT	12,036.59	
31912	02/13/09	2,820.54	110	JESSICA GROCERY STORE, INC.		25479	CUSTODIAL SERVICES	2,820.54	
31913	02/13/09	39.60	1117	KELLEY'S SERVICE INC.		25129	REV VEH PARTS	9.05	
						25421	REV VEH PARTS	12.22	
						25422	REV VEH PARTS	18.33	
31914	02/13/09	720.00	878	KELLY SERVICES, INC.		25439	TEMP/OPS W/E 1/25	720.00	
31915	02/13/09	29.94	074	KENVILLE LOCKSMITHS	7	25120	REV VEH PARTS	19.96	
						25435	REPAIRS/MAINTENANCE	9.98	
31916	02/13/09	23.20	001233	KIMBALL MIDWEST		25304	PARTS & SUPPLIES	4.10	
						25305	PARTS & SUPPLIES	19.10	
31917	02/13/09	171.50	001093	KROLL LABORATORY SPECIALISTS		25349	JAN DRUG TESTS	171.50	

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SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
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DATE: 02/01/09 THRU 02/28/09

CHECK NUMBER	CHECK DATE	CHECK AMOUNT	VENDOR	VENDOR NAME	VENDOR TYPE	TRANS. NUMBER	TRANSACTION DESCRIPTION	TRANSACTION AMOUNT	COMMENT
31918	02/13/09	165.00	852	LAW OFFICES OF MARIE F. SANG	7	25396	WORKERS COMP CLAIM	165.00	
31919	02/13/09	30.00	880	LEXISNEXIS		25346	PROF/TECH SVC/RISK	30.00	
31920	02/13/09	687.00	533	LINDSKOG, P.E., ROBERT	7	25360	PROF/TECH SVC/RISK	687.00	
31921	02/13/09	1,407.05	001119	MACERICH PARTNERSHIP LP	7	25484	CAPITOLA MALL RENT	1,407.05	
31922	02/13/09	1,028.25	041	MISSION UNIFORM		25200	UNIF/LAUNDRY/FLT	132.11	
						25201	UNIF/LAUNDRY/FLT	50.60	
						25202	UNIF/LAUNDRY/FLT	43.26	
						25203	UNIF/LAUNDRY/FLT	226.40	
						25211	UNIF/LAUNDRY/FAC	56.52	
						25326	UNIF/LAUNDRY/FAC	58.23	
						25365	UNIF/LAUNDRY/PT	35.42	
						25428	UNIF/LAUNDRY/FLT	43.26	
						25429	UNIF/LAUNDRY/FLT	199.74	
						25430	UNIF/LAUNDRY/FLT	132.11	
						25431	UNIF/LAUNDRY/FLT	50.60	
31923	02/13/09	15,141.82	001225	NATIONAL SECURITY SERVICE		25330	JAN SECURITY	6,045.80	
						25331	JAN SECURITY	2,960.00	
						25332	JAN SECURITY	1,850.00	
						25333	JAN SECURITY	1,332.00	
						25334	JAN SECURITY	2,080.74	
						25335	JAN SECURITY	873.28	
31924	02/13/09	501.12	887	NEOPOST, INC		25366	POSTAGE/PT	302.40	
						25367	OFFICE SUPPLIES/PT	198.72	
31925	02/13/09	13,380.01	001063	NEW FLYER INDUSTRIES LIMITED		25361	7 TRILOGY BIKE RACKS	11,658.64	
						25362	7 PIVOT PLTS	1,721.37	
31926	02/13/09	2,054.01	002721	NEXTEL COMMUNICATIONS		25438	PHONES/OPS	2,054.01	
31927	02/13/09	27.47	004	NORTH BAY FORD LINC-MERCURY		25409	CREDIT NOTE	-17.17	
						25410	REV VEH PARTS	120.61	
						25411	CREDIT MEMO	-75.97	
31928	02/13/09	88.34	E088	O'DONNELL, SHAWN		25473	EMPLOYMENT EXAMS	88.34	
31929	02/13/09	9,292.42	009	PACIFIC GAS & ELECTRIC		25456	12/25-1/26 DUBOIS	7,358.39	
						25464	12/30-1/29 PACIFIC	1,934.03	
31930	02/13/09	961.16	043	PALACE ART & OFFICE SUPPLY		25063	OFFICE SUPPLIES/FLT	19.27	
						25136	OFFICE SUPPLIES	118.27	
						25195	OFFICE SUPPLY/ADM	49.58	
						25196	LOCAL MTG EXP	123.42	
						25296	OFFICE SUPPLIES/FIN	45.54	
						25328	OFFICE SUPPLY/OPS	140.95	
						25412	OFFICE SUPPLY/ADM	455.57	
						25434	OFFICE SUPPLY/FLT	8.56	
31931	02/13/09	887.00	950	PARADISE LANDSCAPE INC	0	25401	FEB MAINTENANCE	887.00	
31932	02/13/09	84.63	882	PRINT SHOP SANTA CRUZ	7	25363	PRINTING/MTC	84.63	
31933	02/13/09	128.53	107A	PROBUILD		25325	REPAIRS/MAINTENANCE	13.33	
						25400	REPAIRS/MAINTENANCE	96.12	
						25426	REV VEH PARTS	3.88	
						25427	SAFETY SUPPLY	15.20	
31934	02/13/09	93.74	E623	REED, KATHLEEN		25414	RPT SC 01-09-14	93.74	
31935	02/13/09	99.01	002094	RICON CORPORATION		25458	REV VEH PARTS	99.01	
31936	02/13/09	12,376.96	966	S.C. FUELS	0	25231	JAN DIESEL/FLT	12,376.96	
31937	02/13/09	1,112.71	001379	SAFETY-KLEEN		25418	HAZ WASTE DISP	1,112.71	

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SANTAL VALLEY FOR  
 SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
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DATE: 02/01/09 THRU 02/28/09

CHECK NUMBER	CHECK DATE	CHECK AMOUNT	VENDOR	VENDOR NAME	VENDOR TYPE	TRANS. NUMBER	TRANSACTION DESCRIPTION	TRANSACTION AMOUNT	COMMENT
31938	02/13/09	1,986.59	018	SALINAS VALLEY FORD SALES		25124	REV VEH PARTS	1,986.59	
31939	02/13/09	3,642.91	002713	SANTA CRUZ AUTO TECH, INC.		25379	OUT RPR REV VEH	71.25	
						25380	OUT RPR REV VEH	59.20	
						25381	OUT RPR REV VEH	59.20	
						25382	OUT RPR REV VEH	59.20	
						25383	OUT RPR REV VEH	49.71	
						25384	OUT RPR REV VEH	49.71	
						25385	OUT RPR REV VEH	49.71	
						25386	OUT RPR REV VEH	49.71	
						25387	OUT RPR REV VEH	49.71	
						25388	OUT RPR REV VEH	49.71	
						25389	OUT RPR REV VEH	49.71	
						25390	OUT RPR REV VEH	49.71	
						25391	OUT RPR REV VEH	49.71	
						25392	OUT RPR REV VEH	2,946.67	
31940	02/13/09	823.65	135	SANTA CRUZ AUTO PARTS, INC.		25121	PARTS & SUPPLIES	17.09	
						25122	REV VEH PARTS	124.78	
						25198	CLEANING SUPPLIES	38.99	
						25199	PARTS & SUPPLIES	19.01	
						25368	REV VEH PARTS	94.19	
						25369	REV VEH PARTS	110.06	
						25371	REV VEH PARTS	231.50	
						25372	REV VEH PARTS	108.19	
						25424	REV VEH PARTS	40.85	
						25425	CLEANING SUPPLIES	38.99	
31941	02/13/09	2.81	848	SANTA CRUZ ELECTRONICS, INC.		25307	REV VEH PARTS	2.81	
31942	02/13/09	2,033.51	079	SANTA CRUZ MUNICIPAL UTILITIES		25405	JAN SEWER/WTC	67.40	VOIDED
						25406	JAN WATER WTC	465.60	
						25407	JAN GARBAGE/WTC	1,443.56	
						25408	JAN WATER/WTC	56.95	
31942	02/13/09	-2,033.51	079	SANTA CRUZ MUNICIPAL UTILITIES		25405	JAN SEWER/WTC	-67.40	**VOID
						25406	JAN WATER WTC	-465.60	
						25407	JAN GARBAGE/WTC	-1,443.56	
						25408	JAN WATER/WTC	-56.95	
31943	02/13/09	3,563.30	977	SANTA CRUZ TRANSPORTATION, LLC	7	25446	JAN PT SVCS	3,563.30	
31944	02/13/09	263.97	965	SAYLER LEGAL SERVICE, INC.		25153	PROF/TECH SVCS/RISK	97.79	
						25154	PROF/TECH SVCS/RISK	69.76	
						25155	PROF/TECH SVCS/RISK	32.14	
						25156	PROF/TECH SVCS/RISK	32.14	
						25297	PROF SVCS/RISK	32.14	
31945	02/13/09	366.00	957	SECURITY SHORING & STEEL PLT		25233	PLATE RENTAL/FAC	366.00	
31946	02/13/09	2,500.00	002267	SHAW & YODER, INC.		25352	JAN LEGISLATIVE SVC	2,500.00	
31947	02/13/09	100.00	B016	SKILLICORN, DALE	7	25472	FEB BOARD MTGS	100.00	
31948	02/13/09	176.36	E239	SLATER, ROBYN		25475	RECRUITMENT	176.36	
31949	02/13/09	12,116.23	001075	SOQUEL III ASSOCIATES	7	25483	RESEARCH PARK RENT	12,116.23	
31950	02/13/09	2,171.16	001232	SPECIALIZED AUTO AND		25172	OUT RPR REV VEH	59.35	
						25175	OUT RPR REV VEH	380.53	
						25176	OUT RPR REV VEH	235.13	
						25181	OUT RPR REV VEH	50.87	
						25373	OUT RPR REV VEH	256.73	

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SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
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						25374	OUT RPR REV VEH	404.69	
						25375	OUT RPR REV VEH	182.91	
						25376	OUT RPR REV VEH	192.74	
						25377	OUT RPR REV VEH	225.30	
						25378	OUT RPR REV VEH	182.91	
31951	02/13/09	8,135.11	001648	STEVE'S UNION SERVICE		25452	FUELS & LUBE/PT	8,135.11	
31952	02/13/09	2,707.41	002805	TELEPATH CORPORATION		25423	FEB OUT RPR-EQUIP	2,707.41	
31953	02/13/09	1,385.39	001800	THERMO KING OF SALINAS, INC		25457	REV VEH PARTS	1,385.39	
31954	02/13/09	83.32	007	UNITED PARCEL SERVICE		25420	FRT OUT/FLT	83.32	
31955	02/13/09	484.05	221	VEHICLE MAINTENANCE PROGRAM		25394	CREDIT NOTE	-142.13	
						25395	REV VEH PARTS	157.92	
						25460	REV VEH PARTS	468.26	
31956	02/13/09	3,481.64	001083	WATSONVILLE TRANSPORTATION, INC		25447	JAN PT SVCS	3,481.64	
31957	02/13/09	160.69	001223	WATSONVILLE CADILLAC, BUICK,		25370	REV VEH PARTS	160.69	
31958	02/13/09	70.00	682	WEISS, AMY L.	7	25185	JAN INTERPRETER	70.00	
31959	02/13/09	51.55	436	WEST PAYMENT CENTER		25240	CA 09 CIVIL PRACTICE	51.55	
31960	02/13/09	222.43	042	WFCB-OSH COMMERCIAL SERVICES		25416	REPAIRS/MAINTENANCE	167.56	
						25451	SAFETY SUPPLIES/PT	54.87	
31961	02/13/09	221.72	147	ZEE MEDICAL SERVICE CO.		25454	SAFETY SUPPLIES	48.12	
						25463	SAFETY SUPPLIES	103.35	
						25471	SAFETY SUPPLIES	70.25	
31963	02/13/09	2,033.51	130	CITY OF WATSONVILLE UTILITIES		25487	JAN SEWER/WTC	67.40	
						25488	JAN WATER/WTC	465.60	
						25489	JAN GARB/WTC	1,443.56	
						25490	JAN WATER/WTC	56.95	
31964	02/13/09	315.33	001234	SSI		25491	SOFT/HARDWARE/IT	315.33	
31966M02/11/09		184.07	T179	SUB LABAN, WALID & WINONA		25493	REFUND UTILITIES	184.07	MANUAL
				REFUND UTILITIES					
31967M02/23/09		346.00	001857	SWRCB FEES		25528	NOT OF INTENT/STM WA	346.00	MANUAL
				NOT OF INTENT/STM WA					
32061M02/19/09		56.06	M033	BAILEY, NEIL	0	25765	MED PYMT SUPP	56.06	MANUAL
				MED PYMT SUPP					
32062M02/19/09		28.03	M036	CERVANTES, GLORIA	0	25766	MED PYMT SUPP	28.03	MANUAL
				MED PYMT SUPP					
32063M02/19/09		28.03	M039	DAVILA, ANA MARIA	0	25767	MED PYMT SUPP	28.03	MANUAL
				MED PYMT SUPP					
32064M02/19/09		28.03	M040	GARBEZ, LINDA	0	25768	MED PYMT SUPP	28.03	MANUAL
				MED PYMT SUPP					
32065M02/19/09		56.06	M100	GARCIA, SANTIAGO	0	25769	MED PYMT SUPP	56.06	MANUAL
				MED PYMT SUPP					
32066M02/19/09		56.06	M041	GOUVEIA, ROBERT	0	25770	MED PYMT SUPP	56.06	MANUAL
				MED PYMT SUPP					
32067M02/19/09		72.94	M081	HALL, JAMES	0	25771	MED PYMT SUPP	72.94	MANUAL
				MED PYMT SUPP					
32068M02/19/09		28.03	M050	O'MARA, KATHLEEN	0	25772	MED PYMT SUPP	28.03	MANUAL
				MED PYMT SUPP					
32069M02/19/09		28.03	M109	PEREZ, CHERYL		25773	MED PYMT SUPP	28.03	MANUAL
				MED PYMT SUPP					
32070M02/19/09		56.06	M085	ROSSI, DENISE	0	25774	MED PYMT SUPP	56.06	MANUAL
				MED PYMT SUPP					

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SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
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DATE: 02/01/09 THRU 02/28/09

CHECK NUMBER	CHECK DATE	CHECK AMOUNT	VENDOR	VENDOR NAME	VENDOR TYPE	TRANS. NUMBER	TRANSACTION DESCRIPTION	TRANSACTION AMOUNT	COMMENT
32071M02/19/09		28.03	M030	ROWE, RUBY		25775	MED PYMT SUPP	28.03	MANUAL
32072M02/19/09		56.06	M054	SLOAN, FRANCIS	0	25776	MED PYMT SUPP	56.06	MANUAL
32073M02/19/09		28.03	M086	TOLINE, DONALD	0	25777	MED PYMT SUPP	28.03	MANUAL
32074M02/19/09		28.03	M088	YAGI, RANDY	0	25778	MED PYMT SUPP	28.03	MANUAL
32075M02/19/09		218.96	M005	ROSS, EMERY	0	25779	MED PYMT SUPP	218.96	MANUAL
32076M02/19/09		56.06	M022	CAPELLA, KATHLEEN	0	25780	MED PYMT SUPP	56.06	MANUAL
32077M02/19/09		246.99	M061	KAMEDA, TERRY	0	25781	MED PYMT SUPP	246.99	MANUAL
32078M02/19/09		217.29	M057	PARHAM, WALLACE	0	25782	MED PYMT SUPP	217.29	MANUAL
32079M02/19/09		180.17	M064	PETERS, TERRIE	0	25783	MED PYMT SUPP	180.17	MANUAL
32080M02/19/09		28.03	M070	PICARELLA, FRANCIS	0	25784	MED PYMT SUPP	28.03	MANUAL
32081M02/19/09		217.29	M058	POTEETE, BEVERLY	0	25785	MED PYMT SUPP	217.29	MANUAL
32082M02/19/09		156.17	M010	SHORT, SLOAN	0	25786	MED PYMT SUPP	156.17	MANUAL
32083M02/19/09		28.03	M073	CENTER, DOUG	0	25787	MED PYMT SUPP	28.03	MANUAL
32084M02/19/09		28.03	M092	CRAWFORD, TERRI	0	25788	MED PYMT SUPP	28.03	MANUAL
32085M02/19/09		28.03	M096	DRAKE, JUDITH	0	25789	MED PYMT SUPP	28.03	MANUAL
32086M02/19/09		28.03	M099	FIKE, LOUIS	0	25790	MED PYMT SUPP	28.03	MANUAL
32087M02/19/09		67.46	M074	GABRIELE, BERNARD	0	25791	MED PYMT SUPP	67.46	MANUAL
32088M02/19/09		28.03	M101	GOES, ALAN	0	25792	MED PYMT SUPP	28.03	MANUAL
32089M02/19/09		28.03	M104	JUSSEL, PETE	0	25793	MED PYMT SUPP	28.03	MANUAL
32090M02/19/09		28.03	M117	POLANCO, ANDRES		25794	MED PYMT SUPP	28.03	MANUAL
32091M02/19/09		28.03	M112	SILVA, EDUARDO	0	25795	MED PYMT SUPP	28.03	MANUAL
32092M02/19/09		217.29	M076	VONWAL, YVETTE	0	25796	MED PYMT SUPP	217.29	MANUAL
TOTAL		395,813.39		ACCOUNTS PAYABLE			TOTAL CHECKS	170	395,813.39

5-1.7

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009

**TO:** Board of Directors

**FROM:** Angela Aitken, Finance Manager



**SUBJECT: MONTHLY BUDGET STATUS REPORTS FOR JANUARY 2009.**

## I. RECOMMENDED ACTION

**That the Board of Directors accept and file the budget status reports for the month of January 2009.**

## II. SUMMARY OF ISSUES

- **Operating Revenues** for the month of January 2009 were \$103K or 5 % under the amount of revenue expected for January 2009.
- **Consolidated Operating Expenses** for the month of January 2009 were \$21K or 1 % under budget.
- **Capital Budget** spending year to date through January 2009 was \$11,250K or 37 % of the Capital budget.

## III. DISCUSSION

An analysis of the District's budget status is prepared monthly in order to apprise the Board of Directors of the District's actual revenues, expenses and capital in relation to the adopted operating and capital budgets for the fiscal year. The attached monthly revenue, expense and capital reports represent the status of the District's FY09 operating and capital budgets versus actual expenditures for the month.

The adopted December 19, 2008 revised FY09 & FY10 Budget numbers are reflected in January's report.

The fiscal year has elapsed **58%**.

5-2.1

**A. Operating Revenue**

For the month of January 2009 revenue was \$103K or 5 % under the amount of revenue expected for the month. Revenue variances are explained in the notes at the end of the revenue report.

**B. Operating Expense by Department**

Total Operating Expenses by Department for the month of January 2009 were \$21K or 1 % under budget; 3 % over where we were in FY08. Majority of the variance is due to lower than anticipated Personnel expenses in Paratransit Program, Haz Mat Disposal costs in Facilities, and Fuel & Lube Rev Vehicles expenses in Fleet.

**C. Consolidated Operating Expenses**

Consolidated Operating Expenses for the month of January 2009 were \$21K or 1 % under budget. Personnel Expenses, Prof & Tech Fees, Haz Mat Disposal and Fuels & Lube Rev Veh all contributed to the variance. Further explanation of these accounts is contained in the notes following the report.

**D. Capital Budget**

Capital Budget spending year to date through January 2009 was \$11,250K or 37 % of the Capital budget. Of this, \$3,310K has been spent of the MetroBase Maintenance Facility project, \$3,567K has been spent on the Local Bus Replacement , \$1,383K has been spent on the CNG Bus Conversions, and \$2,359K has been spent on the H17 Bus Replacement project.

**IV. FINANCIAL CONSIDERATIONS**

At this time, our Operating and Capital Budget are within tolerable variances.

**IV. ATTACHMENTS**

- Attachment A:** FY09 Operating Revenue for the month ending – 01/31/09  
FY09 Operating Expenses by Department for the month ending – 01/31/09  
FY09 Consolidated Operating Expenses for the month ending – 01/31/09  
FY09 Capital Budget Reports for the month ending – 01/31/09

Prepared by: Kristina Mihaylova

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**FY09**  
**Operating Revenue**  
*For the month ending - January 31, 2009*

Percent of Year Elapsed - 58%

Revenue Source	Current Period				Notes	Year to Date				YTD Year Over Year Comparison			
	Actual	Budget	\$ Var	% Var		Actual	Budget	\$ Var	% Var	FY09 Actual	FY08 Actual	\$ Var	% Var
Passenger Fares	\$ 246,152	\$ 271,528	\$ (25,376)	-9%		\$ 1,992,643	\$ 2,040,285	\$ (47,642)	-2%	\$ 1,992,643	\$ 2,036,046	\$ (43,403)	-2%
Paratransit Fares	\$ 17,063	\$ 17,408	\$ (345)	-2%		\$ 214,764	\$ 196,599	\$ 18,165	9%	\$ 214,764	\$ 133,959	\$ 80,805	60%
Special Transit Fares	\$ 415,594	\$ 455,353	\$ (39,759)	-9%		\$ 1,872,415	\$ 1,880,188	\$ (7,773)	0%	\$ 1,872,415	\$ 1,544,490	\$ 327,925	21%
Highway 17 Fares	\$ 81,308	\$ 63,315	\$ 17,993	28%		\$ 609,545	\$ 552,243	\$ 57,302	10%	\$ 609,545	\$ 473,271	\$ 136,274	29%
Highway 17 Payments	\$ 38,985	\$ 52,435	\$ (13,450)	-26%		\$ 252,515	\$ 287,824	\$ (35,309)	-12%	\$ 252,515	\$ 287,293	\$ (34,778)	-12%
<b>Subtotal Passenger Revenue</b>	<b>\$ 799,102</b>	<b>\$ 860,039</b>	<b>\$ (60,937)</b>	<b>-7%</b>	<b>1</b>	<b>\$ 4,941,882</b>	<b>\$ 4,957,139</b>	<b>\$ (15,257)</b>	<b>0%</b>	<b>\$ 4,941,882</b>	<b>\$ 4,475,059</b>	<b>\$ 466,823</b>	<b>10%</b>
Commissions	\$ -	\$ 413	\$ (413)	-100%		\$ 3,213	\$ 2,886	\$ 327	11%	\$ 3,213	\$ 3,242	\$ (29)	-1%
Advertising Income	\$ 18,913	\$ 7,105	\$ 11,808	166%	2	\$ 87,071	\$ 49,735	\$ 37,336	75%	\$ 87,071	\$ 172,245	\$ (85,174)	-49%
Rent Income - SC Pacific Station	\$ 7,512	\$ 7,512	\$ -	0%		\$ 52,398	\$ 52,398	\$ -	0%	\$ 52,398	\$ 44,912	\$ 7,486	17%
Rent Income - Watsonville TC	\$ 2,852	\$ 2,821	\$ 31	1%		\$ 22,441	\$ 22,379	\$ 62	0%	\$ 22,441	\$ 24,925	\$ (2,484)	-10%
Rent Income - General	\$ -	\$ -	\$ -	0%		\$ 12,659	\$ -	\$ 12,659	100%	\$ 12,659	\$ -	\$ 12,659	100%
Interest Income	\$ 33,956	\$ 27,290	\$ 6,666	24%	3	\$ 273,513	\$ 190,112	\$ 83,401	44%	\$ 273,513	\$ 646,570	\$ (373,057)	-58%
Other Non-Transp Revenue	\$ 66	\$ 417	\$ (351)	-84%		\$ 4,593	\$ 2,919	\$ 1,674	57%	\$ 4,593	\$ 123,642	\$ (119,049)	-96%
Sales Tax Revenue	\$ 1,188,600	\$ 1,247,950	\$ (59,350)	-5%	4	\$ 9,856,596	\$ 9,894,504	\$ (37,908)	0%	\$ 9,856,596	\$ 10,177,957	\$ (321,361)	-3%
Transp Dev Act (TDA) - Op Asst	\$ -	\$ -	\$ -	0%		\$ 2,989,232	\$ 2,989,232	\$ -	0%	\$ 2,989,232	\$ 3,181,018	\$ (191,786)	-6%
<b>Subtotal Other Revenue</b>	<b>\$ 1,251,899</b>	<b>\$ 1,293,508</b>	<b>\$ (41,609)</b>	<b>-3%</b>		<b>\$ 13,301,716</b>	<b>\$ 13,204,165</b>	<b>\$ 97,551</b>	<b>1%</b>	<b>\$ 13,301,716</b>	<b>\$ 14,374,511</b>	<b>\$ (1,072,795)</b>	<b>-7%</b>
FTA Sec 5307 - Op Asst	\$ -	\$ -	\$ -	0%		\$ 3,426,293	\$ 3,426,293	\$ -	0%	\$ 3,426,293	\$ 3,153,552	\$ 272,741	9%
Repay FTA Advance	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
FTA Sec 5311 - Rural Op Asst	\$ -	\$ -	\$ -	0%		\$ 161,615	\$ 161,615	\$ -	0%	\$ 161,615	\$ 149,335	\$ 12,280	8%
Sec 5303 - AMBAG Funding	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ (3,169)	\$ 3,169	-100%
FTA Sec 5317 - Op Assistance	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ 17,785	\$ (17,785)	-100%
<b>Subtotal Grant Revenue</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>		<b>\$ 3,587,908</b>	<b>\$ 3,587,908</b>	<b>\$ -</b>	<b>0%</b>	<b>\$ 3,587,908</b>	<b>\$ 3,317,503</b>	<b>\$ 270,405</b>	<b>8%</b>
<b>Subtotal Operating Revenue</b>	<b>\$ 2,051,001</b>	<b>\$ 2,153,547</b>	<b>\$ (102,546)</b>	<b>-5%</b>		<b>\$ 21,831,506</b>	<b>\$ 21,749,212</b>	<b>\$ 82,294</b>	<b>0%</b>	<b>\$ 21,831,506</b>	<b>\$ 22,167,073</b>	<b>\$ (335,567)</b>	<b>-2%</b>
<b>Total Operating Expenses</b>	<b>\$ 3,243,995</b>					<b>\$ 20,437,336</b>				<b>\$ 20,437,336</b>	<b>\$ 13,969,196</b>		
<b>Variance</b>	<b>\$ (1,192,994)</b>					<b>\$ 1,394,171</b>				<b>\$ 1,394,171</b>	<b>\$ 8,197,877</b>		
<b>One-Time Revenue</b>													
Transfer (to)/from Capital Reserves	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
Transfer (to)/from Cash Flow Res	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
Transfer (to)/from W/C Reserve	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
Transfer (to)/from Liab Ins Res	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
Carryover from Previous Year	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
<b>Subtotal One-Time Revenue</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>Total Revenue</b>	<b>\$ 2,051,001</b>	<b>\$ 2,153,547</b>	<b>\$ (102,546)</b>	<b>-5%</b>		<b>\$ 21,831,506</b>	<b>\$ 21,749,212</b>	<b>\$ 82,294</b>	<b>0%</b>	<b>\$ 21,831,506</b>	<b>\$ 22,167,073</b>	<b>\$ (335,567)</b>	<b>-2%</b>
<b>Total Operating Expenses</b>	<b>\$ 3,243,995</b>					<b>\$ 20,437,336</b>				<b>\$ 20,437,336</b>	<b>\$ 13,969,196</b>		
<b>Variance</b>	<b>\$ (1,192,994)</b>					<b>\$ 1,394,171</b>				<b>\$ 1,394,171</b>	<b>\$ 8,197,877</b>		

5-2.91

Attachment A





**FY09**  
**Operating Revenue**  
*For the month ending - January 31, 2009*

Percent of Year Elapsed - 58%

<u>Revenue Source</u>	<u>Actual</u>	<u>Current Period</u>				<u>Notes</u>	<u>Year to Date</u>				<u>YTD Year Over Year Comparison</u>			
		<u>Budget</u>	<u>\$ Var</u>	<u>% Var</u>	<u>Actual</u>		<u>Budget</u>	<u>\$ Var</u>	<u>% Var</u>	<u>Actual</u>	<u>FY09</u>	<u>FY08</u>	<u>\$ Var</u>	<u>% Var</u>

Current Period Notes:

- 1) **Passenger Revenue** is under budget due to a decrease in ridership.
- 2) **Advertising Income** is over budget due to more advertising than expected.
- 3) **Interest Income** is over budget due to revenue budgeted using County Treasury estimates, while a higher interest rate was actually paid.
- 4) **Sales Tax Revenue** is under budget due to less consumer discretionary spending and current economic conditions.

5-2.92



**FY09**  
**Operating Expenses by Department**  
**For the month ending - January 31, 2009**

	Current Period				Notes	Year to Date				YTD Year Over Year Comparison			
	Actual	Budget	\$ Var	% Var		Actual	Budget	\$ Var	% Var	Actual FY09	FY08	\$ Var	% Var
<b>Departmental Personnel Expenses</b>													
700 - SCCIC			\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
1100 - Administration	\$ 72,307	\$ 87,059	\$ -5,248	-8%		\$ 541,000	\$ 534,629	\$ 6,371	1%	\$ 541,000	\$ 526,875	\$ 14,125	3%
1200 - Finance	\$ 107,125	\$ 94,150	\$ 12,975	14%		\$ 447,060	\$ 467,009	\$ (19,949)	-4%	\$ 447,060	\$ 314,083	\$ 132,977	42%
1300 - Customer Service	\$ 42,018	\$ 37,520	\$ 4,498	12%		\$ 254,060	\$ 262,640	\$ (8,580)	-3%	\$ 254,060	\$ 230,976	\$ 23,084	10%
1400 - Human Resources	\$ 49,321	\$ 48,084	\$ 1,237	3%		\$ 319,374	\$ 336,587	\$ (17,213)	-5%	\$ 319,374	\$ 294,110	\$ 25,264	9%
1500 - Information Technology	\$ 45,394	\$ 41,751	\$ 3,643	9%		\$ 289,231	\$ 292,262	\$ (3,031)	-1%	\$ 289,231	\$ 282,032	\$ 7,199	3%
1700 - District Counsel	\$ 41,003	\$ 37,703	\$ 3,300	9%		\$ 246,541	\$ 263,921	\$ (17,380)	-7%	\$ 246,541	\$ 230,196	\$ 16,345	7%
1800 - Risk Management	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
2200 - Facilities Maintenance	\$ 91,700	\$ 82,896	\$ 8,804	11%		\$ 557,833	\$ 580,273	\$ (22,440)	-4%	\$ 557,833	\$ 505,991	\$ 51,842	10%
3100 - Paratransit Program	\$ 287,773	\$ 293,714	\$ (5,941)	-2%		\$ 1,758,304	\$ 2,055,998	\$ (297,694)	-14%	\$ 1,758,304	\$ 1,628,881	\$ 129,423	8%
3200 - Operations	\$ 176,235	\$ 174,870	\$ 1,365	1%		\$ 1,137,932	\$ 1,289,749	\$ (151,817)	-12%	\$ 1,137,932	\$ 1,122,063	\$ 15,869	1%
3300 - Bus Operators	\$ 1,273,684	\$ 1,162,881	\$ 110,803	10%		\$ 7,708,319	\$ 8,140,168	\$ (431,849)	-5%	\$ 7,708,319	\$ 7,301,735	\$ 406,584	6%
4100 - Fleet Maintenance	\$ 342,292	\$ 320,343	\$ 21,949	7%		\$ 2,185,249	\$ 2,301,714	\$ (116,465)	-5%	\$ 2,185,249	\$ 2,262,237	\$ (76,988)	-3%
9001 - Cobra Benefits	\$ 445	\$ -	\$ 445	100%		\$ 2,406	\$ -	\$ 2,406	100%	\$ 2,406	\$ (2,929)	\$ 5,335	-182%
9005 - Retired Employee Benefits	\$ 142,041	\$ 143,457	\$ (1,416)	-1%		\$ 908,843	\$ 1,004,198	\$ (95,355)	-9%	\$ 908,843	\$ 850,071	\$ 58,772	7%
9014 - Operating Grants	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
110020 - Operating Grants	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
100 - New Flyer Parts Credit	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
<b>Subtotal Personnel Expenses</b>	<b>\$ 2,671,338</b>	<b>\$ 2,504,428</b>	<b>\$ 166,910</b>	<b>7%</b>		<b>\$ 16,356,152</b>	<b>\$ 17,529,147</b>	<b>\$ (1,172,995)</b>	<b>-7%</b>	<b>\$ 16,356,152</b>	<b>\$ 15,546,321</b>	<b>\$ 809,831</b>	<b>5%</b>
<b>Departmental Non-Personnel Expenses</b>													
700 - SCCIC	\$ -	\$ -	\$ -	0%		\$ 270	\$ 300	\$ (30)	-10%	\$ 270	\$ 260	\$ 10	4%
1100 - Administration	\$ 28,961	\$ 34,661	\$ (5,700)	-16%		\$ 139,855	\$ 259,520	\$ (119,665)	-46%	\$ 139,855	\$ 379,946	\$ (240,091)	-63%
1200 - Finance	\$ 49,534	\$ 55,575	\$ (6,041)	-11%		\$ 467,408	\$ 549,275	\$ (81,867)	-15%	\$ 467,408	\$ 431,592	\$ 35,816	8%
1300 - Customer Service	\$ 7,759	\$ 2,924	\$ 4,835	165%		\$ 53,567	\$ 59,119	\$ (5,552)	-9%	\$ 53,567	\$ 45,437	\$ 8,130	18%
1400 - Human Resources	\$ 2,033	\$ 11,116	\$ (9,083)	-82%		\$ 20,071	\$ 77,811	\$ (57,740)	-74%	\$ 20,071	\$ 21,527	\$ (1,456)	-7%
1500 - Information Technology	\$ 9,350	\$ 9,589	\$ (239)	-2%		\$ 64,880	\$ 73,119	\$ (8,239)	-11%	\$ 64,880	\$ 127,048	\$ (62,168)	-49%
1700 - District Counsel	\$ 828	\$ 1,692	\$ (864)	-51%		\$ 8,554	\$ 11,843	\$ (3,289)	-28%	\$ 8,554	\$ 12,972	\$ (4,418)	-34%
1800 - Risk Management	\$ 6,938	\$ 20,833	\$ (13,895)	-67%		\$ 31,179	\$ 145,831	\$ (114,652)	-79%	\$ 31,179	\$ 18,158	\$ 13,021	72%
2200 - Facilities Maintenance	\$ 181,170	\$ 176,702	\$ 4,468	3%		\$ 991,605	\$ 1,029,412	\$ (37,807)	-4%	\$ 991,605	\$ 297,473	\$ 694,132	233%
3100 - Paratransit Program	\$ 39,549	\$ 72,526	\$ (32,977)	-45%		\$ 388,396	\$ 507,682	\$ (121,286)	-24%	\$ 388,396	\$ 463,306	\$ (76,910)	-17%
3200 - Operations	\$ 39,080	\$ 41,039	\$ (1,959)	-5%		\$ 345,785	\$ 303,773	\$ 42,012	14%	\$ 345,785	\$ 314,221	\$ 31,564	10%
3300 - Bus Operators	\$ -	\$ 334	\$ (334)	-100%		\$ 4,164	\$ 5,836	\$ (1,672)	-29%	\$ 4,164	\$ 4,793	\$ (629)	-13%
4100 - Fleet Maintenance	\$ 207,457	\$ 333,062	\$ (125,605)	-38%		\$ 1,555,608	\$ 2,541,435	\$ (985,827)	-39%	\$ 1,555,608	\$ 2,209,963	\$ (654,355)	-30%
9001 - Cobra Benefits	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ 1,094	\$ (1,094)	-100%
9005 - Retired Employee Benefits	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
9014 - Operating Grants	\$ -	\$ -	\$ -	0%		\$ 11,848	\$ -	\$ 11,848	100%	\$ 11,848	\$ (575)	\$ 12,423	-2181%
110020 - Operating Grants	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
100 - New Flyer Parts Credit	\$ -	\$ -	\$ -	0%		\$ 0	\$ -	\$ 0	100%	\$ 0	\$ -	\$ 0	100%
<b>Subtotal Non-Personnel Expenses</b>	<b>\$ 672,659</b>	<b>\$ 760,053</b>	<b>\$ (87,394)</b>	<b>-25%</b>		<b>\$ 4,081,190</b>	<b>\$ 5,564,956</b>	<b>\$ (1,483,766)</b>	<b>-27%</b>	<b>\$ 4,081,190</b>	<b>\$ 4,327,215</b>	<b>\$ (246,025)</b>	<b>-6%</b>

5-2.03



**FY09**  
**Operating Expenses by Department**  
**For the month ending - January 31, 2009**

	Current Period				Notes	Year to Date				YTD Year Over Year Comparison			
	Actual	Budget	\$ Var	% Var		Actual	Budget	\$ Var	% Var	Actual FY09	FY08	\$ Var	% Var
<b>Total Departmental Expenses</b>													
700 - SCCIC	\$ -	\$ -	\$ -	0%		\$ 270	\$ 300	\$ (30)	-10%	\$ 270	\$ 260	\$ 10	4%
1100 - Administration	\$ 101,268	\$ 101,720	\$ (452)	0%		\$ 680,855	\$ 794,148	\$ (113,293)	-14%	\$ 680,855	\$ 906,821	\$ (225,966)	-25%
1200 - Finance	\$ 156,659	\$ 149,725	\$ 6,934	5%		\$ 914,468	\$ 1,016,284	\$ (101,816)	-10%	\$ 914,468	\$ 745,675	\$ 168,793	23%
1300 - Customer Service	\$ 49,777	\$ 40,444	\$ 9,333	23%		\$ 307,627	\$ 321,759	\$ (14,132)	-4%	\$ 307,627	\$ 276,413	\$ 31,214	11%
1400 - Human Resources	\$ 51,354	\$ 59,200	\$ (7,846)	-13%		\$ 339,445	\$ 414,398	\$ (74,953)	-18%	\$ 339,445	\$ 315,637	\$ 23,808	8%
1500 - Information Technology	\$ 54,744	\$ 51,340	\$ 3,404	7%		\$ 354,111	\$ 365,381	\$ (11,270)	-3%	\$ 354,111	\$ 409,080	\$ (54,969)	-13%
1700 - District Counsel	\$ 41,831	\$ 39,395	\$ 2,436	6%		\$ 255,095	\$ 275,764	\$ (20,669)	-7%	\$ 255,095	\$ 243,168	\$ 11,927	5%
1800 - Risk Management	\$ 6,938	\$ 20,833	\$ (13,895)	-67%	1	\$ 31,179	\$ 145,831	\$ (114,652)	-79%	\$ 31,179	\$ 18,158	\$ 13,021	72%
2200 - Facilities Maintenance	\$ 272,870	\$ 259,598	\$ 13,272	5%	2	\$ 1,549,438	\$ 1,609,685	\$ (60,247)	-4%	\$ 1,549,438	\$ 803,464	\$ 745,974	93%
3100 - Paratransit Program	\$ 327,322	\$ 366,240	\$ (38,918)	-11%	3	\$ 2,144,700	\$ 2,563,680	\$ (418,980)	-16%	\$ 2,144,700	\$ 2,092,187	\$ 52,513	3%
3200 - Operations	\$ 215,315	\$ 215,909	\$ (594)	0%		\$ 1,483,717	\$ 1,593,522	\$ (109,805)	-7%	\$ 1,483,717	\$ 1,436,284	\$ 47,433	3%
3300 - Bus Operators	\$ 1,273,684	\$ 1,163,215	\$ 110,469	9%	4	\$ 7,712,483	\$ 8,146,004	\$ (433,521)	-5%	\$ 7,712,483	\$ 7,306,528	\$ 405,955	6%
4100 - Fleet Maintenance	\$ 549,749	\$ 653,405	\$ (103,656)	-16%	5	\$ 3,740,857	\$ 4,843,149	\$ (1,102,292)	-23%	\$ 3,740,857	\$ 4,472,200	\$ (731,343)	-16%
9001 - Cobra Benefits	\$ 445	\$ -	\$ 445	100%		\$ 2,406	\$ -	\$ 2,406	100%	\$ 2,406	\$ (1,835)	\$ 4,241	-231%
9005 - Retired Employee Benefits	\$ 142,041	\$ 143,457	\$ (1,416)	-1%		\$ 908,843	\$ 1,004,198	\$ (95,355)	-9%	\$ 908,843	\$ 850,071	\$ 58,772	7%
9014 - Operating Grants	\$ -	\$ -	\$ -	0%		\$ 11,848	\$ -	\$ 11,848	100%	\$ 11,848	\$ (575)	\$ 12,423	-2161%
110020 - Operating Grants	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
100 - New Flyer Parts Credit	\$ -	\$ -	\$ -	0%		\$ 0	\$ -	\$ 0	100%	\$ 0	\$ -	\$ 0	100%
<b>Total Operating Expenses</b>	<b>\$ 3,243,997</b>	<b>\$ 3,264,481</b>	<b>\$ (20,484)</b>	<b>-1%</b>		<b>\$ 20,437,342</b>	<b>\$ 23,094,102</b>	<b>\$ (2,656,760)</b>	<b>-12%</b>	<b>\$ 20,437,342</b>	<b>\$ 19,873,536</b>	<b>\$ 563,806</b>	<b>3%</b>

\*\* does not include depreciation

**Current Period Notes:**

- 1) **Customer service** is over budget due to printing expenses for bus passes and coupons in January 2009.
- 2) **Risk Management** is under budget due to below budgeted settlement costs paid in January 2009.
- 3) **Facilities Maintenance** is over budget due to accruals adjustment entries and December 2008 invoices for repair - equipment paid in January 2009.
- 4) **Paratransit Program** is under budget due to not being at full complement and less than anticipated fuel and purchased transportation costs.
- 5) **Bus Operators** is over budget due to accruals adjustment entries for the prior month.
- 6) **Fleet** is under budget due to less than anticipated fuel costs.

5-2.94



**FY09**  
**Consolidated Operating Expenses**  
**For the month ending - January 31, 2009**

	Current Period					Year to Date				YTD Year Over Year Comparison			
	Actual	Budget	\$ Var	% Var	Notes	Actual	Budget	\$ Var	% Var	FY09	FY08	\$ Var	% Var
<b>LABOR</b>													
501011 Bus Operator Pay	\$ 682,914	\$ 703,961	\$ (21,047)	-3%		\$ 4,513,578	\$ 4,927,726	\$ (414,148)	-8%	\$ 4,513,578	\$ 4,279,179	\$ 234,399	5%
501013 Bus Operator Overtime	\$ 168,119	\$ 131,653	\$ 36,465	28%		\$ 757,344	\$ 921,574	\$ (164,230)	-18%	\$ 757,344	\$ 753,235	\$ 4,109	1%
501021 Other Salaries	\$ 573,433	\$ 497,698	\$ 75,735	15%		\$ 3,567,350	\$ 3,530,075	\$ 37,275	1%	\$ 3,567,350	\$ 3,443,617	\$ 123,733	4%
501023 Other Overtime	\$ 25,519	\$ 27,472	\$ (1,952)	-7%		\$ 149,631	\$ 192,301	\$ (42,670)	-22%	\$ 149,631	\$ 173,928	\$ (24,297)	-14%
<b>Total Labor -</b>	<b>\$ 1,449,985</b>	<b>\$ 1,360,784</b>	<b>\$ 89,201</b>	<b>7%</b>		<b>\$ 8,987,903</b>	<b>\$ 9,571,676</b>	<b>\$ (583,774)</b>	<b>-6%</b>	<b>\$ 8,987,903</b>	<b>\$ 8,649,959</b>	<b>\$ 337,944</b>	<b>4%</b>
<b>FRINGE BENEFITS</b>													
502011 Medicare/Soc. Sec.	\$ 21,626	\$ 17,887	\$ 3,740	21%		\$ 127,476	\$ 125,207	\$ 2,270	2%	\$ 127,476	\$ 119,897	\$ 7,579	6%
502021 Retirement	\$ 216,139	\$ 199,817	\$ 16,322	8%		\$ 1,312,796	\$ 1,398,719	\$ (85,923)	-6%	\$ 1,312,796	\$ 1,174,824	\$ 137,972	12%
502031 Medical Insurance	\$ 448,803	\$ 461,945	\$ (13,142)	-3%		\$ 2,935,836	\$ 3,233,559	\$ (297,722)	-9%	\$ 2,935,836	\$ 2,656,393	\$ 279,443	11%
502041 Dental Insurance	\$ 39,625	\$ 41,935	\$ (2,310)	-6%		\$ 278,679	\$ 293,538	\$ (14,860)	-5%	\$ 278,679	\$ 269,788	\$ 8,891	3%
502045 Vision Insurance	\$ 11,189	\$ 11,619	\$ (430)	-4%		\$ 77,853	\$ 81,333	\$ (3,480)	-4%	\$ 77,853	\$ 75,926	\$ 1,927	3%
502051 Life Insurance	\$ 3,669	\$ 4,181	\$ (512)	-12%		\$ 25,412	\$ 29,267	\$ (3,855)	-13%	\$ 25,412	\$ 23,227	\$ 2,185	9%
502060 State Disability	\$ 19,919	\$ 23,174	\$ (3,255)	-14%		\$ 89,438	\$ 162,213	\$ (72,775)	-45%	\$ 89,438	\$ 69,487	\$ 19,951	29%
502061 Disability Insurance	\$ 16,764	\$ 19,189	\$ (2,426)	-13%		\$ 124,006	\$ 134,326	\$ (10,320)	-8%	\$ 124,006	\$ 119,131	\$ 4,875	4%
502071 State Unemp. Ins	\$ 28,140	\$ 4,461	\$ 23,679	531%		\$ 47,570	\$ 31,229	\$ 16,341	52%	\$ 47,570	\$ 47,926	\$ (356)	-1%
502081 Worker's Comp Ins	\$ 49,503	\$ 83,349	\$ (33,845)	-41%		\$ 533,752	\$ 582,357	\$ (48,605)	-8%	\$ 533,752	\$ 629,117	\$ (95,365)	-15%
502083 Worker's Comp IBNR	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
502101 Holiday Pay	\$ 125,173	\$ 32,676	\$ 92,497	283%		\$ 270,175	\$ 228,716	\$ 41,459	18%	\$ 270,175	\$ 249,880	\$ 20,295	8%
502103 Floating Holiday	\$ 6,486	\$ 5,817	\$ 669	12%		\$ 16,877	\$ 40,717	\$ (23,840)	-59%	\$ 16,877	\$ 15,020	\$ 1,857	12%
502109 Sick Leave	\$ 56,423	\$ 80,035	\$ (23,612)	-30%		\$ 351,963	\$ 506,021	\$ (154,058)	-30%	\$ 351,963	\$ 326,534	\$ 25,429	8%
502111 Annual Leave	\$ 156,308	\$ 135,141	\$ 21,166	16%		\$ 1,052,939	\$ 952,996	\$ 99,943	10%	\$ 1,052,939	\$ 982,205	\$ 70,734	7%
502121 Other Paid Absence	\$ 14,339	\$ 10,357	\$ 3,982	38%		\$ 76,435	\$ 72,490	\$ 3,945	5%	\$ 76,435	\$ 69,267	\$ 7,168	10%
502251 Physical Exams	\$ 1,050	\$ 1,107	\$ (57)	-5%		\$ 3,855	\$ 7,747	\$ (3,892)	-50%	\$ 3,855	\$ 3,603	\$ 252	7%
502253 Driver Lic Renewal	\$ 206	\$ 363	\$ (157)	-43%		\$ 780	\$ 2,538	\$ (1,758)	-69%	\$ 780	\$ 864	\$ (84)	-10%
502999 Other Fringe Benefits	\$ 5,990	\$ 10,591	\$ (4,601)	-43%		\$ 42,404	\$ 74,492	\$ (32,087)	-43%	\$ 42,404	\$ 63,270	\$ (20,866)	-33%
<b>Total Fringe Benefits -</b>	<b>\$ 1,221,354</b>	<b>\$ 1,143,644</b>	<b>\$ 77,709</b>	<b>7%</b>		<b>\$ 7,368,248</b>	<b>\$ 7,957,466</b>	<b>\$ (589,219)</b>	<b>-7%</b>	<b>\$ 7,368,248</b>	<b>\$ 6,896,359</b>	<b>\$ 471,889</b>	<b>7%</b>
<b>Total Personnel Expenses -</b>	<b>\$ 2,671,338</b>	<b>\$ 2,504,428</b>	<b>\$ 166,910</b>	<b>7%</b>	<b>1</b>	<b>\$ 16,356,150</b>	<b>\$ 17,529,143</b>	<b>\$ (1,172,992)</b>	<b>-7%</b>	<b>\$ 16,356,150</b>	<b>\$ 15,546,318</b>	<b>\$ 809,832</b>	<b>5%</b>

5-2.95



**FY09**  
**Consolidated Operating Expenses**  
**For the month ending - January 31, 2009**

	Current Period					Year to Date				YTD Year Over Year Comparison			
	Actual	Budget	\$ Var	% Var	Notes	Actual	Budget	\$ Var	% Var	FY09	FY08	\$ Var	% Var
<b>SERVICES</b>													
503011 Acctg & Audit Fees	\$ 497	\$ -	\$ 497	100%		\$ 40,697	\$ 50,250	\$ (9,553)	-19%	\$ 40,697	\$ 38,665	\$ 2,032	5%
503012 Admin & Bank Fees	\$ 983	\$ 1,350	\$ (367)	-27%		\$ 98,370	\$ 105,500	\$ (7,130)	-7%	\$ 98,370	\$ 86,348	\$ 12,022	14%
503031 Prof & Tech Fees	\$ 5,050	\$ 25,286	\$ (20,235)	-80%	2	\$ 61,578	\$ 211,500	\$ (149,922)	-71%	\$ 61,578	\$ 88,309	\$ (26,731)	-30%
503032 Legislative Services	\$ 7,500	\$ 8,367	\$ (867)	-10%		\$ 52,500	\$ 58,567	\$ (6,067)	-10%	\$ 52,500	\$ 52,970	\$ (470)	-1%
503033 Legal Services	\$ -	\$ 4,583	\$ (4,583)	-100%		\$ -	\$ 32,083	\$ (32,083)	-100%	\$ -	\$ 1,259	\$ (1,259)	-100%
503034 Pre-Employ Exams	\$ 1,759	\$ 1,288	\$ 471	37%		\$ 6,791	\$ 9,018	\$ (2,227)	-25%	\$ 6,791	\$ 6,107	\$ 684	11%
503041 Temp Help	\$ 6,430	\$ -	\$ 6,430	100%	3	\$ 80,754	\$ -	\$ 80,754	100%	\$ 80,754	\$ 74,401	\$ 6,353	9%
503161 Custodial Services	\$ 5,072	\$ 4,900	\$ 172	4%		\$ 40,620	\$ 34,300	\$ 6,320	18%	\$ 40,620	\$ 39,004	\$ 1,616	4%
503162 Uniform & Laundry	\$ 2,536	\$ 3,546	\$ (1,010)	-28%		\$ 21,469	\$ 24,821	\$ (3,352)	-14%	\$ 21,469	\$ 23,520	\$ (2,051)	-9%
503171 Security Services	\$ 30,910	\$ 33,375	\$ (2,465)	-7%		\$ 211,642	\$ 233,625	\$ (21,983)	-9%	\$ 211,642	\$ 193,347	\$ 18,295	9%
503221 Classified/Legal Ads	\$ 2,513	\$ 2,763	\$ (249)	-9%		\$ 9,498	\$ 15,889	\$ (6,390)	-40%	\$ 9,498	\$ 8,130	\$ 1,368	17%
503222 Legal Advertising	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
503225 Graphic Services	\$ -	\$ 417	\$ (417)	-100%		\$ -	\$ 2,917	\$ (2,917)	-100%	\$ -	\$ -	\$ -	0%
503351 Repair - Bldg & Impr	\$ 9,679	\$ 7,500	\$ 2,179	29%		\$ 55,608	\$ 52,500	\$ 3,108	6%	\$ 55,608	\$ 56,034	\$ (426)	-1%
503352 Repair - Equipment	\$ 56,035	\$ 34,985	\$ 21,050	60%	4	\$ 211,419	\$ 246,895	\$ (35,476)	-14%	\$ 211,419	\$ 104,461	\$ 106,958	102%
503353 Repair - Rev Vehicle	\$ 24,143	\$ 32,449	\$ (8,306)	-26%		\$ 294,569	\$ 227,143	\$ 67,426	30%	\$ 294,569	\$ 157,477	\$ 137,092	87%
503354 Repair - Non Rev Vehicle	\$ 708	\$ 2,500	\$ (1,792)	-72%		\$ 13,733	\$ 17,500	\$ (3,767)	-22%	\$ 13,733	\$ 13,407	\$ 326	2%
503363 Haz Mat Disposal	\$ 5,575	\$ 38,722	\$ (33,147)	-86%	5	\$ 31,864	\$ 61,056	\$ (29,192)	-48%	\$ 31,864	\$ 21,079	\$ 10,785	51%
<b>Total Services -</b>	<b>\$ 159,391</b>	<b>\$ 202,030</b>	<b>\$ (42,639)</b>	<b>-21%</b>		<b>\$ 1,231,113</b>	<b>\$ 1,383,563</b>	<b>\$ (152,450)</b>	<b>-11%</b>	<b>\$ 1,231,113</b>	<b>\$ 964,518</b>	<b>\$ 266,595</b>	<b>28%</b>
<b>MOBILE MATERIALS AND SUPPLIES</b>													
504011 Fuels & Lube Non Rev Veh	\$ 4,404	\$ 16,775	\$ (12,371)	-74%		\$ 87,319	\$ 117,425	\$ (30,106)	-26%	\$ 87,319	\$ 90,534	\$ (3,215)	-4%
504012 Fuels & Lube Rev Veh	\$ 135,872	\$ 234,860	\$ (98,988)	-42%	6	\$ 954,347	\$ 1,854,020	\$ (899,673)	-49%	\$ 954,347	\$ 1,291,877	\$ (337,530)	-26%
504021 Tires & Tubes	\$ 6,737	\$ 17,083	\$ (10,346)	-61%	7	\$ 121,084	\$ 119,581	\$ 1,503	1%	\$ 121,084	\$ 109,282	\$ 11,802	11%
504161 Other Mobile Supplies	\$ 22	\$ 833	\$ (811)	-97%		\$ 6,484	\$ 5,831	\$ 653	11%	\$ 6,484	\$ 4,372	\$ 2,112	48%
504191 Rev Vehicle Parts	\$ 45,703	\$ 51,275	\$ (5,572)	-11%		\$ 194,858	\$ 358,925	\$ (164,067)	-46%	\$ 194,858	\$ 421,373	\$ (226,515)	-54%
<b>Total Mobile Materials &amp; Supplies -</b>	<b>\$ 192,739</b>	<b>\$ 320,827</b>	<b>\$ (128,088)</b>	<b>-40%</b>		<b>\$ 1,364,093</b>	<b>\$ 2,455,783</b>	<b>\$ (1,091,690)</b>	<b>-44%</b>	<b>\$ 1,364,093</b>	<b>\$ 1,917,438</b>	<b>\$ (553,345)</b>	<b>-29%</b>

5-2-06



**FY09**  
**Consolidated Operating Expenses**  
**For the month ending - January 31, 2009**

	Current Period					Year to Date					YTD Year Over Year Comparison			
	Actual	Budget	\$ Var	% Var	Notes	Actual	Budget	\$ Var	% Var	FY09	FY08	\$ Var	% Var	
<b>OTHER MATERIALS &amp; SUPPLIES</b>														
504205 Freight Out	\$ 207	\$ 292	\$ (84)	-29%		\$ 1,497	\$ 2,043	\$ (546)	-27%	\$ 1,497	\$ 2,234	\$ (737)	-33%	
504211 Postage & Mailing	\$ 2,471	\$ 1,887	\$ 585	31%		\$ 6,770	\$ 13,207	\$ (6,437)	-49%	\$ 6,770	\$ 7,955	\$ (1,185)	-15%	
504214 Promotional Items	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%	
504215 Printing	\$ 13,710	\$ 3,233	\$ 10,477	324%	8	\$ 51,984	\$ 57,633	\$ (5,648)	-10%	\$ 51,984	\$ 31,262	\$ 20,722	66%	
504217 Photo Supply/Processing	\$ 88	\$ 808	\$ (720)	-89%		\$ 4,340	\$ 5,658	\$ (1,317)	-23%	\$ 4,340	\$ 2,912	\$ 1,428	49%	
504311 Office Supplies	\$ 2,604	\$ 7,297	\$ (4,693)	-64%		\$ 44,702	\$ 49,977	\$ (5,275)	-11%	\$ 44,702	\$ 46,690	\$ (1,988)	-4%	
504315 Safety Supplies	\$ 1,547	\$ 2,275	\$ (728)	-32%		\$ 10,239	\$ 15,925	\$ (5,686)	-36%	\$ 10,239	\$ 18,462	\$ (8,223)	-45%	
504317 Cleaning Supplies	\$ 82	\$ 4,417	\$ (4,335)	-98%		\$ 18,958	\$ 30,917	\$ (11,959)	-39%	\$ 18,958	\$ 33,196	\$ (14,238)	-43%	
504409 Repair/Maint Supplies	\$ 2,131	\$ 4,583	\$ (2,453)	-54%		\$ 36,091	\$ 32,083	\$ 4,007	12%	\$ 36,091	\$ 35,253	\$ 838	2%	
504421 Non-Inventory Parts	\$ 2,490	\$ 3,917	\$ (1,427)	-36%		\$ 44,890	\$ 29,917	\$ 14,973	50%	\$ 44,890	\$ 27,540	\$ 17,350	63%	
504511 Small Tools	\$ 35	\$ 833	\$ (798)	-96%		\$ 3,182	\$ 5,833	\$ (2,651)	-45%	\$ 3,182	\$ 6,054	\$ (2,872)	-47%	
504515 Employee Tool Rplcmt	\$ -	\$ 217	\$ (217)	-100%		\$ 1,135	\$ 1,517	\$ (382)	-25%	\$ 1,135	\$ 704	\$ 431	61%	
<b>Total Other Materials &amp; Supplies -</b>	<b>\$ 25,365</b>	<b>\$ 29,758</b>	<b>\$ (4,393)</b>	<b>-15%</b>		<b>\$ 223,788</b>	<b>\$ 244,709</b>	<b>\$ (20,920)</b>	<b>-9%</b>	<b>\$ 223,788</b>	<b>\$ 212,262</b>	<b>\$ 11,526</b>	<b>5%</b>	
<b>UTILITIES</b>														
505011 Gas & Electric	\$ 22,519	\$ 18,418	\$ 4,101	22%		\$ 114,962	\$ 128,925	\$ (13,963)	-11%	\$ 114,962	\$ 122,984	\$ (8,022)	-7%	
505021 Water & Garbage	\$ 12,320	\$ 10,313	\$ 2,007	19%		\$ 78,766	\$ 72,191	\$ 6,575	9%	\$ 78,766	\$ 69,471	\$ 9,295	13%	
505031 Telecommunications	\$ 9,732	\$ 10,025	\$ (293)	-3%		\$ 63,250	\$ 70,177	\$ (6,927)	-10%	\$ 63,250	\$ 55,083	\$ 8,167	15%	
<b>Total Utilities -</b>	<b>\$ 44,571</b>	<b>\$ 38,756</b>	<b>\$ 5,815</b>	<b>15%</b>		<b>\$ 256,978</b>	<b>\$ 271,293</b>	<b>\$ (14,315)</b>	<b>-5%</b>	<b>\$ 256,978</b>	<b>\$ 247,538</b>	<b>\$ 9,440</b>	<b>4%</b>	
<b>CASUALTY &amp; LIABILITY</b>														
506011 Insurance - Property	\$ 5,965	\$ 9,862	\$ (3,897)	-40%		\$ 37,845	\$ 69,034	\$ (31,189)	-45%	\$ 37,845	\$ 23,734	\$ 14,111	59%	
506015 Insurance - PL & PD	\$ 40,526	\$ 42,500	\$ (1,974)	-5%		\$ 283,682	\$ 297,500	\$ (13,818)	-5%	\$ 283,682	\$ 240,533	\$ 43,149	18%	
506021 Insurance - Other	\$ -	\$ -	\$ -	0%		\$ 711	\$ 801	\$ (90)	-11%	\$ 711	\$ 1,007	\$ (296)	-29%	
506123 Settlement Costs	\$ 5,804	\$ 12,500	\$ (6,696)	-54%	9	\$ 28,845	\$ 87,500	\$ (58,655)	-67%	\$ 28,845	\$ 17,627	\$ 11,218	64%	
506127 Repairs - Dist Prop	\$ 5,101	\$ -	\$ 5,101	100%		\$ (16,351)	\$ -	\$ (16,351)	100%	\$ (16,351)	\$ (7,124)	\$ (9,227)	130%	
<b>Total Casualty &amp; Liability -</b>	<b>\$ 57,396</b>	<b>\$ 64,862</b>	<b>\$ (7,466)</b>	<b>-12%</b>		<b>\$ 334,732</b>	<b>\$ 454,835</b>	<b>\$ (120,103)</b>	<b>-26%</b>	<b>\$ 334,732</b>	<b>\$ 275,777</b>	<b>\$ 58,955</b>	<b>21%</b>	
<b>TAXES</b>														
507051 Fuel Tax	\$ 1,572	\$ 1,025	\$ 547	53%		\$ 5,276	\$ 7,175	\$ (1,899)	-26%	\$ 5,276	\$ 3,355	\$ 1,921	57%	
507201 Licenses & permits	\$ 3,090	\$ 1,113	\$ 1,977	178%		\$ 7,420	\$ 8,689	\$ (1,269)	-15%	\$ 7,420	\$ 6,840	\$ 580	8%	
507999 Other Taxes	\$ 1,305	\$ 2,183	\$ (879)	-40%		\$ 21,708	\$ 15,281	\$ 6,426	42%	\$ 21,708	\$ 13,315	\$ 8,393	63%	
<b>Total Utilities -</b>	<b>\$ 5,967</b>	<b>\$ 4,321</b>	<b>\$ 1,646</b>	<b>38%</b>		<b>\$ 34,404</b>	<b>\$ 31,145</b>	<b>\$ 3,259</b>	<b>10%</b>	<b>\$ 34,404</b>	<b>\$ 23,510</b>	<b>\$ 10,894</b>	<b>46%</b>	

5-2.07



**FY09**  
**Consolidated Operating Expenses**  
**For the month ending - January 31, 2009**

	Current Period					Year to Date				YTD Year Over Year Comparison			
	Actual	Budget	\$ Var	% Var	Notes	Actual	Budget	\$ Var	% Var	FY09	FY08	\$ Var	% Var
<b><u>PURCHASED TRANSPORTATION</u></b>													
503406 Contr/Paratrans	\$ 7,633	\$ 20,833	\$ (13,200)	-63%	10	\$ 113,912	\$ 145,831	\$ (31,919)	-22%	\$ 113,912	\$ 183,202	\$ (69,290)	-38%
Total Purchased Transportation -	\$ 7,633	\$ 20,833	\$ (13,200)	-63%		\$ 113,912	\$ 145,831	\$ (31,919)	-22%	\$ 113,912	\$ 183,202	\$ (69,290)	-38%
<b><u>MISC</u></b>													
509011 Dues & Subscriptions	\$ 4,658	\$ 5,409	\$ (751)	-14%		\$ 36,250	\$ 37,863	\$ (1,613)	-4%	\$ 36,250	\$ 9,959	\$ 26,291	264%
509085 Advertising - Rev Product	\$ -	\$ -	\$ -	0%		\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	0%
509101 Emp Incentive Prog	\$ 6,095	\$ 1,109	\$ 4,986	450%	11	\$ 11,635	\$ 28,154	\$ (16,519)	-59%	\$ 11,635	\$ 11,446	\$ 189	2%
509121 Employee Training	\$ -	\$ 3,111	\$ (3,111)	-100%		\$ 16,857	\$ 27,777	\$ (10,920)	-39%	\$ 16,857	\$ 36,131	\$ (19,274)	-53%
509123 Travel	\$ 442	\$ 6,011	\$ (5,569)	-93%		\$ 20,294	\$ 42,077	\$ (21,783)	-52%	\$ 20,294	\$ 17,042	\$ 3,252	19%
509125 Local Meeting Exp	\$ 623	\$ 390	\$ 233	60%		\$ 2,867	\$ 2,730	\$ 137	5%	\$ 2,867	\$ 2,037	\$ 830	41%
509127 Board Director Fees	\$ 900	\$ 1,100	\$ (200)	-18%		\$ 6,500	\$ 7,700	\$ (1,200)	-16%	\$ 6,500	\$ 7,800	\$ (1,300)	-17%
509150 Contributions	\$ -	\$ 54	\$ (54)	-100%		\$ -	\$ 378	\$ (378)	-100%	\$ -	\$ 98	\$ (98)	-100%
509197 Sales Tax Expense	\$ (22)	\$ -	\$ (22)	100%		\$ (22)	\$ -	\$ (22)	100%	\$ (22)	\$ (52)	\$ 30	-58%
509198 Cash Over/Short	\$ (14)	\$ 42	\$ (56)	-134%		\$ (254)	\$ 294	\$ (547)	-186%	\$ (254)	\$ 791	\$ (1,045)	-132%
Total Misc -	\$ 12,682	\$ 17,226	\$ (4,543)	-26%		\$ 94,127	\$ 146,973	\$ (52,845)	-36%	\$ 94,127	\$ 85,252	\$ 8,875	10%
<b><u>LEASES &amp; RENTALS</u></b>													
512011 Facility Rentals	\$ 65,033	\$ 59,138	\$ 5,895	10%	12	\$ 416,778	\$ 413,966	\$ 2,812	1%	\$ 416,778	\$ 403,333	\$ 13,445	3%
512061 Equipment Rentals	\$ 1,880	\$ 2,301	\$ (421)	-18%		\$ 11,260	\$ 16,857	\$ (5,597)	-33%	\$ 11,260	\$ 14,390	\$ (3,130)	-22%
Total Leases & Rentals -	\$ 66,913	\$ 61,439	\$ 5,474	9%		\$ 428,038	\$ 430,823	\$ (2,785)	-1%	\$ 428,038	\$ 417,723	\$ 10,315	2%
<b>Total Non-Personnel Expenses -</b>	<b>\$ 572,657</b>	<b>\$ 760,052</b>	<b>\$ (187,395)</b>	<b>-25%</b>		<b>\$ 4,081,185</b>	<b>\$ 5,564,955</b>	<b>\$ (1,483,769)</b>	<b>-27%</b>	<b>\$ 4,081,185</b>	<b>\$ 4,327,220</b>	<b>\$ (246,035)</b>	<b>-6%</b>
<b>TOTAL OPERATING EXPENSE -</b>	<b>\$ 3,243,995</b>	<b>\$ 3,264,480</b>	<b>\$ (20,485)</b>	<b>-1%</b>		<b>\$ 20,437,336</b>	<b>\$ 23,094,097</b>	<b>\$ (2,656,762)</b>	<b>-12%</b>	<b>\$ 20,437,336</b>	<b>\$ 19,873,538</b>	<b>\$ 563,798</b>	<b>3%</b>

\*\* does not include depreciation

**Current Period Notes:**

- 1) **Total Personnel Expenses** are over budget due to accruals adjustment entries for the prior month.
- 2) **Prof & Tech Fees** are below budget due to anticipated website redesign costs straight-lined.
- 3) **Temp Help** is over budget due to vacancies and work loads.

5-2.08



**FY09**  
**Consolidated Operating Expenses**  
*For the month ending - January 31, 2009*

	Current Period				Notes	Year to Date				YTD Year Over Year Comparison			
	Actual	Budget	\$ Var	% Var		Actual	Budget	\$ Var	% Var	Actual FY09	FY08	\$ Var	% Var
4) <b>Repair - Equipment</b>	is over budget due to North Star invoices for December and January paid in January 2009.												
5) <b>Haz Mat Disposal</b>	is under budget due to lower than anticipated spending for the month of January 2009. Higher expenses will be incurred towards the end of the fiscal year.												
6) <b>Fuels &amp; Lube Rev Veh</b>	is under budget due to the CNG conversion and the resulting economies in fuel consumption.												
7) <b>Tires &amp; Tubes</b>	is under budget due to the cyclical nature of tire and tube replacements.												
8) <b>Printing</b>	is over budget due to printing of bus passes and coupons (105,000 regular, youth, and senior and disabled bus passes, and 30,000 paracruz coupons.)												
9) <b>Settlement costs</b>	are under budget due to less than anticipated settlement costs for the month.												
10) <b>Contr/Paratrans</b>	is under budget due to less than budgeted rides for the month.												
11) <b>Emp Incentive Program</b>	is over budget due to holiday party expenses. A credit of \$4,000 for employee, board and retiree reimbursements will be received in the next month.												
12) <b>Facility Rentals</b>	is over budget due to the two year irrevocable license for Felton Faire.												

5-2.09





**FY2009**  
**CAPITAL BUDGET**  
*For the month ending - January 31, 2009*

	<u>YTD Actual</u>	<u>FY09 Budget</u>	<u>Remaining Budget</u>	<u>% Spent YTD</u>
<b><u>Grant-Funded Projects</u></b>				
MetroBase Maintenance Facility	\$ 3,310,355	\$ 3,605,404	\$ 295,049	92%
MetroBase Operations Facility	\$ 2,737	\$ 9,404,019	\$ 9,401,282	0%
Local Bus Replacement	\$ 3,566,858	\$ 3,572,932	\$ 6,074	100%
CNG Bus Conversions	\$ 1,382,989	\$ 3,410,000	\$ 2,027,011	41%
Pacific Station Project	\$ 153,927	\$ 3,176,077	\$ 3,022,150	5%
H17 Bus Replacement	\$ 2,359,041	\$ 2,359,050	\$ 9	100%
Facility Camera Security System	\$ -	\$ 220,000	\$ 220,000	0%
Bus Camera Project	\$ -	\$ 205,000	\$ 205,000	0%
Trapeze Pass Interactive Voice Response System	\$ -	\$ 91,141	\$ 91,141	0%
Replace Dispatch Console	\$ 18,048	\$ 25,000	\$ 6,952	72%
<b>Subtotal Grant Funded Projects</b>	<b>\$ 10,793,955</b>	<b>\$ 26,068,623</b>	<b>\$ 15,274,668</b>	<b>41%</b>
<b><u>District Funded Projects</u></b>				
<b><u>IT Projects</u></b>				
Replace Fleet & Facilities Maintenance Software	\$ -	\$ 470,000	\$ 470,000	0%
Upgrade District Phone System	\$ 15,369	\$ 100,000	\$ 84,631	15%
GFI Data Warehouse Project: Phase I	\$ 3,743	\$ 65,000	\$ 61,257	6%
Replace 4 Windows and 1 Sun Server	\$ 49,496	\$ 50,000	\$ 504	99%
Trapeze Pass Customer Certification Software	\$ -	\$ 46,000	\$ 46,000	0%
ATP - Hastus Run Time Analysis Program - IT/OPS	\$ 18,695	\$ 19,264	\$ 569	97%
Upgrade GFI software to System 7 Version 2	\$ -	\$ 17,000	\$ 17,000	0%
(2) Laptops (1) IT (1) Financial Analyst	\$ 3,551	\$ 4,500	\$ 949	79%
FMLA Tracking Software	\$ -	\$ 4,000	\$ 4,000	0%
Portable Projector w/case	\$ 1,955	\$ 2,000	\$ 45	98%
<b><u>Facilities Repair &amp; Improvements</u></b>				
Bus Stop Improvements	\$ 7,770	\$ 100,000	\$ 92,230	8%
Replace Roof - Watsonville Transit Center Main Building	\$ -	\$ 50,000	\$ 50,000	0%
Patch, Reseal, and Restripe - Greyhound Lot	\$ -	\$ 21,390	\$ 21,390	0%
Digital ID Card Processing Equipment	\$ -	\$ 17,000	\$ 17,000	0%
Patch, Reseal, Restripe - Cavallaro Transit Center (SVT)	\$ -	\$ 7,550	\$ 7,550	0%
Patch, Reseal, Restripe - Soquel Park & Ride Lot	\$ -	\$ 5,650	\$ 5,650	0%
Reseal Operations Facility Roof-FY08 - Retention Invoice	\$ 2,663	\$ 2,663	\$ 1	100%
Add Alarm Audio/Visual - OPS Bldg	\$ 1,744	\$ -	\$ (1,744)	-100%

5-2.2.10



**FY2009**  
**CAPITAL BUDGET**  
*For the month ending - January 31, 2009*

	<u>YTD Actual</u>	<u>FY09 Budget</u>	<u>Remaining Budget</u>	<u>% Spent YTD</u>
<b><u>Revenue Vehicle Replacement</u></b>				
Rebuild Bus Engines - 1998 Fleet	\$ 165,570	\$ 129,302	\$ (36,268)	128%
Trilogy Bike Racks (7) w/assembly kits	\$ 13,380	\$ 15,000	\$ 1,620	89%
<b><u>Non-Revenue Vehicle Replacement</u></b>				
DGS Fees - Last FY Purchase	\$ 1,651	\$ -	\$ (1,651)	-100%
<b><u>Maint Equipment</u></b>				
Replace Repeater for Davenport	\$ -	\$ 15,000	\$ 15,000	0%
Portable Steam Cleaner - Transit Center cleaning	\$ 10,081	\$ 11,207	\$ 1,126	90%
Battery Powered Walk Behind Sweeper - Pacific Station	\$ 5,285	\$ 5,500	\$ 215	96%
Wet/Dry Vac - Pacific Station, & other Metro facilities	\$ -	\$ 4,200	\$ 4,200	0%
Decelerometer w/Printer	\$ 1,242	\$ 1,323	\$ 81	94%
2000 Watt Generator	\$ 1,095	\$ 1,200	\$ 105	91%
<b><u>Office Equipment</u></b>				
NONE	\$ -	\$ -	\$ -	0%
<b><u>Admin</u></b>				
Purchase & Renovation of Vernon Bldg	\$ 152,561	\$ 2,962,139	\$ 2,809,578	5%
<b>Subtotal District Funded Projects</b>	<b>\$ 455,850</b>	<b>\$ 4,126,888</b>	<b>\$ 3,671,038</b>	<b>11%</b>
<b>TOTAL CAPITAL PROJECTS</b>	<b>\$ 11,249,804</b>	<b>\$ 30,195,511</b>	<b>\$ 18,945,706</b>	<b>37%</b>

5-2.211



**FY2009**  
**CAPITAL BUDGET**  
*For the month ending - January 31, 2009*

	<u>YTD Actual</u>	<u>FY09 Budget</u>	<u>Remaining Budget</u>	<u>% Spent YTD</u>
<b><u>CAPITAL FUNDING</u></b>				
Federal Capital Grants	\$ 752,084	\$ 3,158,343	\$ 2,406,258	24%
State/Other Capital Grants (STIP)	\$ 6,582,989	\$ 8,610,000	\$ 2,027,011	76%
State/Other Capital Grants (1B PTMISEA)	\$ 2,109,624	\$ 4,404,019	\$ 2,294,395	48%
State/Other Capital Grants (TCRP)	\$ 153,927	\$ 832,410	\$ 678,483	18%
State Security Bond Funds (1B)	\$ 18,048	\$ 440,505	\$ 422,457	4%
STA Funding (Current Year)	\$ -	\$ 528,833	\$ 528,833	0%
STA Funding (Prior Year)	\$ 719,748	\$ 2,066,267	\$ 1,346,519	35%
Alternative Fuel Conversion Fund	\$ 462,000	\$ 462,000	\$ -	100%
District Reserves (Lawsuit & Sakata Proceeds)	\$ 451,384	\$ 6,440,577	\$ 5,989,193	7%
Capital Reserves	\$ -	\$ 3,252,557	\$ 3,252,557	0%
<b>TOTAL CAPITAL FUNDING</b>	<b>\$ 11,249,804</b>	<b>\$ 30,195,511</b>	<b>\$ 18,945,706</b>	<b>37%</b>

5-2.a.12

# GOVERNMENT TORT CLAIM

## RECOMMENDED ACTION

TO: Board of Directors

FROM: District Counsel

RE: Claim of: Blair, Joe  
Date of Incident: 12/13/2008

Received: 2/17/2009 Claim #: 09-0005  
Occurrence Report No.: SC 12-08-22

In regard to the above-referenced Claim, this is to recommend that the Board of Directors take the following action:

- 1. Reject the claim entirely.
- 2. Deny the application to file a late claim.
- 3. Grant the application to file a late claim.
- 4. Reject the claim as untimely filed.
- 5. Reject the claim as insufficient.
- 6. Allow the claim in full.
- 7. Allow the claim in part, in the amount of \$ \_\_\_\_\_ and reject the balance.

By Margaret Gallagher  
Margaret Gallagher  
DISTRICT COUNSEL

Date: 2-20-09

---

I, Cindi Thomas, do hereby attest that the above Claim was duly presented to and the recommendations were approved by the Santa Cruz Metropolitan Transit District's Board of Directors at the meeting of March 27, 2009.

By \_\_\_\_\_  
Cindi Thomas  
RECORDING SECRETARY

Date: \_\_\_\_\_

MG/lg  
Attachment(s)

CLAIM AGAINST THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

(Pursuant to Section 910 et Seq., Government Code)

Claim # 09-6005

TO: BOARD OF DIRECTORS, Santa Cruz Metropolitan Transit District

ATTN: Secretary to the Board of Directors  
370 Encinal Street, Suite 100  
Santa Cruz, CA 95060

1. Claimant's Name: Joe Blair

Claimant's Address/Post Office Box: [REDACTED]

Claimant's Phone Number: [REDACTED]

2. Address to which notices are to be sent: same as above

3. Occurrence: back injury

Date: 12/20/08 Time: @ 5:40pm Place: Logue & Morrison

Circumstances of occurrence or transaction giving rise to claim: The right rear strap on my wheelchair was not secured properly. The driver made a sudden & unnecessary stop causing the chair to rotate forward & to the left, twisting lower back & impacting shoulder.

4. General description of indebtedness, obligation, injury, damage, or loss incurred so far as is known: cost of medical attention

5. Name or names of public employees or employees causing injury, damage, or loss, if known: Metro driver #555

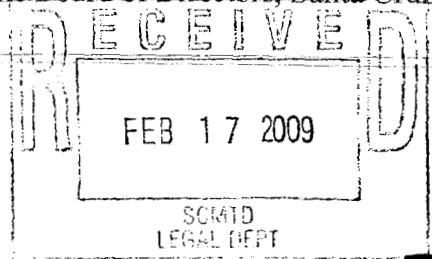
6.	Amount claimed now .....	\$ <u>970.00</u>
	Estimated amount of future loss, if known .....	\$ <u>500.00</u>
	TOTAL .....	\$ <u>1470.00</u>

7. Basis of above computations: current expenses + estimate

Joe Blair  
CLAIMANT'S SIGNATURE (or Company Representative or Parent of Minor Claimant)

2/11/09  
DATE

Note: Claim must be presented to the Secretary to the Board of Directors, Santa Cruz Metropolitan Transit District



5-3.2

# GOVERNMENT TORT CLAIM

## RECOMMENDED ACTION

TO: Board of Directors

FROM: District Counsel

RE: Claim of: CSAA-IIB (Scott, B.) Received: 2/25/09 Claim #: 09-0008  
Date of Incident: 01/08/09 Occurrence Report No.: SC 01-09-04

In regard to the above-referenced Claim, this is to recommend that the Board of Directors take the following action:

- 1. Reject the claim entirely.
- 2. Deny the application to file a late claim.
- 3. Grant the application to file a late claim.
- 4. Reject the claim as untimely filed.
- 5. Reject the claim as insufficient.
- 6. Allow the claim in full.
- 7. Allow the claim in part, in the amount of \$ \_\_\_\_\_ and reject the balance.

By Margaret Gallagher  
Margaret Gallagher  
DISTRICT COUNSEL

Date: 3-05-09

---

I, Cindi Thomas, do hereby attest that the above Claim was duly presented to and the recommendations were approved by the Santa Cruz Metropolitan Transit District's Board of Directors at the meeting of March 27, 2009.

By \_\_\_\_\_  
Cindi Thomas  
RECORDING SECRETARY

Date: \_\_\_\_\_

MG/lg  
Attachment(s)



California State  
Automobile Association  
Inter-Insurance Bureau

P. O. Box 920  
Suisun City, CA 94585-0920

February 23, 2009

09-0008

Santa Cruz metropolitan transit district  
370 Encinal St Ste 100  
Santa Cruz, Ca  
95060

**RE:** Your Insured: Jane McDonald  
Your Claim No.: SC010904  
Our Insured: Bryan M Scott  
Our Claim No.: 05-3P0570-7  
Date of Loss: 01/08/2009

Dear Santa Cruz Metropolitan Transit District:

This will confirm our subrogation interest arising from this loss. We have settled the claim with our insured and based on the following facts, request payment directly to **California State Automobile Association Inter-Insurance Bureau (CSAA-IIB)**:

In order to assist with and expedite the evaluation and processing of this subrogation demand, we enclose the relevant documentation in support of our claim. This information may contain personal or privileged information about our insured, and is being provided to you pursuant to California Insurance Code Section 791.13 and may not be used for any unauthorized purpose.

Repair Bill	\$880.32
Deductible	\$0.00
Loss of Use	\$209.00
<hr/>	
TOTAL	\$1,089.32

Please be advised that any payment in an amount less than that set forth in this letter that is forwarded to CSAA without its prior authorization as described below **will not constitute a full and final settlement and will be accepted as partial payment only**. Since payments received in the mail are processed by clerical staff and deposited as a matter of course without examination, unauthorized payments for less than the full amount demanded may be processed inadvertently. Although such payments may be demarked as "payment in full" or have other words of similar meaning written on them, their processing will not constitute an accord and satisfaction, as CSAA has not agreed to acceptance of such payments. Only an authorized Subrogation Specialist may communicate, orally or in writing, CSAA's specific agreement to accept an amount less than that demanded in this letter.

If you have any questions, please feel free to contact the CSAA Subrogation Department.

Sincerely,

Subrogation Recovery Team C  
888 900-6520 extension 6299  
Fax 707-863-9052

RECEIVED  
FEB 25 2009  
5-3.4



## **AGENDA**

**MARCH 18, 2009 - 6:00 PM  
PACIFIC STATION CONFERENCE ROOM  
920 PACIFIC AVENUE, SANTA CRUZ, CALIFORNIA**

- 1. ROLL CALL**
- 2. AGENDA ADDITIONS/DELETIONS**
- 3. ORAL/WRITTEN COMMUNICATION**
- 4. CONSIDERATION OF APPROVAL OF MINUTES OF FEBRUARY 18, 2009**
- 5. FILE RIDERSHIP REPORT FOR NOVEMBER AND DECEMBER 2008**
- 6. FILE PARACRUZ OPERATIONS STATUS REPORT FOR NOVEMBER 2008**
- 7. REPORT BY MAC REPRESENTATIVE TO OTHER TRANSIT RELATED MEETINGS**
- 8. DISCUSSION OF METRO'S WEB SITE RE-DESIGN**
- 9. REVIEW OF SERVICE ANIMALS ON FIXED ROUTE, PARATRANSIT VEHICLES AND METRO'S FACILITIES POLICY**
- 10. REVIEW OF BICYCLES ON FIXED ROUTE BUSES POLICY**
- 11. CONSIDERATION OF FIXED ROUTE HOLIDAY SERVICE**
- 12. DISTRIBUTION OF MAC VOUCHERS**
- 13. COMMUNICATIONS TO METRO GENERAL MANAGER**
- 14. COMMUNICATIONS TO METRO BOARD OF DIRECTORS**
- 15. ITEMS FOR NEXT MEETING AGENDA**
- 16. ADJOURNMENT**

*NEXT MEETING: WEDNESDAY, APRIL 15, 2009, AT 6:00 PM  
PACIFIC STATION CONFERENCE ROOM*

**5-4.1**



**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

**Minutes - METRO Advisory Committee (MAC)**

**January 21, 2009**

The METRO Advisory Committee (MAC) met on Wednesday, January 21, 2009 in the Pacific Station Conference Room located at 920 Pacific Avenue in Santa Cruz, California.

Chair Naomi Gunther called the meeting to order at 6:02 p.m.

**1. ROLL CALL:**

**MEMBERS PRESENT**

Naomi Gunther, Chair  
Mara Murphy, Vice Chair  
Dennis "Pop" Papadopulo  
Stuart Rosenstein  
Dave Williams

**MEMBERS ABSENT**

Heidi Curry  
Robert Yount

**VISITORS PRESENT**

Steve Prince, Bus Operator/ UTU Rep.

**STAFF PRESENT**

Mary Ferrick, Fixed Route Superint.  
April Warnock, Paratransit Superint.

**2. AGENDA ADDITIONS/DELETIONS**

None.

**3. ORAL/WRITTEN COMMUNICATION**

Written:

None.

Oral:

Dennis Papadopulo asked if operators still do a welfare check with passengers they haven't seen in awhile? April Warnock answered that ParaCruz does welfare checks when there is an alert given.

Dave Williams notified the committee that Robert Yount and Mike Rotkin are scheduled to be on the KSCO radio station on Monday, January 26, 2009 from 12:00 to 2:00 p. m. to promote METRO and MAC.

Mary Ferrick reported that the bench has been replaced at the bus stop on Poplar Street.

**4. CONSIDERATION OF APPROVAL OF MINUTES OF DECEMBER 17, 2008**

**ACTION: MOTION: DENNIS PAPADOPULO SECOND: MARA MURPHY**

**ACCEPT AND FILE MINUTES OF THE DECEMBER 17, 2008 MEETING AS PRESENTED.**

5-4.2

**Motion passed unanimously with Heidi Curry and Robert Yount being absent.**

**5. ACCEPT RIDERSHIP REPORT FOR OCTOBER 2008**

There was discussion of factors that account for the significant increase from the previous year. Such as METRO adding additional service on the weekends on Highway 17 Express in the fall, gas prices and larger enrollment at UCSC.

**6. FILE PARACRUZ OPERATIONS STATUS REPORT FOR SEPTEMBER 2008**

April Warnock stated the ready window percentage for September 2007 total pick-ups has a typo it should be 7462.

Vice Chair Mara Murphy asked about the subcontractor rides. April Warnock explained that ParaCruz subcontracts the overflow runs to Watsonville Transportation or Santa Cruz Transportation. The companies' train their drivers as back up drivers and the runs are done in ParaCruz vehicles.

**7. CONSIDERATION OF PASSENGER LOADING AND UNLOADING ZONE AT THE WATSONVILLE TRANSIT CENTER**

April Warnock distributed a copy of a diagram and photographs of the ParaCruz drop off location at the Watsonville Transit Center, which is attached to the file copy of these minutes. Ms. Warnock indicated on the diagram and with the photographs where ParaCruz loads and unloads riders on Rodriguez Street. She explained that it's a shared stop and there is room for transfers.

Dave Williams stated there are 3 or 4 spaces in that area and maybe one of them should be designated as a blue zone for disabled and/or ParaCruz. Mary Ferrick said she could ask the Bus Stop and Advisory Committee about the designation. Ms. Ferrick also said, because it is a public street and sidewalk, there would have to be some interaction with the City of Watsonville.

**8. REPORT BY MAC REPRESENTATIVE TO OTHER TRANSIT RELATED MEETINGS**

None.

**9. CONSIDERATION OF FIXED ROUTE HOLIDAY SERVICE**

Mary Ferrick reported that the approximate minimum cost is \$18,000.00 per day for fixed route holiday service. This figure is based only on the average operator wage at time and a half and the number of current hours of a Sunday level service, which is 477 hours. It does not include any other costs associated with running service.

Stuart Rosenstein feels no service on holidays is a real hardship for many people and expressed his opinion regarding minimal service on holidays.

**10. CONSIDERATION OF PUBLISHED BUS SCHEDULES AND ABILITY OF METRO'S FIXED ROUTE TO STAY "ON TIME" AND MAKE CONNECTIONS**

Stuart Rosenstein said route 69 is frequently late on the occasions that he has ridden it and would like to know why METRO is sticking to a time schedule that isn't accurate?

There was considerable discussion on variations of traffic, ridership and construction that makes it almost impossible to stay on schedule at certain times of the day. The discussion turned to suggestions of actions that could and couldn't be implemented due to financial, service, technological or staff impact.

**ACTION: MOTION: STUART ROSENSTEIN SECOND: DAVE WILLIAMS**

**MAC RECOMMENDS THAT METRO MANAGEMENT ADD AN ADVISORY STATEMENT TO HEADWAYS AND THE WEB SITE TO REFLECT POSSIBLE DELAYS DURING PEAK HOURS.**

**Motion passed unanimously with Heidi Curry and Robert Yount being absent.**

**11. BUS OPERATOR SHIFTS**

There was discussion regarding operator hours and shifts.

**12. CONSIDERATION OF REGULAR MEETING MAC CALENDAR FOR 2009**

MAC members discussed coming up with suggestions of topics dedicated to specific meeting times and the possibility of taking a month off in the summer. The 2009 MAC meeting schedule was not adopted and will be revisited next month.

**13. DISTRIBUTION OF MAC VOUCHERS**

Mary Ferrick distributed METRO MAC vouchers to the MAC members at this time.

**14. COMMUNICATIONS TO METRO GENERAL MANAGER**

None.

**15. COMMUNICATIONS TO METRO BOARD OF DIRECTORS**

None.

**16. ITEMS FOR NEXT MEETING AGENDA**

- Election of Officers
- Consideration of MAC 2009 Regular Meeting Calendar
- Discussion of Revised Elderly and Persons with Disabilities Fixed Route Discount Fare Policy
- Consideration of Fixed Route Holiday Service
- Consideration of Designated Disabled Parking Space at the Watsonville Transit Center

**ADJOURN**

There being no further business, Chair Naomi Gunther thanked everyone for participating and adjourned the meeting at 7:54 p.m.

Respectfully submitted,

KAREN BLIGHT  
Administrative Assistant

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27<sup>th</sup>, 2009  
**TO:** Board of Directors  
**FROM:** April Warnock, Paratransit Superintendent  
**SUBJECT:** METRO PARACRUZ OPERATIONS STATUS REPORT

## I. RECOMMENDED ACTION

**This report is for information only - no action requested**

## II. SUMMARY OF ISSUES

- METRO ParaCruz is the federally mandated ADA complementary paratransit program of the Transit District, providing shared ride, door-to-door demand-response transportation to customers certified as having disabilities that prevent them from independently using the fixed route bus.
- METRO assumed direct operation of paratransit services November 1, 2004.
- Operating Statistics and customer feedback information reported are for the month of December 2008.
- ParaCruz Performance Goals are reflected in the Comparative Statistics Table in order to better compare actual performance.
- A breakdown of pick-up times beyond the ready window is included.
- At the January 23<sup>rd</sup>, 2008 METRO Board of Directors meeting, Staff was requested to provide additional information on the number of ParaCruz in-person eligibility assessments in comparison to past years, since implementation.

## III. DISCUSSION

METRO ParaCruz is the federally mandated ADA complementary paratransit program of the Transit District, providing shared ride, door-to-door demand-response transportation to customers certified as having disabilities that prevent them from independently using the fixed route bus.

METRO began direct operation of ADA paratransit service (METRO ParaCruz) beginning November 1, 2004. This service had been delivered under contract since 1992.

At the January 23<sup>rd</sup>, 2008 METRO Board of Directors meeting Staff was requested to provide additional information on the number of ParaCruz eligibility assessments conducted each year since in-person eligibility assessments started August 2002. In person Eligibility assessments

were initiated while METRO’s ADA Paratransit was a service contracted with Community Bridges. METRO ParaCruz has been administered in-house since October 2004. Attachment G illustrates the differences of the number of assessments conducted each year, separated into each category of Eligibility determinations.

There has been discussion regarding ParaCruz on-time performance. It was noted that most statistical data continues to show improvement, the reported percentage of pick ups performed within the “ready window” has remained relatively consistent, hovering at roughly 90%. Staff was requested to provide a break down reflecting pick-ups beyond the “ready window”.

The table below displays the percentage of pick-ups within the “ready window” and a breakdown in 5-minute increments for pick-ups beyond the “ready window”.

	<b>December 2007</b>	<b>December 2008</b>
Total pick ups	6699	7282
<b>Percent in “ready window”</b>	<b>94.48%</b>	<b>94.01%</b>
1 to 5 minutes late	2.42%	2.65%
6 to 10 minutes late	1.09%	1.41%
11 to 15 minutes late	.73%	.95%
16 to 20 minutes late	.42%	.54%
21 to 25 minutes late	.24%	.25%
26 to 30 minutes late	.18%	.08%
31 to 35 minutes late	.06%	.04%
36 to 40 minutes late	.07%	.04%
41 or more minutes late (excessively late/missed trips)	.01%	.03%
<b>Total beyond “ready window”</b>	<b>5.52%</b>	<b>5.99%</b>

During the month of December 2008, ParaCruz received five (5) Customer Service complaints. Three (3) of the complaints were valid, and two (2) were not valid.

As a way to monitor performance for selected items, two new columns have been added to the Comparative Operating Statistics Table. They are titled, respectively, ‘Performance ‘ and ‘Performance Goals’. These new columns identify what the average is for the unpredictable factors, and performance goals that we have established for reported items where performance is a critical indicator to ParaCruz’ efficiency.

**IV. FINANCIAL CONSIDERATIONS**

NONE

**V. ATTACHMENTS**

**Attachment A:** Comparative Operating Statistics Table for December 2008.

5-5.2

- Attachment B:** Number of Rides Comparison Chart
- Attachment C:** Shared vs. Total Rides Chart
- Attachment D:** Mileage Comparison Chart
- Attachment E:** Year To Date Mileage Chart
- Attachment F:** Daily Drivers vs. Subcontractor Chart
- Attachment G:** Eligibility Charts

# Attachment **A**

Board of Directors  
Board Meeting March 27<sup>th</sup>, 2008

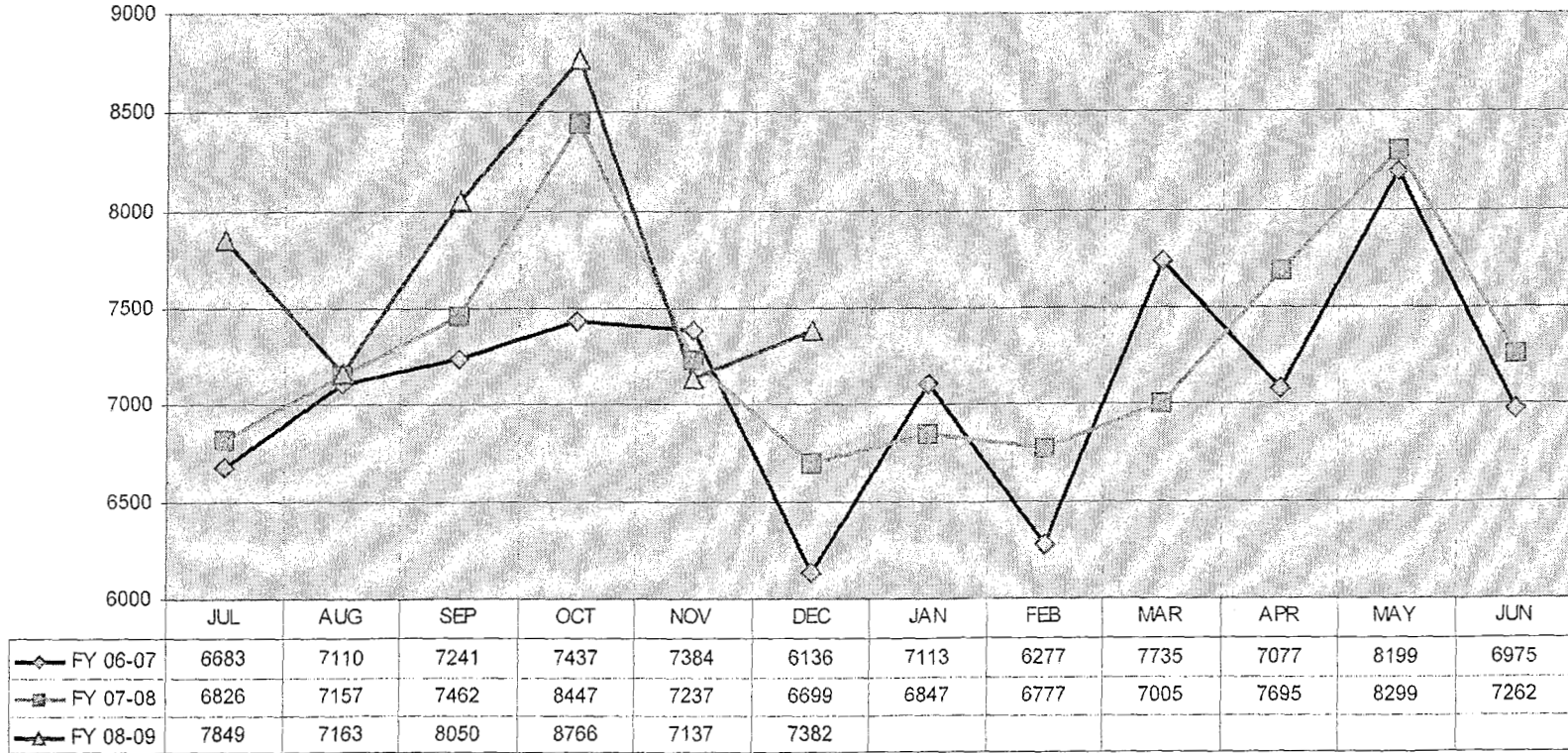
## Comparative Operating Statistics This Fiscal Year, Last Fiscal Year through December.

	Dec 07	Dec 08	Fiscal 07-08	Fiscal 08-09	Performance Averages	Performance Goals
Requested	7360	8315	47,152	49,988	8151	
Performed	6699	7282	43,828	46,247	7511	
Cancel	18.06%	22.18%	16.27%	18.19%	18.04%	
No Shows	2.72%	2.97%	2.46%	2.97%	2.78%	Less than 3%
Total miles	45,769	48,812	288,980	310,340	49,466	
Av trip miles	5.15	5.06	5.15	5.08	4.98	
Within ready window	94.48%	94.01%	93.68%	93.74%	94.30%	92.00% or better
Excessively late/missed trips	1	2	17	22	2.92	Zero (0)
Call center volume	5683	6077	36,154	33,037	6334	
Call average seconds to answer	34	32	30	35	29.92 seconds	Less than 2 minutes
Hold times less than 2 minutes	96%	95%	96%	96%	96%	Greater than 90%
Distinct riders	737	784	1,413	1,420	789	
Most frequent rider	58 rides	47 rides	282 rides	229 rides	53 rides	
Shared rides	65.6%	62.2%	65.1%	65.4%	68.27%	Greater than 60%
Passengers per rev hour	2.45	2.17	2.46	2.13	2.17	Greater than 1.6 passengers/hour
Rides by supplemental providers	8.28%	7.8%	18.18%	9.79%	10.22%	No more than 25%
Vendor cost per ride	\$23.12	\$25.48	\$23.00	\$23.36	\$22.71	
ParaCruz driver cost per ride (estimated)	\$23.97	\$25.73	\$23.96	\$24.68	\$25.35	
Rides < 10 miles	71.56%	72.40%	78.39%	70.80%	71.9%	
Rides > 10	28.44%	27.60%	21.61%	29.20%	28.1%	

5-5. a1



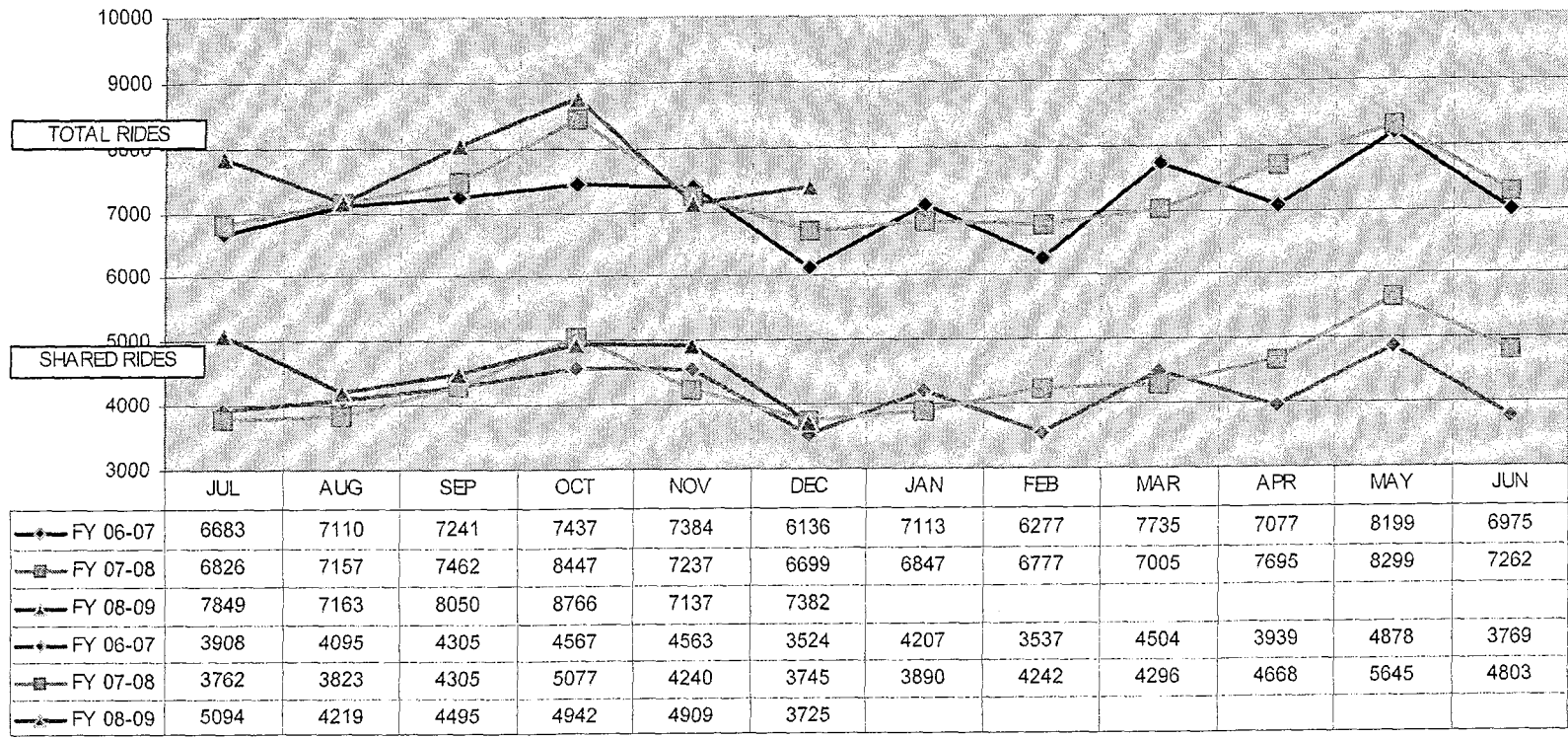
NUMBER OF RIDES COMPARISON CHART



5-5.61

Attachment B

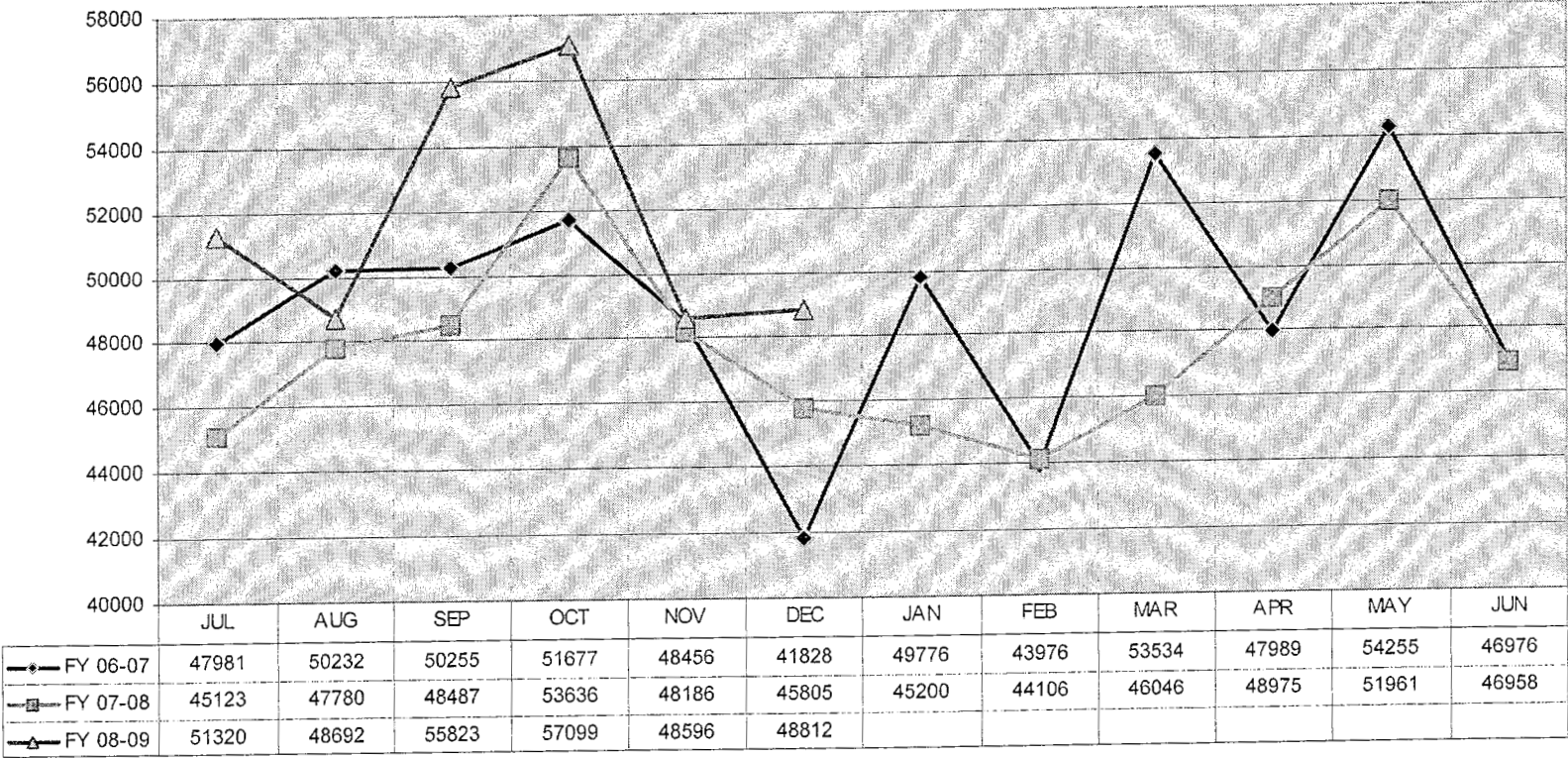
TOTAL vs. SHARED RIDES



5-5.01

Attachment C

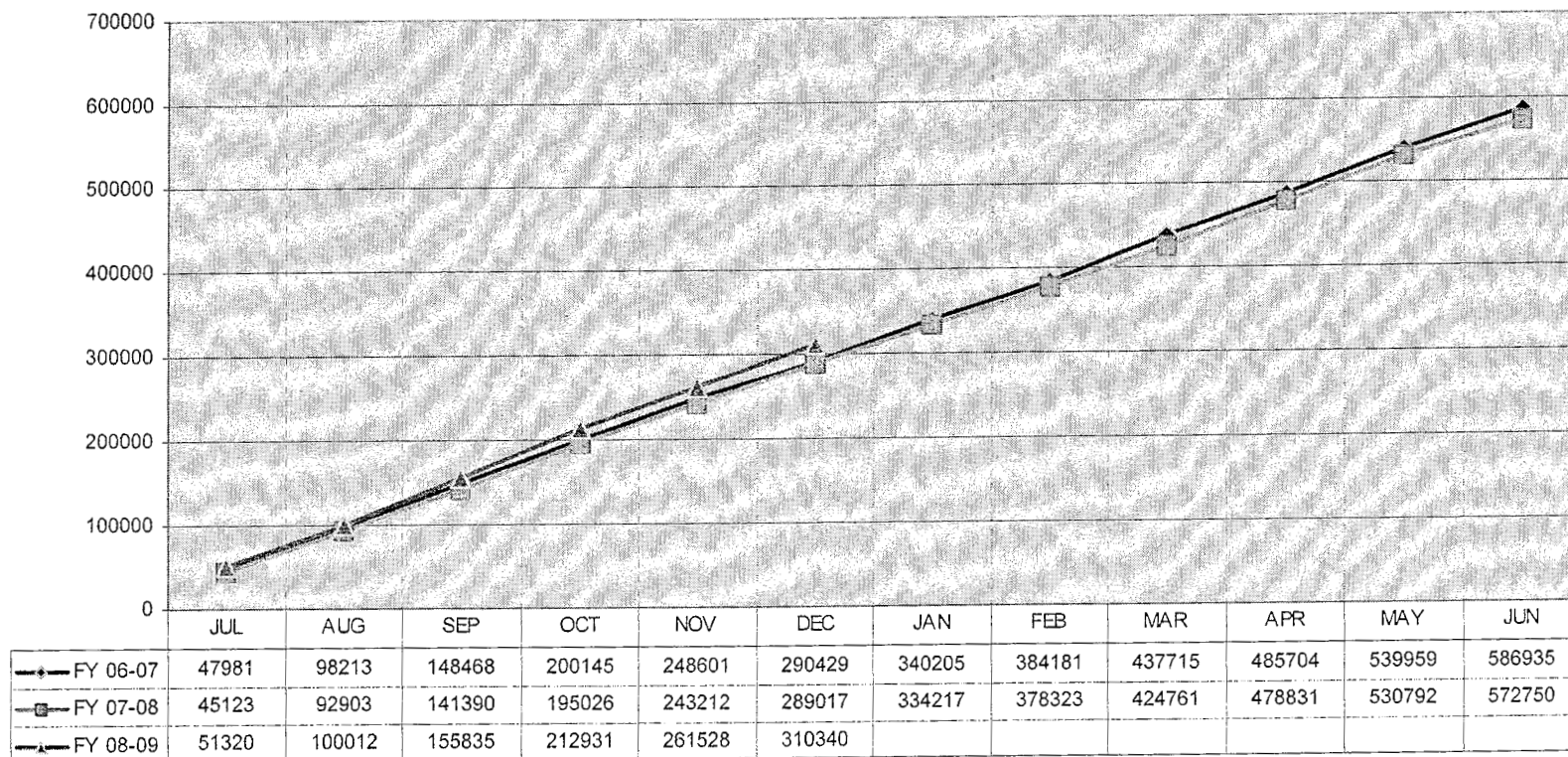
MILEAGE COMPARISON



5-5.11

Attachment D

YEAR TO DATE MILEAGE COMPARISON

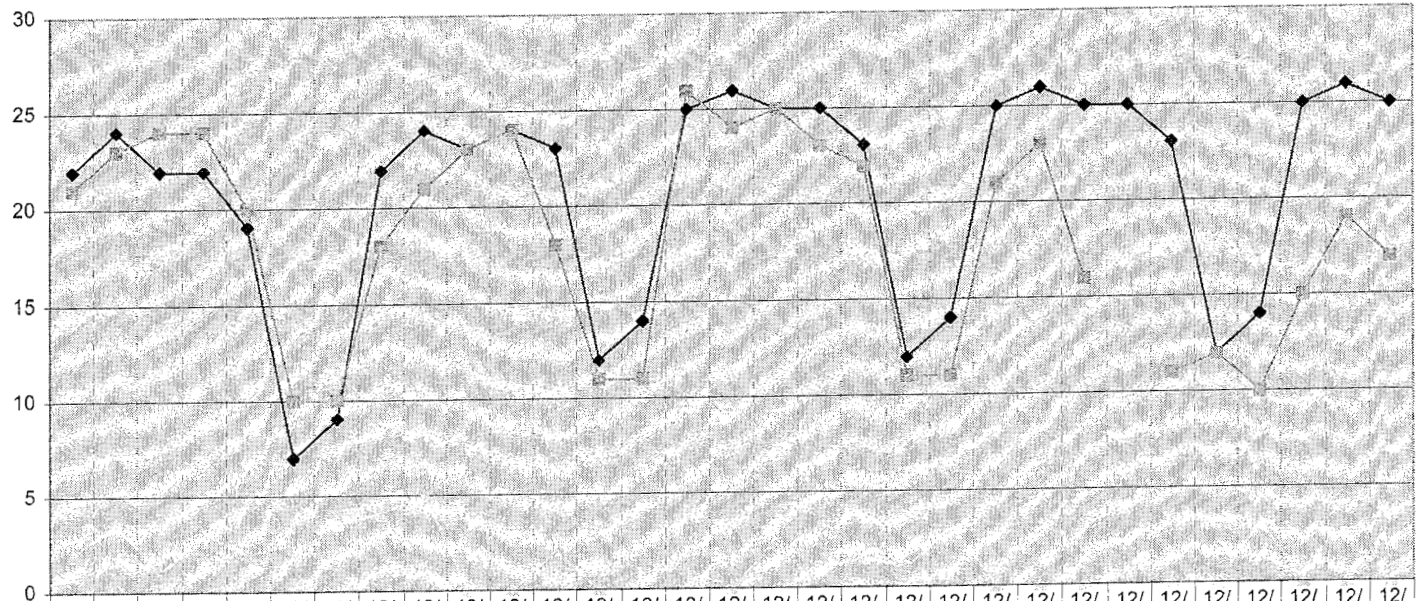


5-5.e1

Attachment E

5-5.41

DAILY DRIVER vs. SUBCONTRACTOR



	12/1	12/2	12/3	12/4	12/5	12/6	12/7	12/8	12/9	12/10	12/11	12/12	12/13	12/14	12/15	12/16	12/17	12/18	12/19	12/20	12/21	12/22	12/23	12/24	12/25	12/26	12/27	12/28	12/29	12/30	12/31
◆ #PC SCHEDULE	22	24	22	22	19	7	9	22	24	23	24	23	12	14	25	26	25	25	23	12	14	25	26	25	25	23	12	14	25	26	25
▣ #PC ACTUAL	21	23	24	24	20	10	10	18	21	23	24	18	11	11	26	24	25	23	22	11	11	21	23	16		11	12	10	15	19	17
△ # SUBCON	2.0	3.5	1.0	3.0	2.0	2.5	3.5	4.0	5.0	0.0	0.0	2.0	0.0	1.0	1.0	0.0	2.5	1.0	1.5	1.0	3.0	0.0	0.0	0.0		0.0	0.0	3.0	0.0	0.0	0.0

Attachment E

OUT OF DATABASE	UNRESTRICTED	RESTRICTED CONDITIONAL	RESTRICTED TRIP BY TRIP	TEMPORARY	VISITOR	DCSD	TOTAL
1/1/2005 to 12/31/2005	189	30	12	33	6	283	<b>553</b>
1/1/2006 to 12/31/2006	466	39	24	47	17	384	<b>977</b>
1/1/2007 to 12/31/2007	264	26	19	53	22	173	<b>557</b>
1/1/2008 to 12/31/2008	308	17	19	57	18	58	<b>477</b>

INTO DATABASE	UNRESTRICTED	RESTRICTED CONDITIONAL	RESTRICTED TRIP BY TRIP	TEMPORARY	VISITOR	TOTAL	DENIED
1/1/2005 to 12/31/2005	428	16	34	48	6	<b>532</b>	28
1/1/2006 to 12/31/2006	356	13	47	49	17	<b>482</b>	4
1/1/2007 to 12/31/2007	442	29	93	46	22	<b>632</b>	6
1/1/2008 to 12/31/2008	400	59	57	23	18	<b>557</b>	12

NUMBER OF ELIGIBLE RIDERS	2005	5336
	2006	<b>5315</b>
	2007	<b>4820</b>
	2008	<b>4895</b>
	<b>CURRENTLY</b>	<b>4975</b>

# HIGHWAY 17 EXPRESS OPERATING STATISTICS SUMMARY

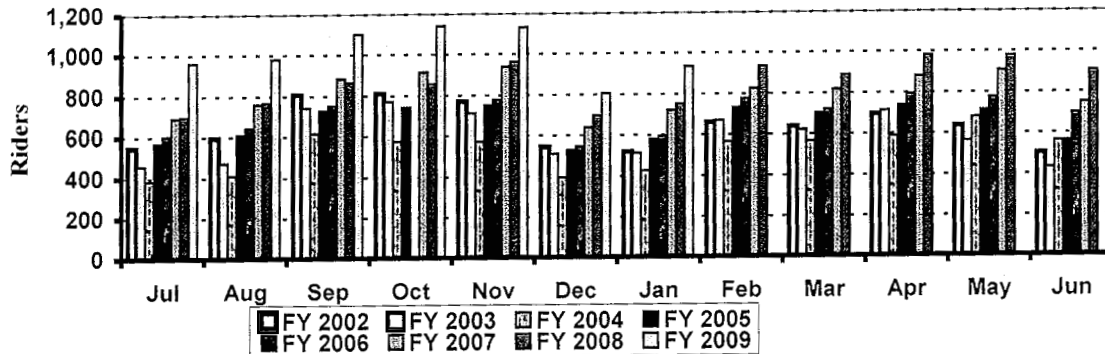
## FISCAL YEAR 2009

MONTHLY	Jul-2008	Aug-2008	Sep-2008	Oct-2008	Nov-2008	Dec-2008	Jan-2009	Feb-2009	Mar-2009	Apr-2009	May-2009	Jun-2009
<b>Total Ridership</b>	25,909	26,183	27,827	31,546	27,852	21,008	24,835					
Avg. Weekday Ridership	959	977	1,101	1,142	1,133	805	933					
Avg. Saturday Ridership	540	566	550	625	567	422	559					
Avg. Sunday Ridership	531	565	500	697	660	324	488					
<b>Total Service Days</b>	31	31	30	31	30	31	31					
Number of Weekdays	22	21	21	23	18	22	21					
Number of Saturdays	4	5	4	4	5	4	5					
Numbers of Sundays	5	5	5	4	7	5	5					
<b>Revenue Hours</b>	1,485	1,451	1,468	1,633	1,456	1,592	1,552					

QUARTERLY	Q1	Q2	Q3	Q4
<b>Total Ridership</b>	79,919	80,406		
Avg. Weekday Ridership	1,012	1,022		
Avg. Saturday Ridership	553	540		
Avg. Sunday Ridership	532	564		
<b>Revenue Hours</b>	4,403	4,681		

FYTD	Jul-2008	Aug-2008	Sep-2008	Oct-2008	Nov-2008	Dec-2008	Jan-2009	Feb-2009	Mar-2009	Apr-2009	May-2009	Jun-2009
<b>Total Ridership</b>	25,909	52,092	79,919	111,465	139,317	160,325	185,160					
Avg. Weekday Ridership	959	968	1,012	1,046	1,061	1,017	1,005					
Avg. Saturday Ridership	540	554	553	570	569	547	549					
Avg. Sunday Ridership	531	548	532	567	592	549	540					
<b>Revenue Hours</b>	1,485	2,936	4,403	6,037	7,492	9,084	10,637					

**HIGHWAY 17 EXPRESS**  
Average Weekday Ridership History



**FYTD COMPARISON**  
2009 vs. 2008

	FY 2009	FY 2008	Percent Change
# of Weekdays	148	148	0.0%
Total Ridership	185,160	144,750	27.9%
Avg. Wkday Ridership	1,005	797	26.1%
Avg Sat Ridership	549	401	36.8%
Avg Sun Ridership	540	399	35.3%
Revenue Hours	10,637	10,087	5.5%
Riders Per Rev. Hour	17.41	14.35	21.3%

5-6.1

**Santa Cruz METRO  
January 2009 Ridership Report**

ROUTE	Miles	Hours	UC			Full Fare	Tickets	Cash S/D		S/D Day Pass	S/D Day Pass	Passes/Free Rides	Pacific Shores	Total Ridership	Passengers Per Mile	Passengers Per Hour	Wheelchair	Bike
			Student	Faculty	Cabrillo			Riders	Day Pass									
10	5,185.26	434.33	34,423	1,542	68	1,133	61	61	9	9	1,014	12	38,324	7.39	88.24	25	958	
13	1,978.56	169.20	15,491	600	20	349	8	11	4	3	344	0	16,830	8.51	99.47	2	408	
15	6,872.16	577.40	47,575	1,619	164	1,235	57	49	10	4	1,111	0	51,824	7.54	89.75	18	1,295	
16	14,577.15	1,197.97	97,403	3,272	185	3,932	112	144	25	8	2,853	9	107,943	7.40	90.10	48	2,632	
19	5,427.57	409.26	28,056	1,068	59	1,140	43	81	7	20	1,015	3	31,492	5.80	76.95	13	822	
3	2,272.40	164.66	532	87	107	555	82	107	21	40	1,509	61	3,101	1.36	18.83	5	80	
4	1,415.10	146.66	279	56	37	481	310	243	6	20	3,645	5	5,082	3.59	34.65	35	131	
7	1,042.00	93.34	290	31	9	91	25	47	3	9	635	1	1,141	1.10	12.22	11	10	
9	433.64	23.00	31	11	3	94	10	5	0	2	175	0	331	0.76	14.39	0	9	
12A	236.95	17.10	1,213	37	2	26	2	2	0	1	7	0	1,290	5.44	75.44	0	36	
20	5,823.17	388.07	23,420	794	114	1,211	76	107	10	0	116	0	27,421	4.71	70.66	21	585	
27x	1,265.04	108.00	4,989	207	5	87	2	2	1	0	116	0	5,409	4.28	50.08	1	271	
31	2,131.64	110.66	84	53	47	564	48	24	5	1	873	2	1,701	0.80	15.37	7	137	
32	714.84	42.34	6	4	5	203	13	7	1	0	293	1	533	0.75	12.59	1	12	
33	423.81	19.55	1	12	0	124	34	0	0	0	205	0	376	0.89	19.23	0	3	
34	237.32	15.01	8	7	1	94	4	1	0	0	163	0	278	1.17	18.52	1	10	
35	37,977.79	1,905.25	1,375	394	432	13,309	653	1,251	328	137	21,507	1	39,387	1.04	20.67	50	1,867	
40	2,434.00	98.99	28	18	8	606	24	32	13	11	675	1	1,416	0.58	14.30	0	43	
41	2,971.35	123.33	295	107	24	633	24	15	7	1	479	11	1,596	0.54	12.94	0	166	
42	3,388.70	125.84	240	15	25	465	21	40	4	2	324	8	1,144	0.34	9.09	1	102	
53	1,113.60	78.66	19	17	5	154	7	61	7	9	460	4	743	0.67	9.45	22	20	
54	2,186.70	126.66	23	10	22	209	10	77	9	8	475	0	843	0.39	6.66	17	15	
55	2,697.20	183.34	28	19	342	582	52	100	13	23	1,421	1	2,581	0.96	14.08	38	82	
56	2,105.80	93.00	5	8	107	239	12	56	11	2	473	0	913	0.43	9.82	10	28	
66	6,520.38	560.84	1,774	323	183	4,848	284	724	99	49	7,499	12	15,795	2.42	28.16	125	463	
68	5,001.40	408.51	1,892	317	85	2,707	186	398	64	26	5,300	3	10,978	2.19	26.87	76	290	
68N	1,846.50	132.99	688	47	18	723	16	40	1	0	757	0	2,290	1.24	17.22	7	139	
69	3,346.70	302.17	1,202	273	112	2,683	193	307	46	17	4,122	12	8,967	2.68	29.68	68	286	
69A	14,532.19	780.16	1,441	412	202	9,009	760	1,236	109	101	9,243	9	22,522	1.55	28.87	156	823	
69N	1,659.90	133.32	438	67	35	563	10	38	0	0	758	2	1,911	1.15	14.33	17	121	
69W	14,100.52	784.67	1,834	443	1,014	8,580	580	979	138	78	10,587	26	24,259	1.72	30.92	119	859	
70	2,734.20	224.83	216	60	839	1,130	122	175	25	16	2,274	9	4,866	1.78	21.64	20	142	
71	48,586.77	2,777.17	3,271	994	2,512	24,849	1,924	2,980	281	289	25,132	79	62,311	1.28	22.44	257	2,946	
72	5,260.08	254.34	11	17	28	1,429	79	270	25	22	1,040	0	2,921	0.56	11.48	19	64	
74	3,216.98	188.34	5	19	3	1,344	103	238	18	26	896	0	2,652	0.82	14.08	12	22	
75	6,598.80	397.50	42	37	41	3,354	146	544	67	72	2,244	0	6,547	0.99	16.47	40	153	
76	2,102.48	110.73	32	11	6	554	44	84	11	13	529	3	1,287	0.61	11.62	3	31	
79	1,569.26	91.66	4	24	3	555	74	241	18	58	679	0	1,656	1.06	18.07	47	21	
88	798.48	80.01	11	1	1	11	4,077	1	0	0	913	0	5,015	6.28	62.68	4	5	
91x	5,600.48	240.83	388	117	339	1,163	228	115	59	22	1,493	1	3,925	0.70	16.30	5	214	
UC Supp.	1,875.71	116.94	7,189	302	4	112	0	6	2	0	123	2	7,740	4.13	66.19	1	114	
Night Owl	1,534.81	121.68	4,661	37	15	337	5	4	0	0	88	1	5,148	3.35	42.31	0	147	
<b>TOTAL</b>	<b>231,797.38</b>	<b>14,358.31</b>	<b>280,913</b>	<b>13,489</b>	<b>7,231</b>	<b>91,467</b>	<b>10,521</b>	<b>10,903</b>	<b>1,457</b>	<b>1,091</b>	<b>115,024</b>	<b>393</b>	<b>532,489</b>	<b>2.30</b>	<b>37.09</b>	<b>1,302</b>	<b>16,562</b>	
<b>ROUTE</b>			<b>VTA/SC</b>	<b>ECO</b>	<b>Full</b>	<b>S/D</b>	<b>Passes/</b>	<b>RIDERSHIP</b>	<b>Passengers</b>	<b>Passengers</b>	<b>Wheelchair</b>	<b>Bike</b>						
			<b>Day Pass</b>	<b>Pass</b>	<b>Fare</b>	<b>Day Pass</b>	<b>Free Rides</b>		<b>Per Mile</b>	<b>Per Hour</b>								
17	48,685.04	1,552.32	85	80	286	11,206	1,185	1,350	121	10,521								
											70	1,106						

**January Ridership 557,323**

5-7.1



**Santa Cruz METRO  
January 2008 Ridership Report**

ROUTE	Miles	Hours	Passes/ Free Rides	UC Student	UC Staff Faculty	Full Fare	Day Pass	Cash S/D Riders	S/D Day Pass	Cabrillo	Total Ridership	Passengers Per Mile	Passengers Per Hour	W/C	Bike
10	5,297.98	444.00	1,057	27,218	2,010	949	7	54	5	30	31,365	5.92	70.64	27	595
13	1,868.64	159.80	378	12,605	667	283	5	10	1	15	13,984	7.48	87.51	1	259
15	6,490.58	545.50	958	43,036	1,944	1,271	8	47	4	65	47,391	7.30	86.88	4	814
16	15,290.57	1,262.15	2,289	82,745	3,862	3,534	30	139	12	121	92,862	6.07	73.57	20	1,801
19	5,728.62	423.69	1,000	23,459	1,164	850	8	63	9	27	26,631	4.65	62.85	5	505
3	2,386.02	172.89	1,318	509	103	786	18	143	22	78	3,151	1.32	18.23	8	79
4	1,485.86	153.99	3,508	445	99	563	11	285	48	62	5,400	3.63	35.07	48	123
7	1,094.10	98.01	558	89	31	72	1	51	11	24	886	0.81	9.04	3	11
9	455.32	24.15	233	10	29	62	1	18	2	2	362	0.80	14.99	-	6
12A	223.79	16.15	14	915	138	41	-	1	1	3	1,119	5.00	69.29	-	32
20	6,320.80	421.12	1,223	19,684	1,030	1,178	21	79	12	137	23,581	3.73	56.00	12	445
27	1,194.76	102.00	48	4,718	258	93	-	3	2	1	5,125	4.29	50.25	1	139
31	2,238.22	115.14	877	63	81	584	11	15	1	21	1,716	0.77	14.90	3	85
32	750.58	44.46	150	13	3	235	-	2	1	6	442	0.59	9.94	1	9
33	423.81	19.55	107	-	-	72	-	-	-	1	210	0.50	10.74	-	2
34	237.32	15.01	144	1	-	95	-	1	-	-	246	1.04	16.39	-	1
35	38,227.11	1,918.02	19,905	1,276	471	12,334	261	1,036	136	408	36,560	0.98	19.06	53	1,335
40	2,453.94	99.69	589	42	3	596	14	55	11	4	1,334	0.54	13.38	1	38
41	3,070.31	127.50	521	364	56	578	9	20	1	12	1,599	0.52	12.54	2	84
42	3,389.16	125.76	392	140	37	346	-	46	3	19	1,004	0.30	7.98	1	69
53	1,169.28	82.59	542	6	10	271	12	59	6	9	929	0.79	11.25	49	44
54	2,059.83	119.49	316	26	9	251	6	38	1	4	666	0.32	5.57	-	9
55	2,832.06	192.51	1,247	15	20	660	25	113	15	271	2,400	0.85	12.47	18	52
56	2,211.09	97.65	390	8	7	254	8	34	2	95	807	0.36	8.26	1	12
66	6,533.46	563.11	6,637	1,504	440	5,676	129	645	50	139	15,623	2.39	27.74	116	369
68	5,029.56	411.26	4,660	1,438	287	3,069	92	343	35	87	10,181	2.02	24.76	65	237
68N	1,852.50	132.99	771	469	43	886	-	58	-	19	2,281	1.23	17.15	17	59
69	3,494.25	315.80	3,913	1,181	294	2,894	57	345	40	79	8,986	2.57	28.45	47	246
69A	14,571.99	783.69	8,329	1,169	510	9,192	153	961	122	154	21,487	1.47	27.42	183	629
69N	1,742.90	139.99	834	406	94	755	2	46	1	46	2,206	1.27	15.76	9	125
69W	14,177.46	790.50	8,894	1,554	482	8,843	119	810	78	803	22,156	1.56	28.03	126	757
70	2,590.29	212.99	2,053	233	70	1,164	13	111	18	652	4,480	1.73	21.03	18	127
71	49,033.04	2,804.90	23,260	2,338	1,063	24,005	348	2,755	190	2,292	58,336	1.19	20.80	246	2,254
72	5,523.08	267.06	1,012	18	36	1,327	37	254	20	33	2,827	0.51	10.59	19	39
74	3,402.08	197.76	710	3	26	1,306	14	206	15	26	2,395	0.70	12.11	13	32
75	6,586.20	397.50	1,848	11	37	2,610	52	396	50	78	5,266	0.80	13.25	29	110
76	1,892.23	99.75	349	1	10	328	8	74	5	-	811	0.43	8.13	6	9
79	1,647.73	96.24	988	18	34	553	19	213	51	10	1,956	1.19	20.32	59	29
88	798.48	80.01	331	6	1	15	-	2	-	3	5,040	6.31	62.99	-	-
91	5,640.42	233.70	1,416	93	133	1,318	52	79	13	350	3,639	0.65	15.57	5	203
UC Supplemental	1,127.84	69.75	35	5,663	229	100	-	3	-	4	6,048	5.36	86.71	-	67
Unknown			80	7	1	-	-	-	-	17	149			-	-
<b>TOTAL</b>	<b>232,543.26</b>	<b>14,377.82</b>	<b>103,884</b>	<b>233,499</b>	<b>15,822</b>	<b>89,999</b>	<b>1,551</b>	<b>9,613</b>	<b>994</b>	<b>6,207</b>	<b>473,637</b>	<b>2.04</b>	<b>32.94</b>	<b>1,216</b>	<b>11,841</b>

ROUTE	Monthly Pass	VTA/SC Day Pass	CalTrain	Full Fare	17 Day Pass	S/D Riders	ECO Pass	METRO RIDERSHIP	Passengers Per Mile	Passengers Per Hour	W/C	Bike			
17	45,680.90	1,482.78	9,048	38	47	8,935	118	1,149	6,028	186	20,537	0.45	13.85	37	963

Night Owl	3,848.00
TOTAL	3,848.00

<b>January Ridership</b>	498,022
<b>January Revenue</b>	\$ 209,735.98

5-7.2

BUS OPERATOR LIFT TEST \*PULL-OUT\*

	A	B	C	D	E	F	
VEHICLE CATEGORY	TOTAL BUSES	AVG # DEAD IN GARAGE	AVG # AVAIL. FOR SERVICE	AVG # IN SERVICE	AVG # SPARE BUSES	AVG # LIFTS OPERATING	% LIFTS WORKING ON PULL-OUT BUSES
FLYER/HIGHWAY 17 - 40'	7	1	6	0	6	0	100%
FLYER/LOW FLOOR - 40'	12	2	10	7	3	7	100%
FLYER/LOW FLOOR - 35'	18	1	17	10	7	10	100%
FLYER/HIGH FLOOR - 35'	13	6	7	1	6	1	100%
GILLIG/SAM TRANS - 40'	10	1	9	5	4	5	100%
DIESEL CONVERSION - 35'	15	3	12	11	1	11	100%
DIESEL CONVERSION - 40'	14	4	10	8	2	8	100%
ORION/HIGHWAY 17 - 40'	11	3	8	7	1	7	100%
GOSHEN	1	0	1	1	0	1	0%
TROLLEY	1	0	1	0	1	0	100%
CNG NEW FLYER - 40'	10	2	8	7	1	7	100%

5-7.3

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

## PASSENGER LIFT PROBLEMS

MONTH OF JANUARY 2009

BUS #	DATE	DAY	REASON
9820LF	6-Jan	Tuesday	Passenger side of coach wheelchair area back seat will not stay in up position.
9803LF	7-Jan	Wednesday	Wheelchair on passenger side santa cruz arm stuck, cannot move.
9806LF	7-Jan	Wednesday	No alarm for kneel or ramp.
9834G	8-Jan	Thursday	No lift.
9812LF	13-Jan	Tuesday	When pushing kneel switch to kneel bus, switch will shock you 1/3 of the time.
9840G	15-Jan	Thursday	Lift did not work for WC on last run of day.
2238CN	22-Jan	Thursday	Kneel very slow going up.
2223CN	25-Jan	Sunday	Bell for wheelchair people on right side has a wire exposed.

F New Flyer  
G Gillig  
C Champion  
LF Low Floor Flyer  
GM GMC  
CG CNG  
CN SR855 & SR854  
OR Orion/Hwy 17

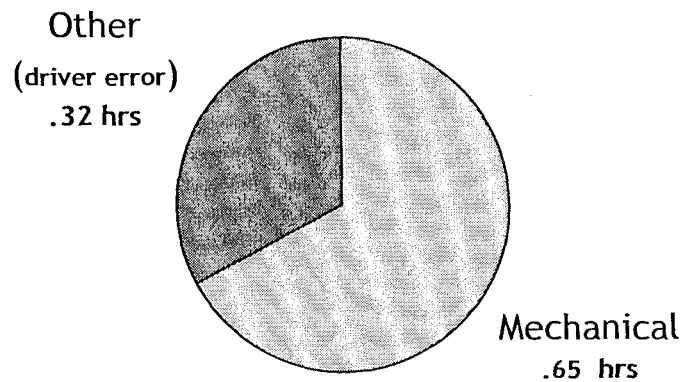
Note: Lift operating problems that cause delays of less than 30 minutes.

5-7.4

### Dropped Service for FY09


	FY07		FY08		FY09	
	Dropped Hours	Dropped Miles	Dropped Hours	Dropped Miles	Dropped Hours	Dropped Miles
July	5.02	96.88	5.53	90.97	81.53	1482.81
August	15.02	276.46	4.93	110.45	1.13	23.95
September	11.30	160.72	9.00	191.05	11.50	194.51
October	37.52	540.19	9.52	122.24	29.75	555.98
November	37.55	477.48	3.32	45.89	11.60	59.92
December	6.08	143.84	18.97	241.87	1.58	21.32
January	12.24	188.23	49.20	453.86	0.97	10.95
February	13.07	188.23	53.53	717.31		
March	7.13	133.30	22.50	315.63		
April	4.85	43.67	40.75	586.55		
May	16.00	241.42	16.40	246.82		
June	62.19	802.29	52.05	882.35		
<b>TOTAL</b>	<b>227.96</b>	<b>3,292.71</b>	<b>285.70</b>	<b>4,004.99</b>	<b>138.07</b>	<b>2,349.43</b>

#### Dropped Service Breakdown for January 2009



5-7.5

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009  
**TO:** Board of Directors  
**FROM:** Angela Aitken, Finance Manager   
**SUBJECT:** UNIVERSITY OF CALIFORNIA – SANTA CRUZ  
MONTHLY SERVICE-JANURARY 2009 VERSUS JANURARY 2008

## I. RECOMMENDED ACTION

**This report is for information purposes only. No action is required**

## II. SUMMARY OF ISSUES

- There were Eighteen (18) school-term days in 2009 and Nineteen (19) in 2008
- Revenue received from UCSC was \$356,147.42 versus \$291,196.34; an increase of 22.3%
- System-wide UCSC ridership increased by 16.3%
  - Total student ridership increased by 18.4%
  - Total Faculty/Staff ridership decreased by 14.9%
- Average Student ridership per school-term day increased by 25%
- Average Faculty/Staff ridership per weekday decreased by 10.8%

## III. DISCUSSION

For the month of January 2009, there were Eighteen (18) school-term days. School-term service resumed on January 6 after the winter holiday.

UCSC Revenue increased a total of \$64,951.08; or 22.3%. UCSC ridership for all METRO routes was up 16.3%. This includes an 18.4% increase in student ridership and a 14.9% decrease in Faculty/ Staff ridership.

Please see attached graphs that will depict Total UCSC Student and Faculty/Staff ridership increasing by 18.4% and decreasing by 14.9% respectively.

## IV. FINANCIAL CONSIDERATIONS.

Overall UCSC revenue is under budget by 0.1% as of January 2009.

5-8.1

**V. ATTACHMENTS**

**Attachment A: Total UCSC Monthly Revenue**

**Attachment B: Total UCSC Ridership**

**Attachment C: Monthly UCSC Ridership**

**Attachment D: Total UCSC Student Ridership**

**Attachment E: Total UCSC Faculty/Staff Ridership**

Prepared by: Erich Friedrich

5-8.2

### Total UCSC Monthly Revenue

FY 08 UCSC Revenue									
Date	Regular Student Bill	Regular Staff Bill	Night Owl Bill	Supplemental Bill	27x	TOTAL	Last Year	% Change	\$ Change
Jul-07	\$ 33,024.00	\$ 15,920.00				\$ 48,944.00	\$ 46,696.41	4.8%	\$ 2,247.59
Aug-07	\$ 38,130.53	\$ 17,149.80				\$ 55,280.33	\$ 54,014.10	2.3%	\$ 1,266.23
Sep-07	\$ 101,639.55	\$ 16,690.11	\$ 2,433.63	\$ 4,176.42	\$ 1,501.57	\$ 126,441.28	\$ 170,754.64	-26.0%	\$ (44,313.36)
Oct-07	\$ 331,758.64	\$ 20,061.49	\$ 7,658.98	\$ 8,740.07	\$ 5,020.67	\$ 373,239.85	\$ 314,022.57	18.9%	\$ 59,217.28
Nov-07	\$ 247,552.14	\$ 16,527.66	\$ 6,321.47	\$ 3,205.48	\$ 5,018.58	\$ 278,625.33	\$ 253,496.74	9.9%	\$ 25,128.59
Dec-07	\$ 119,753.81	\$ 12,320.21	\$ 4,731.24	\$ 4,824.85	\$ 2,820.60	\$ 144,450.71	\$ 76,128.86	89.7%	\$ 68,321.85
Jan-08	\$ 256,740.31	\$ 17,162.30	\$ 10,939.02	\$ 2,683.50	\$ 3,671.21	\$ 291,196.34	\$ 277,066.89	5.1%	\$ 14,129.45
Feb-08	\$ 276,028.54	\$ 18,729.40	\$ 13,041.41	\$ 4,439.97	\$ 4,601.84	\$ 316,841.16	\$ 256,817.50	23.4%	\$ 60,023.66
Mar-08	\$ 209,758.69	\$ 17,772.03	\$ 8,550.08	\$ 7,601.47	\$ 4,626.41	\$ 248,308.68	\$ 210,515.59	18.0%	\$ 37,793.09
Apr-08	\$ 297,663.63	\$ 20,042.00	\$ 13,705.06	\$ 7,208.57	\$ 5,651.21	\$ 344,270.47	\$ 272,972.83	26.1%	\$ 71,297.64
May-08	\$ 275,379.83	\$ 19,473.42	\$ 12,965.34	\$ 9,079.77	\$ 6,163.16	\$ 323,061.52	\$ 294,166.80	9.8%	\$ 28,894.72
Jun-08	\$ 127,125.79	\$ 16,138.87	\$ 4,122.59	\$ 4,842.39	\$ 3,027.40	\$ 155,257.04	\$ 148,913.76	4.3%	\$ 6,343.28
<b>FY 2008 Totals</b>	<b>\$ 2,314,555.46</b>	<b>\$ 207,987.30</b>	<b>\$ 84,468.82</b>	<b>\$ 56,802.49</b>	<b>\$ 42,102.65</b>	<b>\$ 2,705,916.71</b>	<b>\$ 2,375,566.69</b>	<b>13.9%</b>	<b>\$330,350.02</b>
FY 09 UCSC Revenue									
Date	Regular Student Bill	Regular Staff Bill	Night Owl Bill	Supplemental Bill	27x	TOTAL	Last Year	% Change	\$ Change
Jul-08	\$ 40,787.95	\$ 14,367.08	-	\$ 9,719.80	-	\$ 64,874.83	\$ 48,944.00	32.5%	\$ 15,930.83
Aug-08	\$ 43,773.78	\$ 16,273.16	-	\$ 10,973.81	-	\$ 71,020.75	\$ 55,280.33	28.5%	\$ 15,740.42
Sep-08	\$ 151,871.29	\$ 18,162.59	\$ 3,763.96	\$ 2,563.82	\$ 2,007.46	\$ 178,369.12	\$ 126,441.28	41.1%	\$ 51,927.84
Oct-08	\$ 408,791.24	\$ 21,030.79	\$ 13,538.41	\$ 1,999.52	\$ 5,435.42	\$ 450,795.38	\$ 373,239.85	20.8%	\$ 77,555.53
Nov-08	\$ 274,825.68	\$ 15,381.16	\$ 10,512.74	\$ 5,500.47	\$ 3,989.36	\$ 306,220.05	\$ 278,625.33	9.9%	\$ 27,594.72
Dec-08	\$ 129,527.31	\$ 11,581.57	\$ 4,892.43	\$ 3,560.21	\$ 2,118.85	\$ 149,561.52	\$ 144,450.71	3.5%	\$ 5,110.81
Jan-09	\$ 324,761.80	\$ 15,605.62	\$ 11,679.83	\$297.04	\$ 3,803.13	\$ 356,147.42	\$ 291,196.34	22.3%	\$ 64,951.08
Feb-09						\$ -			\$ -
Mar-09						\$ -			\$ -
Apr-09						\$ -			\$ -
May-09						\$ -			\$ -
Jun-09						\$ -			\$ -
	<b>\$ 1,374,339.05</b>	<b>\$ 112,401.97</b>	<b>\$ 44,387.37</b>	<b>\$ 34,614.67</b>	<b>\$ 17,354.22</b>	<b>\$ 1,576,989.07</b>	<b>\$ 1,318,177.84</b>	<b>19.6%</b>	<b>\$258,811.23</b>

5-8.a1

Attachment A

## Total UCSC Ridership

<b>FY 08 UCSC Ridership</b>													
Year	July	August	September	October	November	December	January	February	March	April	May	June	Total
Student	32,666	37,753	93,856	326,808	244,940	110,576	237,057	254,874	193,683	274,851	254,275	117,383	2,178,722
Staff	15,702	16,980	15,412	19,072	15,761	11,376	15,846	17,292	16,410	18,506	17,981	14,902	195,240
<b>Total</b>	<b>48,368</b>	<b>54,733</b>	<b>109,268</b>	<b>345,880</b>	<b>260,701</b>	<b>121,952</b>	<b>252,903</b>	<b>272,166</b>	<b>210,093</b>	<b>293,357</b>	<b>272,256</b>	<b>132,285</b>	<b>2,373,962</b>
<b>Percentage Difference Between This Year and Last Year</b>													
Student	3.2%	4.8%	-40.3%	11.2%	5.4%	80.8%	-5.9%	10.3%	4.1%	9.8%	3.9%	-0.3%	4.0%
Staff	-12.1%	-20.1%	-15.9%	-1.1%	-5.2%	-2.9%	-7.9%	2.0%	-1.4%	7.9%	-3.6%	-0.8%	-5.5%
<b>Total</b>	<b>-2.3%</b>	<b>-4.4%</b>	<b>-37.7%</b>	<b>10.4%</b>	<b>4.7%</b>	<b>67.4%</b>	<b>-6.0%</b>	<b>9.8%</b>	<b>3.7%</b>	<b>9.7%</b>	<b>3.4%</b>	<b>-0.3%</b>	<b>3.2%</b>
<b>FY 09 UCSC Ridership</b>													
Year	July	August	September	October	November	December	January	February	March	April	May	June	Total
Student	37,662	40,419	131,263	353,320	273,202	114,975	280,693						1,231,534
Staff	13,266	15,026	15,698	18,177	15,302	11,263	13,488						102,220
<b>Total</b>	<b>50,928</b>	<b>55,445</b>	<b>146,961</b>	<b>371,497</b>	<b>288,504</b>	<b>126,238</b>	<b>294,181</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,333,754</b>
<b>Percentage Difference Between This Year and Last Year</b>													
Student	15.3%	7.1%	39.9%	8.1%	11.5%	4.0%	18.4%						-43.5%
Staff	-15.5%	-11.5%	1.9%	-4.7%	-2.9%	-1.0%	-14.9%						-47.6%
<b>Total</b>	<b>5.3%</b>	<b>1.3%</b>	<b>34.5%</b>	<b>7.4%</b>	<b>10.7%</b>	<b>3.5%</b>	<b>16.3%</b>						<b>-43.8%</b>
						All UC Trips	FY 08	FY 09					
						Student	1,083,656	1,231,534	13.6%				
						Staff	94,303	102,220	8.4%				
						<b>TOTAL</b>	<b>1,177,959</b>	<b>1,333,754</b>	<b>13.2%</b>				

5-8.61

Attachment B



Monthly UCSC Ridership

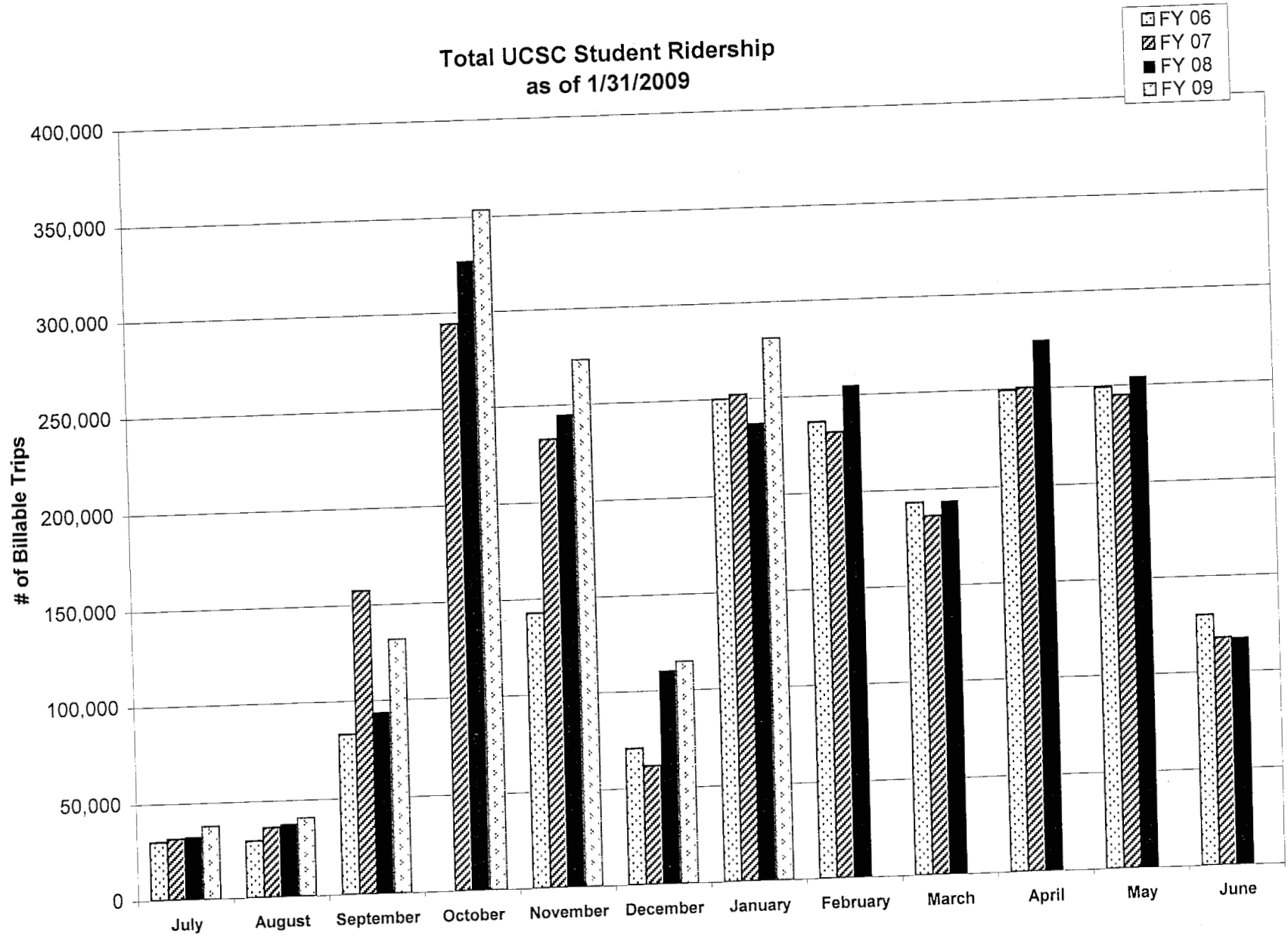
January 2009	Student Ridership			Faculty/ Staff Ridership			Average Student Ridership Per School Term Day			Average Faculty/Staff Ridership <i>Per Weekday</i>		
	FY 09	FY 08	%	FY 09	FY 08	%	FY 09	FY 08	%	FY 09	FY 08	%
Regular Service	263,854	223,085	18.3%	12,942	15,336	-15.6%	14,658.6	11,741.3	24.8%	647.1	730.3	-11.4%
Supplemental	7,189	5,663	26.9%	302	229	31.9%	399.4	298.1	34.0%	15.1	10.9	38.5%
Night Owl	4,661	3,591	29.8%	37	23	60.9%	258.9	189.0	37.0%	1.9	1.1	68.9%
27x	4,989	4,718	5.7%	207	285	-27.4%	277.2	248.3	11.6%	10.4	13.6	-23.7%
<b>TOTAL</b>	<b>280,693</b>	<b>237,057</b>	<b>18.4%</b>	<b>13,488</b>	<b>15,873</b>	<b>-15.0%</b>	<b>15,594.1</b>	<b>12,476.7</b>	<b>25.0%</b>	<b>674.4</b>	<b>755.9</b>	<b>-10.8%</b>

5-8.c1

Attachment C

5-8.d1

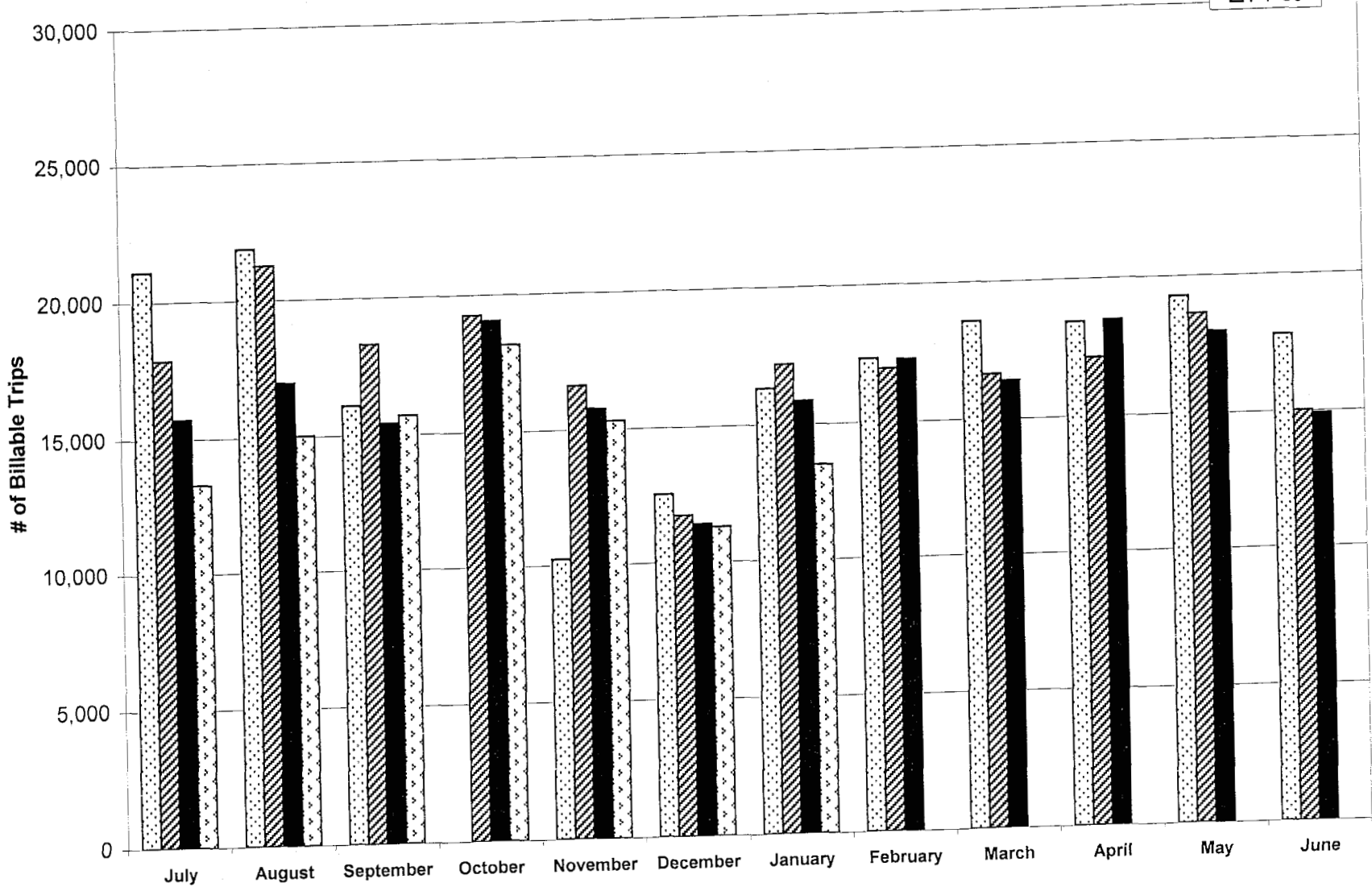
### Total UCSC Student Ridership as of 1/31/2009



Attachment D

Total UCSC Faculty/Staff Ridership  
as of 1/31/2009

FY 06  
FY 07  
FY 08  
FY 09



5-8.e1

Attachment E

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009  
**TO:** Board of Directors  
**FROM:** Frank L. Cheng, Project Manager  
**SUBJECT:** CONSIDERATION OF METROBASE STATUS REPORT

## I. RECOMMENDED ACTION

**That the Board of Directors accept and file the MetroBase Status Report.**

## II. SUMMARY OF ISSUES

- Maintenance Building
  - West Bay Builders working on punch-list items for the first phase of building.
  - West Bay is continuing with site work on 2<sup>nd</sup> half of site.
- Operations Building
  - RNL has repackaged the Operations Building.
  - Invitation For Bids is pending State release of Proposition 1B Bond Funds.
- Vernon Administration Building
  - Wald, Ruhnke & Dost Architects has completed the drawings and specs.
  - On February 27, 2009, the Pre-Bid Conference began.
  - Invitation For Bids(IFB) 09-10 due March 24, 2009 at 2pm.

## III. DISCUSSION

West Bay Builders is continuing to work on punch-list items for the first phase of the Maintenance Building. Currently, West Bay Builders is continuing site work on the 2<sup>nd</sup> half of site. Rain has impacted the site work and has shifted West Bay's work back to the punch-list items for the first phase. Once the weather cooperates, West Bay will continue on the site work. Previously, the Butler building was demolished and underground tanks were removed. This was needed for preparations on grading the site and casting tilt-up panels.

In regards to the Operations Building, RNL Design has completed the re-package of the Operations Building. The plans have been reviewed by the City of Santa Cruz, and plan checked by Bureau Veritas. Invitation for Bids is pending State release of Proposition 1B Bond Funds.

Wald, Ruhnke & Dost (WR&D) Architects have completed drawings for the Vernon Administration Building. Drawings and specifications were available on February 23, 2009 at San Jose Blue located at 21511 E. Cliff Drive, Santa Cruz, other Builders Exchange, and Plan rooms. IFB 09-10 bid is due March 24, 2009 at 2:00pm.

5-9.1

Information for the MetroBase Project can be viewed at <http://www.scmtd.com/metrobase>  
Information on the project, contact information, and MetroBase Hotline number (831) 621-9568  
can be viewed on the website.

New updates on the MetroBase Project:

- Vernon Administration Building IFB 09-10 out to bid.

Previous information regarding the MetroBase Project:

- A. Maintenance Building (IFB 06-01)
  - West Bay working on 2<sup>nd</sup> half site work, and punch-list items for 1<sup>st</sup> half.
  - IFB 06-01 Maintenance Building awarded to West Bay Builders.
  - Weekly Construction Meetings.
- B. Operations Building
  - RNL Design Operations Building re-package complete.
  - Invitation For Bids is pending State release of Proposition 1B Bond Funds.
- C. Vernon Administration Building (IFB 09-10)
  - Wald, Ruhnke & Dost Architects complete.
  - Invitation For Bids 09-10 due March 24, 2009.

#### **IV. FINANCIAL CONSIDERATIONS**

Funds for the construction of the Maintenance Building, Operations Building, and Vernon Administration Building Components of the MetroBase Project are available within the funds the METRO has secured for the Project.

#### **V. ATTACHMENTS**

**None**

5-9.2

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009

**TO:** Board of Directors

**FROM:** Angela Aitken, Finance Manager

**SUBJECT: CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT RENEWAL WITH BROWN ARMSTRONG PAULDEN MCCOWN STARBUCK THORNBURGH & KEETER ACCOUNTANCY CORPORATION FOR FINANCIAL AUDIT AND TAX SERVICES**

## I. RECOMMENDED ACTION

**That the Board of Directors authorize the General Manager to execute an amendment to the contract with Brown Armstrong Paulden McCown Starbuck Thornburgh & Keeter Accountancy Corporation for financial audit and tax services to extend the term of the contract for one (1) additional year for an amount not to exceed \$39,750.**

## II. SUMMARY OF ISSUES

- METRO entered into a contract with Brown Armstrong Paulden McCown Starbuck Thornburgh & Keeter Accountancy Corporation for financial audit and tax services on May 1, 2007.
- The contract will expire on April 30, 2009.
- At the option of METRO, this contract may be renewed for two (2) additional one-year terms under the same terms and conditions.
- Staff recommends that the Board of Directors authorize the General Manager to execute an amendment to the contract with Brown Armstrong Paulden McCown Starbuck Thornburgh & Keeter Accountancy Corporation for financial audit and tax services to extend the contract one (1) additional year for an amount not to exceed \$39,750.

## III. DISCUSSION

METRO entered into a contract with Brown Armstrong Paulden McCown Starbuck Thornburgh & Keeter Accountancy Corporation for financial audit and tax services on May 1, 2007. The contract will expire on April 30, 2009. Contractor has provided good service under this contract. An extension of the contract would be advantageous to METRO. Section 4.01 of the contract allows METRO the option to renew the contract for two (2) additional one-year terms. On the Contractor's original proposal, pricing for the first and second option years was provided. Contractor had proposed the same rate for all three years. Staff recommends that the Board of Directors authorize the General Manager to execute an amendment to the contract with Brown

5-10.1

Armstrong Paulden McCown Starbuck Thornburgh & Keeter Accountancy Corporation for financial audit and tax services to extend the contract one (1) additional year for an amount not to exceed \$39,750.

**IV. FINANCIAL CONSIDERATIONS**

Funds are available in the Finance department's budget for this amendment.

**V. ATTACHMENTS**

**Attachment A:** Contract Amendment

Prepared By: Lloyd Longnecker, Purchasing Agent

5-10.2

**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
SECOND AMENDMENT TO PROFESSIONAL SERVICES CONTRACT FOR  
FINANCIAL AUDIT AND TAX SERVICES (06-20)**

This Second Amendment to Professional Services Contract for Financial Audit and Tax Services is made effective May 1, 2009 between the Santa Cruz Metropolitan Transit District, a political subdivision of the State of California ("METRO") and BROWN ARMSTRONG PAULDEN MCCOWN STARBUCK THORNBURGH & KEETER ACCOUNTANCY CORPORATION ("Contractor").

**I. RECITALS**

1.1 METRO and Contractor entered into a Contract for Financial Audit and Tax Services ("Contract") on March 1, 2007.

1.2 The purpose of this Second Amendment is to extend the agreement for a one-year period, pursuant to the provisions of paragraph 4 of the Contract, which allows for two additional one-year terms upon mutual written consent. This fully executed Amendment constitutes mutual written consent.

Therefore, METRO and Contractor amend the Contract as follows:

**II. SPECIFICATION CHANGES**

2.1 Paragraph 4.01 is amended to read as follows:

The term of this contract will be extended through April 30, 2010.

**III. COMPENSATION**

3.1 METRO agrees to compensate Contractor for Financial Audit and Tax Services at the rates quoted for the second option year as provided in Contractor's original proposal:

Financial Audit Services, Second Option Year: \$39,500.00

Preparation of Federal and State Tax Returns for Santa Cruz Civic Improvement Project,  
Second Option Year: \$250.00

**IV. REMAINING TERMS AND CONDITIONS**

4.1 All other provisions of the Contract that are not affected by this amendment shall remain unchanged and in full force and effect.



V. AUTHORITY

5.1 Each party has full power to enter into and perform this Second Amendment to the Contract and the person signing this Second Amendment on behalf of each has been properly authorized and empowered to enter into it. Each party further acknowledges that it has read this Second Amendment to the Contract, understands it, and agrees to be bound by it.

Signed on \_\_\_\_\_

METRO - SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

\_\_\_\_\_  
Leslie R. White  
General Manager

CONTRACTOR - BROWN ARMSTRONG PAULDEN MCCOWN STARBUCK  
THORNBURGH & KEETER ACCOUNTANCY CORPORATION

By \_\_\_\_\_  
Steven R. Starbuck  
Principal

Approved as to Form:

\_\_\_\_\_  
Margaret R. Gallagher  
District Counsel

5-10. a2<sup>2</sup>

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009

**TO:** Board of Directors

**FROM:** Margaret Gallagher, District Counsel

**SUBJECT: CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A 5-YEAR LEASE EXTENSION FOR THE PROPERTY LOCATED AT 2880 RESEARCH PARK DRIVE IN SOQUEL**

## I. RECOMMENDED ACTION

**Authorize the General Manager to execute a 5-year Lease Extension between the Santa Cruz Metropolitan Transit District and Soquel III Associates, a California General Partnership, for the property located at 2880 Research Park Drive in Soquel.**

## II. SUMMARY OF ISSUES

- The Santa Cruz Metropolitan Transit District has an existing lease with Soquel III Associates, a California general partnership for the lease of the property located 2880 Research Park Drive in Soquel for METRO's ParaCruz facilities.
- The first five-year lease term expires on August 31, 2009 but provides an option to extend the Lease for an additional five year term under the same terms and conditions as the original lease term.
- The Lease requires a written notice within 180 days of the expiration of the term, or by March 1, 2009, which was provided by METRO to Soquel III Associates.
- METRO staff has determined that it is in METRO's financial best interest to keep ParaCruz operations at the existing location. Any move to another location would cost METRO additional funds that it does not currently have.

## III. DISCUSSION

METRO's ParaCruz Operations and Facilities offices are located at 2880 Research Park Drive in Soquel. The property has been leased from Soquel III Associates for these purposes since September 1, 2004. The current lease term expires on August 31, 2009 with an option to extend the Lease for an additional 5-year term. The Lease includes 9,318 square feet of Floor space and 13.9% of the parking spaces on a non-exclusive pro rata basis.

Monthly rent for the initial year was \$8,386.20 for the base rent and \$2,422.68 for the common area charges for a total monthly rent of \$10,808.88. The Lease provides for CPI increases every year on the successive anniversary date of the Commencement Date of the Lease, which is never

less than 2% nor more than 6%. Currently METRO pays a monthly rent of \$12,116.23 which includes \$9,574.26 for the base rent and \$2,541.97 for the common area charges.

METRO staff has determined that it is in the financial best interest to keep ParaCruz operations at the existing location. Any move to another location would cost METRO additional funds that it does not currently have.

#### **IV. FINANCIAL CONSIDERATIONS**

Currently the total monthly rent for the property is \$12,116.23.

If METRO elects to exercise its current option to extend the Lease by an additional five-year term, the annual CPI increases (minimum of 2% and maximum of 6%) will apply to the successive years, beginning September 1, 2009.

#### **V. ATTACHMENTS**

**Attachment A:** Draft Lease Extension

5-11.2

**LEASE AMENDMENT NUMBER 1**

This Lease Amendment Number 1 is made this 27th day of March, 2009 between Soquel III Associates, a California general partnership (hereinafter referred to as the "Landlord") and Santa Cruz Metropolitan Transit District, a local public agency (hereinafter referred to as the "Tenant"), who agree as follows:

RECITALS:

- A. Landlord and Tenant entered into that certain Lease Agreement, dated for reference August 13, 2004 for the premises known as 2880 Research Park Drive, Suite 160, Soquel, California 95073 (hereinafter referred to as the "Lease").
- B. Tenant desires to exercise its first option to extend the term of the Lease.

NOW THEREFORE, the parties hereto agree as follows:

- 1. The term of the Lease shall be extended five (5) years to terminate on August 31, 2014.
- 2. All other terms, conditions, covenants or provisions of the Lease shall remain unchanged.

LANDLORD:

TENANT:

Soquel III Associates,  
a California general partnership

Santa Cruz Metropolitan Transit District,  
a local public agency

By: \_\_\_\_\_  
Bernard Kotansky,  
General Partner

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009

**TO:** Board of Directors

**FROM:** Angela Aitken, Finance Manager  
Robert Cotter, Maintenance Manager

**SUBJECT: CONSIDERATION OF AMENDING CONTRACT FOR SUPPLY AND DELIVERY OF LIQUEFIED NATURAL GAS (LNG) WITH CLEAN ENERGY**

## I. RECOMMENDED ACTION

**That the Board of Directors authorize the General Manager to execute an amendment to the contract for the supply and delivery of LNG fuel with Clean Energy to allow shipments from their Boron, California plant when severe weather conditions would prevent deliveries from their Evanston, Wyoming plant.**

## II. SUMMARY OF ISSUES

- METRO established a contract with Clean Energy for the supply and delivery of liquefied natural gas (LNG) on August 1, 2007.
- LNG fuel is to be delivered to METRO from the Evanston, Wyoming LNG plant until August 1, 2009 when it will then be delivered from Clean Energy's new LNG plant in Boron, California.
- In early March, a delivery from Wyoming was stopped in Truckee, California when the highway was closed due to heavy snow fall.
- Clean Energy was able to re-direct a load of LNG from their southern California plant to METRO in time for the nightly refueling process.
- Clean Energy has requested an amendment to the contract to allow their dispatcher to schedule a shipment from their Southern California plant when severe weather conditions could close state highways and jeopardize the delivery to METRO.
- Staff recommends that the Board of Directors authorize the General Manager to execute an amendment to the contract for the supply and delivery of LNG fuel with Clean Energy to allow shipments from their Boron, California plant when severe weather conditions would prevent deliveries from their Evanston, Wyoming plant.

5-12.1

### **III. DISCUSSION**

METRO established a contract with Clean Energy for the supply and delivery of liquefied natural gas (LNG) on August 1, 2007. The contract calls for LNG fuel to be delivered to METRO from the LNG plant located in Evanston, Wyoming until August 1, 2009 when it will then be delivered from Clean Energy's new LNG plant in Boron, California.

In early March, a delivery from Wyoming was stopped in Truckee, California when the highway was closed due to heavy snow fall. Clean Energy was able to re-direct a load of LNG from their new southern California plant to METRO in time for the nightly refueling process. Clean Energy has requested an amendment to the contract to allow their dispatcher to schedule a shipment from their Southern California plant when severe weather conditions could close state highways and jeopardize the delivery to METRO.

Staff recommends that the Board of Directors authorize the General Manager to execute an amendment to the contract for the supply and delivery of LNG fuel with Clean Energy to allow shipments from their Boron, California plant when severe weather conditions would prevent deliveries from their Evanston, Wyoming plant.

### **IV. FINANCIAL CONSIDERATIONS**

Funding for this contract is contained in Fleet's operating budget. Deliveries from the Southern California plant would be billed using the So Cal Gas index.

### **V. ATTACHMENTS**

**Attachment A:** Contract Amendment

Prepared By: Lloyd Longnecker, Purchasing Agent

5-12.2

**FIRST AMENDMENT  
TO CONTRACT FOR SUPPLY AND DELIVERY OF  
LIQUEFIED NATURAL GAS (06-23)**

**Attachment A**

This First Amendment to the Contract and Supply Delivery of Liquefied Natural Gas (06-23) (the "First Amendment") is made and executed to be effective as of March 30, 2009 by and between Clean Energy, a California Corporation ("Contractor") and the Santa Cruz Metropolitan Transit District, a political subdivision of the State of California ("District"). All capitalized terms used herein and not defined shall have the meaning ascribed to them in the Contract and Supply Delivery of Liquefied Natural Gas (06-23) (the "Agreement") dated August 23, 2007. Contractor and District are referred to herein collectively as the "**Parties**".

**RECITALS**

WHEREAS, the Parties wish to amend the Agreement on the terms and conditions set forth herein.

**AMENDMENT**

NOW, THEREFORE, in consideration of the mutual covenants and obligations of the Parties herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

Section 4.01 of the Agreement is hereby replaced with the following:

4.01 Terms of Payment

Upon written acceptance, District agrees to pay Contractor for the delivery of LNG based on the following formula: (Rocky Mountain Index)/12.1 + \$0.63 + sales tax = Total price per gallon. If LNG is not available from RMI supply sources or if weather or other factors interrupt the delivery of LNG from RMI supply sources, Contractor will procure and deliver LNG from its LNG plant in Boron, California and invoice District based on the following formula: (SoCalGasCo)/12.1 + \$0.63 + sales tax = Total price per gallon. For years three through five of the contract, District agrees to pay Contractor for delivery of LNG based on the following formula: (SoCalGasCo/12.1) + \$0.63 + Sales Tax = Total price per gallon.

Terms and Conditions of the Agreement. Other than as expressly set forth in this First Amendment, all of the terms and conditions of the Agreement shall remain in full force and effect and shall apply to this First Amendment; provided that to the extent there is a conflict between the terms of this First Amendment and the terms of the Agreement, the terms of this First Amendment shall control to the extent of such conflict.

Governing Law. This First Amendment shall be governed by and construed, interpreted and enforced in accordance with the laws of the State of California, not including choice of law rules and principles.

Counterparts. This First Amendment may be executed in two or more counterparts, each of which shall constitute an original, but all of which when taken together shall constitute but one and the same agreement.

No Other Amendment. Except as expressly amended hereby, the terms and provisions of the Agreement remain in full force and effect, and are ratified and confirmed by the Parties in all respects as of the Amendment Effective Date.

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed in multiple originals on the dates set forth beneath the signature lines herein below, but effective as of the date first written above.

**Clean Energy**

By: \_\_\_\_\_  
James N. Harger, Senior Vice President, Marketing & Sales

Date: \_\_\_\_\_

**Santa Cruz Metropolitan Transit District**

By: \_\_\_\_\_  
Leslie R. White, General Manager

Date: \_\_\_\_\_

**Approved as to Form:**

By: \_\_\_\_\_  
Margaret R. Gallagher, District Counsel



# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009  
**TO:** Board of Directors  
**FROM:** Leslie R. White, General Manager  
**SUBJECT:** ACCEPT AND FILE VOTING RESULTS FROM APPOINTEES TO THE  
SANTA CRUZ COUNTY REGIONAL TRANSPORTATION  
COMMISSION FOR PREVIOUS MEETINGS

## I. RECOMMENDED ACTION

**That the Board of Directors accept and file the voting results from appointees to the Santa Cruz County Regional Transportation Commission.**

## II. SUMMARY OF ISSUES

- Per the action taken by the Board of Directors, staff is providing the minutes from the most recent meetings of the Santa Cruz County Regional Transportation Commission.
- Each month staff will provide the minutes from the previous month's SCCRTC meetings.

## III. DISCUSSION

The Board requested that staff include in the Board Packet information relating to the voting results from the appointees to the Santa Cruz County Regional Transportation Commission. Staff is enclosing the minutes from these meetings as a mechanism of complying with this request.

## IV. FINANCIAL CONSIDERATIONS

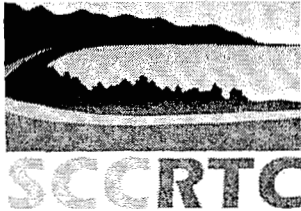
There is no cost impact from this action.

## V. ATTACHMENTS

- Attachment A:** Minutes of the February 5, 2009 Regular SCCRTC Meeting  
**Attachment B:** Minutes of the February 19, 2009 Transportation Policy Workshop

5-13.1

# Attachment **A**



## Santa Cruz County Regional Transportation Commission

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### MINUTES

Thursday  
February 5, 2009  
9:00 a.m.

Watsonville City Council Chambers  
275 Main Street, 4th Floor  
Watsonville, CA

1. Roll Call

The meeting was called to order at 9:08 am.

Members Present:

Dene Bustichi	Kirby Nicol
Tony Campos	Ellen Pirie
Neal Coonerty	Antonio Rivas
Randy Johnson	Pat Spence
Don Lane	Mark Stone
John Leopold	Marcela Tavantzis
Rich Krumholz (ex officio)	

Staff Present:

George Dondero	Gini Pineda
Luis Mendez	Yesenia Parra
Kim Shultz	Rachel Moriconi

2. Oral communications

**Jack Nelson** said that future droughts will be part of California's climate change and that the Commission should include that consideration in its decision making process.

3. Additions or deletions to consent and regular agendas

Executive Director George Dondero said that there were two handouts for Item 20.

**CONSENT AGENDA** (Campos/Pirie approved unanimously)

### MINUTES

5-13.a1

4. Approved draft minutes of the January 8, 2009 regular SCCRTC meeting
5. Accepted draft minutes of the January 12, 2009 Bicycle Committee meeting

**POLICY ITEMS**

*No consent items*

**PROJECTS and PLANNING ITEMS**

6. Approved staff recommendation for the Santa Cruz Metropolitan Transit District (SCMTD) Section 5311 Program of Projects and Application (Resolution 19-09)
7. Accepted FY08-09 second quarter SCCRTC Work Program Report

**BUDGET AND EXPENDITURES ITEMS**

8. Accepted status report on Transportation Development Act (TDA) revenues

**ADMINISTRATION ITEMS**

*No consent items*

**INFORMATION/OTHER ITEMS**

9. Accepted monthly meeting schedule
10. Accepted correspondence log
11. Accepted letters from SCCRTC committees and staff to other agencies
  - a. Letter to Christopher J. Murphy, Office of Traffic Safety Director regarding support for the County of Santa Cruz Health Services OTS grant from Daniel Kostelec, RTC Bicycle Committee chair.
12. Accepted miscellaneous written comments from the public on SCCRTC projects and transportation issues
13. Accepted information items

*No consent items*

**REGULAR AGENDA**

14. Accepted commissioner reports

Chair Randy Johnson thanked Commissioner Tony Campos for serving as Commission Chair for two years.

5-13.92

Commissioner Rivas noted that Commission Alternate David Koch was honored by the Monterey Chapter of the American Public Works Association (APWA) as the Public Works Man of the Year. He commended Mr. Koch for his many contributions to the City of Watsonville including his work on a waste water treatment plant and a water recycling facility. In addition, Mr. Koch oversees a science project for youth that builds projects from recycled materials.

15. Accept director's report

Executive Director George Dondero reported on the status of the federal stimulus package working its way through Congress. He said that staff has asked Senator Feinstein to increase the ratio of funding going to regions.

Mr. Dondero said that the ribbon cutting ceremony for the San Lorenzo River bike/pedestrian bridge on January 23<sup>rd</sup> was well attended. He said that due to drought conditions, the City of Santa Cruz water department probably will not issue a permit for the Highway 1/17 Merge Lanes project landscaping which could result in delaying plant installation.

Mr. Dondero said that he, Chair Johnson and Vice-Chair Stone will be attending Capitol Day on February 11<sup>th</sup> which CalCOG organized especially for transportation. He said that tomorrow he and Senior Planner, Rachel Moriconi would meet with Assemblymember Monning and Senator Simitian. He reported that the Transportation Research Board meeting, which he attended in January, was focused on climate change and that California is at the forefront of climate change policy. Mr. Dondero said that transportation is well represented on the advisory committee to the Air Resources Board which met last week.

Mr. Dondero said that there would be no closed session.

16. Accept Caltrans report and consider action items

Rich Krumholz, Caltrans District 5, announced that Caltrans workers will be furloughed on the 1<sup>st</sup> and 3<sup>rd</sup> Fridays of each month but that maintenance crews will be available for emergencies. The state budget impasse is affecting projects in line for Proposition 1B funds which includes a vehicle detection system for Santa Cruz County. If a budget is not reached by 5pm tomorrow five projects in district 5 will be suspended, one of which is the Salinas Road interchange.

Mr. Krumholz said that Caltrans is working with the City of Santa Cruz and hopes to come to an agreement regarding supplying water for the landscaping for the Highway 1/17 Merge Lanes project. He noted that the project would only need irrigation for the first three years to get the plants established. He added that the Glenwood Curve project is progressing well and announced deadlines for several grant applications including the Safe Routes to School and environmental justice grants.

Mr. Krumholz reported that Gregg Albright has left Caltrans and accepted a position as Deputy Secretary for Environmental Policy and Integration and will be involved in climate change and coastal issues.

17. Welcome new commissioners and solicit committee preferences

Executive Director George Dondero welcomed Commissioners Leopold and Lane representing the First District and the City of Santa Cruz respectively. Mr. Dondero said that if either of them were interested in serving on the Rail Acquisition or Budget and Administration/Personnel Committees to notify him or the Chair. Committee appointments will be made at the March meeting.

18. Highway 1 Soquel/Morrissey Auxiliary Lanes Project – Construction Management Phase

Senior Planner Kim Shultz presented the staff report saying that if the Commission decides to manage the construction of the Auxiliary Lanes project, then a construction management consulting firm needs to be selected.

Commissioners discussed budget costs for construction management services, the general economic climate of the construction industry, cost overruns and change orders, and incentives built into any proposed contract to avoid cost increases.

Commissioner Bustichi moved to approve the staff recommendations that the Regional Transportation Commission authorize staff to release a Request for Proposals (RFP) for Construction Management Services on the Highway 1 Soquel/Morrissey Auxiliary Lanes project. Mr. Bustichi asked that the Commission review the RFP before it is released.

Commissioner Tavantzis seconded recommending that local firms be given priority.

Executive Director George Dondero added that the project is fiscally constrained because it is funded by Proposition 1B.

The motion passed unanimously.

19. Regional Transportation Plan update

Senior Planner Rachel Moriconi presented the staff report saying that the Regional Transportation Plan (RTP) is a long-range state-mandated document that will need to be adopted in 2010 to cover the period from 2010-2035. She said that SB 375, approved in 2008, requires that all RTPs adopted after October 1, 2010 contain a Sustainable Community Strategy component that focuses on reducing greenhouse gas emissions through coordinated land use and transportation planning but that implementation guidance and emission

targets will not be available in time to meet the RTC 2010 RTP adoption deadline. Ms. Moriconi said that staff recommends a minor update for 2010 with a more robust update to be adopted in 2012.

Ms. Moriconi said that an environmental review will be necessary for the RTP and that participating in a joint environmental document with the Association of Monterey Bay Area Governments (AMBAG), the Transportation Agency for Monterey County (TAMC), and the San Benito Council of Governments (SBCOG) would decrease costs.

Commissioner Rivas moved and Commissioner Campos seconded to approve the staff recommendations that the Regional Transportation Commission (RTC):

1. Receive a preliminary report on the upcoming Regional Transportation Plan (RTP) update and discuss key issues that should be considered in the next RTP; and,
2. Authorize the Executive Director to enter into a cooperative agreement with the Association of Monterey Bay Area Governments (AMBAG), the Transportation Agency for Monterey County (TAMC) and San Benito Council of Governments (SBCOG) for the purposes of developing one environmental document that covers the tri-county's regional transportation plans and the Metropolitan Transportation Plan and to sign agreements as necessary to implement the joint process.

The motion passed unanimously.

#### 20. Federal Economic Stimulus project prioritization

Senior Planner Rachel Moriconi reported that staff worked with RTC advisory committees and local jurisdictions to identify projects to receive potential economic stimulus funds within the time frame required in the final bill. She reviewed the individual recommendations and noted the various scenarios that could cause projects to be added or eliminated depending on the funding.

Commissioners discussed project funding requirements, allocation methods, materials availability, Americans with Disabilities Act requirements and paratransit vehicles at UCSC. It was noted that since the economic downturn is global, there could be less competition for construction materials.

City of Santa Cruz Assistant Public Works Director **Chris Schneider** explained that any road rehabilitation over one inch thick requires handicap ramps which would be included in the project plan.

**Larry Pageler**, UCSC, clarified that the paratransit vans at the university complement regular shuttle service on campus and these would be the only funds available to them for these purchases. He added that being able to

purchase them means that they would continue to provide paratransit service at UCSC.

Commissioner Campos moved and Commissioner Nicol seconded to approve the staff recommendations that the Regional Transportation Commission (RTC):

1. Select projects to receive up to \$6.5 million in potential Federal Economic Stimulus funds that may need to be used within 90-180 days of enactment of the bill, contingent on provisions of the final bill, and require that project sponsors immediately initiate pre-construction work on these projects, if they have not already;
2. Consider recommendations and input from the RTC's advisory committees;
3. Require project sponsors to add bicycle lanes, cross-walk striping, curb cuts, and other accessibility improvements as part of road repair projects, where appropriate and feasible.
4. Request that the Association of Monterey Bay Area Governments (AMBAG), Caltrans, and the California Transportation Commission (CTC) amend the Federal Transportation Improvement Program (FTIP) and State Transportation Improvement Program (STIP), if required, to include these projects;
5. In the event that the final Economic Stimulus bill makes additional funds available to the region, and those funds do not need to be used within 90-180 days, indicate its intent to program those additional funds as part of a subsequent project selection process;
6. If projects are at risk of missing deadlines 75 days in advance of "use it or lose it" deadlines to obligate funds, authorize staff, in consultation with project sponsors, to redirect those funds to SCMTD for vehicle replacements or to other agencies for projects that are ready to award a federally-funded contract; and
7. Take additional actions, if necessary, based on any new information that becomes available prior to the February 5<sup>th</sup> meeting.

The motion passed unanimously.

#### 21. Rail acquisition project update

Deputy Director Luis Mendez presented the staff report reviewing the due diligence work performed by the RTC. He referred to a timeline showing what has been done and what needs to be completed and said that once all the reports are presented the Commission can make the final decision regarding the purchase which he expects can be made in August 2009. He said that the California Transportation Commission will make its decision the following week. Mr. Mendez said that because certain services contracted with Egan Consulting Group (ECG) require more work than anticipated and because oversight of the track inspection was added to their scope of work, staff recommends adding \$15,000 to their contract. He said that these funds are in the budget for the rail line acquisition project.

5-13.96

Commissioners discussed the Proposition 116 requirements and the role of freight service in the RTC's application. Commissioners also asked whether the Cemex plant closure would impact the application. Commissioners also discussed the Coastal Conservancy loan agreement.

Mr. Mendez clarified that freight service is not necessary to qualify for Proposition 116 funding, but since it is a component of the RTC's overall plan it must be included in a comprehensive business plan. He said that the agreement with the Coastal Conservancy has expired and that a request to extend it stalled because of the state budget. It should be extended after the budget is resolved.

**Jack Nelson** asked if there is sufficient staff time to manage all the tasks. George Dondero assured that there is sufficient staff.

**Cliff Walters**, Sierra Railroad, said that he thought that short line freight service is a viable business even if Cemex did not reopen. He added that Cemex will probably reopen when the price for cement is higher.

Commissioner Leopold moved and Commissioner Campos seconded to approve the staff recommendations that the Regional Transportation Commission (RTC):

1. Accept this status report on the Santa Cruz Branch Rail Line Acquisition project; and
2. Approve a resolution authorizing the Executive Director to amend the contract with Egan Consulting Group (ECG) to add \$15,000.

The motion (Resolution 20-09) passed unanimously.

22. Review of items to be discussed in closed session – N/A

#### **CLOSED SESSION**

23. Conference with Real Property Negotiator for acquisition of the Santa Cruz Branch Rail Line Property: Santa Cruz Branch Rail Line from Watsonville Junction to Davenport

Agency Negotiator: Kirk Trost, Miller Owen & Trost

Negotiation Parties: SCCRTC, Union Pacific

Under Negotiation: Price and Terms

#### **OPEN SESSION**

24. Report on closed session – N/A



25. Adjourn to special meeting of the Service Authority for Freeway Emergencies
- a. No agenda items this month

26. Next Meetings

The meeting adjourned at 10:54 am.

The next Transportation Policy Workshop meeting is scheduled for Thursday, February 19, 2009 at 9:00 a.m. at the SCCRTC office, 1523 Pacific Ave, Santa Cruz, CA

The next SCCRTC meeting is scheduled for Thursday, March 5 at 9:00 a.m. at the Santa Cruz County Board of Supervisors Chambers, 701 Ocean St., 5<sup>th</sup> floor, Santa Cruz, CA

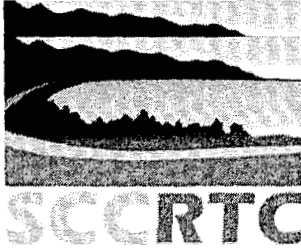
Respectfully submitted,

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Gini Pineda, Staff

**ATTENDEES**

Les White	SCMTD
Leo Moll	
Bruce Shewchuk	PB
Bart Ligtell	PB
Sandra Coley	PVTMA
Peter Scott	CFST
Jack Nelson	
Cliff Walters	Sierra Railroad
Chris Schneiter	City of Santa Cruz PW
Larry Pageler	UCSC
Jennifer Calate	Caltrans



## Attachment **B**

### Santa Cruz County Regional Transportation Commission Transportation Policy Workshop

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#### MINUTES

Thursday February 19, 2009

9:00 a.m.

SCCRTC Conference Room  
1523 Pacific Avenue, Santa Cruz

Commissioner Mark Stone called the meeting to order at 9:07 am.

Self introductions were made.

Members Present: Gustavo Gonzalez, Michelle Hinkle, Randy Johnson, Don Lane, John Leopold, Kirby Nicol, Ellen Pirie, Andy Schiffrin, Pat Spence, Mark Stone, Marcela Tavantzis

Member Absent: Antonio Rivas

Staff Present: Luis Mendez, George Dondero, Yesenia Parra, Karena Pushnik, Gini Pineda, Cory Caletti, Kim Shultz

#### 1. Oral Communications

**Jack Nelson** called cycling activists who brave severe weather "heroes" and asked that the Commission encourage heroism in alternative modes of transportation.

#### 2. Additions or deletions to consent and regular agendas

There was one add-on page for Item 5.

#### **CONSENT AGENDA** (Pirie/Johnson)

#### 3. Approved staff recommendations regarding Monterey Bay Sanctuary Scenic Trail (MBSST) Network funding

#### **REGULAR AGENDA**

#### 4. State Budget and Federal Economic Stimulus updates

5-13.61

Executive Director George Dondero presented the staff report saying that it is still unknown what the RTC will receive from the federal stimulus bill. He said that the state budget was passed early this morning and that transit funding was severely cut.

Commissioner Pirie asked for email updates as information on state and federal funding becomes available.

**Les White**, General Manager, Santa Cruz Metropolitan Transit District, distributed a hand-out describing the impacts of the state budget cuts. Among projects losing funding are the MetroBase Operating facility and the replacement of 30 diesel buses. The loss of construction funds will eliminate approximately 325 jobs in 2009 and inability to replace diesel buses will result in SB 375/AB 32 Green House Gas reduction goals not being met. In addition, service is projected to be reduced by 38% in 2012 from current 2009 levels, resulting in the lay-off of approximately 150 SCMTD employees in Fall 2012.

Mr. White said that the SCMTD will ask for an extension from the California Air Resources Board to continue to operate diesel buses so that service cuts are not required. He said that SCMTD will try to persuade the state to continue selling bonds and will look for other revenue sources.

Commissioners discussed using other funding sources to purchase buses like the stimulus funds, the federal transportation reauthorization bill and approaching the California Air Resources Board.

It was noted that previously enacted legislation will be affected by the budget cuts and new ballot measures will have to be approved by the voters in order to take effect. Commissioner Spence asked for a report describing what propositions will be affected by new ballot measures.

5. Proposed amendment to the FY 08-09 Budget and Work Program - Highway 1 Auxiliary Lanes project

Senior Planner Kim Shultz reported that a reallocation of resources within the existing project budget is necessary to complete the environmental document phase of the Highway 1 Soquel/Morrissey Auxiliary Lanes project. This action is needed due to changes in state regulations and procedures to process environmental documents, and a very high number of comments on the draft environmental document.

Commissioners questioned the expectations regarding the number of comments on the environmental documents. Parag Mehta, Nolte Associates, said that the estimate was based on similar projects in size and scope and was also influenced by the fact that at the time of the cost estimate, the High Occupancy Vehicle (HOV) Lanes project was the leading Highway 1 project but because of the Proposition 1B funding, the Auxiliary Lanes project took precedence as a stand-alone project.

5-13.62

Commission Alternate Schiffirin said that some people want a full Environmental Impact Report (EIR) on the project as opposed to a Negative Declaration and asked if the final environmental document will include an analysis of the issues regarding the decision to produce a Negative Declaration as the environmental document for the project.

Mr. Shultz said that this has been submitted as a comment on the draft environmental document and Caltrans will prepare a response which will undergo several iterations of review including review by Caltrans legal staff. Rahn Garcia, RTC Legal Counsel, stated that he is prepared to separately advise the RTC regarding this issue. Mr. Dondero added that Caltrans is confident of its decision to prepare a Negative Declaration for this project.

**Jack Nelson** stated that public comments indicate that the Auxiliary Lanes project is viewed as part of the larger HOV Lane project and per CEQA standards requires a full EIR.

Commissioner Pirie moved and Commissioner Tavantzis seconded to approve the staff recommendations that the Regional Transportation Commission adopt a resolution approving the proposed amendment to the FY 08-09 Budget and Work Program to complete the environmental documentation phase of the Highway 1 Soquel/Morrissey Auxiliary Lanes project.

The motion (Resolution 21-09) passed unanimously.

6. Review of items to be discussed in closed session – N/A

#### **CLOSED SESSION**

7. Conference with real property negotiator for acquisition of the Santa Cruz Branch Rail Line property: Santa Cruz Branch Rail Line from Watsonville Junction to Davenport

Agency Negotiator: Kirk Trost, Miller Owen & Trost

Negotiation Parties: SCCRTC, Union Pacific

Under Negotiation: Price and Terms

#### **OPEN SESSION**

8. Report on closed session – N/A
9. Next meetings

The meeting adjourned at 10 am.

**5-13.63**

The next SCCRTC meeting is scheduled for Thursday, March 5, 2009 at 9:00 a.m. at the Santa Cruz County Supervisor Chambers, 701 Ocean St, Fifth Floor, Santa Cruz, CA.

The next Transportation Policy Workshop is scheduled for Thursday, March 19, 2009 at 9:00 a.m. at the SCCRTC Offices, 1523 Pacific Avenue, Santa Cruz, CA.

Respectfully submitted,

---

Gini Pineda, Staff

**ATTENDEES**

Cliff Walters  
Les White  
Jack Nelson  
Eduardo Mantes  
Peter Scott  
Rahn Garcia

Sierra Railroad  
SCMTD  
  
UTU  
CFST  
County Counsel

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009

**TO:** Board of Directors

**FROM:** Leslie R. White, General Manager

**SUBJECT: CONSIDERATION OF PROVIDING A LETTER SUPPORTING THE APPLICATION OF THE SANTA CRUZ REGIONAL TRANSPORTATION COMMISSION TO THE ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS FOR FUNDING FOR A MONTEREY BAY AREA 511 TRAVELER INFORMATION SYSTEM FEASIBILITY AND PLANNING STUDY**

## I. RECOMMENDED ACTION

**That the Board of Directors authorize the Chair to sign a letter supporting the application of the Santa Cruz Regional Transportation Commission to the Association of Monterey Bay Area Governments for funding for a Monterey Bay Area 511 Traveler Information System Feasibility and Planning Study.**

## II. SUMMARY OF ISSUES

- The Santa Cruz County Regional Transportation Commission (SCCRTC) is applying to the Association of Monterey Bay Area Governments (AMBAG) for funding to support a Monterey Bay Area 511 Traveler Information System Feasibility and Planning Study.
- The Monterey Bay Area 511 Plan would be the first step in providing up-to-date transportation information.
- The Monterey Bay Area 511 Plan would address providing access to transportation information through the use of telephone, web, pda's and other means.
- The Monterey Bay Area 511 Plan would include information regarding road and transit operating conditions to assist travelers.
- The SCCRTC has requested that METRO write a letter of support for the application for funds from AMBAG for the Monterey Bay Area 511 Traveler Information Feasibility and Planning Study.
- A letter of support for the SCCRTC application is attached to this Staff Report.
- Staff recommends that the Board of Directors authorize the Chair to sign the attached letter of support for the SCCRTC application for funding from AMBAG.

5-14.1

### **III. DISCUSSION**

The Santa Cruz County Regional Transportation Commission (SCCRTC) is applying to the Association of Monterey Bay Area Governments (AMBAG) for funding to support a Monterey Bay Area 511 Traveler Information System Feasibility and Planning Study. The Monterey Bay Area 511 Plan would be the first step in providing up-to-date transportation information. The Monterey Bay Area 511 Plan would address providing access to transportation information through the use of telephone, web, pda's and other means. The Monterey Bay Area 511 Plan would include information regarding road and transit operating conditions to assist travelers.

The SCCRTC has requested that METRO write a letter of support for the application for funds from AMBAG for the Monterey Bay Area 511 Traveler Information Feasibility and Planning Study. A letter of support for the SCCRTC application is attached to this Staff Report.

Staff recommends that the Board of Directors authorize the Chair to sign the attached letter of support for the SCCRTC application for funding from AMBAG.

### **IV. FINANCIAL CONSIDERATIONS**

The transmission of a letter of support for the SCCRTC applications for funding will have no impact on the METRO Operating or Capital Budgets.

### **V. ATTACHMENTS**

**Attachment A:** Draft Letter of Support for the SCCRTC Application for funds from AMBAG.

March 27, 2009

# Attachment **A**

George Dondero  
Santa Cruz County Regional Transportation Commission  
1523 Pacific Avenue  
Santa Cruz, CA 95060

RE: Support for funding a Monterey Bay Area 511 Traveler Information System  
Feasibility and Planning Study

Dear Mr. Dondero:

On behalf of the Santa Cruz Metropolitan Transit District, I am writing to support the joint Caltrans' Planning Grant application of the Santa Cruz County Regional Transportation Commission, the Transportation Agency for Monterey County, and the Association of Monterey Bay Area Governments, to fund a Monterey Bay Area 511 Traveler Information System Feasibility and Planning Study. This Monterey Bay Area 511 Plan will be the first step towards providing residents, commuters, visitors and businesses, with access to comprehensive, reliable, and up-to-date multi-modal transportation information for the Monterey Bay Area via phone, web, and personal digital assistant. Easy access to comprehensive and multi-modal transportation information will enable travelers to make the most convenient choice for their travel (when to travel, which mode or which route to take).

Transit is a critical component of the Monterey Bay Area 511 Plan. In fact, transit schedule and route information is the second most frequently accessed information through 511 programs in metropolitan areas. Providing transit information as part of a one-stop shop transportation information center, such as through a 511 system, encourages transit ridership by offering a new way for existing customers to stay up-to-date on schedule changes, route and real-time transit arrival information twenty-four hours a day/seven days per week. New riders also benefit by having easy access to transit information through the simple to remember phone number and website. Notably, a Monterey Bay Area 511 Plan will work towards integrating the trip planning capabilities of different transit jurisdictions in the Monterey Bay Area and with neighboring counties in the region to make planning a transit trip that crosses jurisdictions seamless to users. Furthermore, the Monterey Bay Area 511 Plan will include a design for web and phone alerts to inform all transportation users, including transit users, of unexpected events impacting the transportation services upon which they rely.

A 511 system could also have a useful application to transit route and schedule planning. Being able to track trends regarding travel times, road and highway conditions would help Santa Cruz Metro with route and schedule design as well as to implement detours as needed and offer a mechanism to communicate these deviations to the public in a timely way.

5-14.a1



In addition to improving access to transit information within the region and seamless trip planning between transit jurisdictions and regional neighbors, in Santa Cruz County developing a Monterey Bay Area 511 Traveler Information System will address a wide range of transportation challenges faced by the area. A comprehensive plan to provide relevant transportation information will help manage demand on the congested transportation system, such as US Highways 1 and 17, thereby maximizing the efficiency and optimizing the use of existing transportation infrastructure. Essential to making the best use of the current transportation system and to the Monterey Bay Area 511 planning effort is coordinating and leveraging investments in technology for all modes, and prioritizing new investments that can play a dual role of collecting data and monitoring transportation services, and providing easy access to real-time and relevant transportation information.

The Santa Cruz Metropolitan Transit District appreciates your consideration and urges your support of a funding request to plan for a Monterey Bay Area 511 Traveler Information System Feasibility and Planning Study. Thank you for your support.

Sincerely,

Dene Bustichi  
Chair  
Board of Directors

Cc: Dave Murray, Caltrans  
Debra L. Hale, Transportation Agency for Monterey County  
John Doughty, Association of Monterey Bay Area Governments

5-14.a2

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009  
**TO:** Board of Directors  
**FROM:** Ciro F. Aguirre, Manager of Operations  
**SUBJECT: CONSIDERATION OF INFORMATION REGARDING REQUEST TO RELOCATE BUS STOP AT 41<sup>ST</sup> AVENUE AND SOQUEL DRIVE**

## I. RECOMMENDED ACTION

**No action is required. This report is for informational purposes only.**

## II. SUMMARY OF ISSUES

- On March 2, 2009 METRO received a letter dated February 20, 2009 written on behalf of the residents of Greenbrae Lane proposing to have the bus stop at 41<sup>st</sup> Avenue and Soquel Drive relocated or permanently removed.
- Letter expressed several safety concern regarding traffic conditions impacted by buses servicing the stop, and drivers maneuvering around buses attempting to access Greenbrae Lane.
- Requests to the County Board of Supervisors to remove/relocate the stop were unsuccessful, representatives referred to METRO Board of Directors.
- METRO Staff conducted a field review of the reported situation and found current bus stop to be American with Disabilities Act (ADA) compliant, and no incidents or accidents attributed to METRO servicing the stop.
- Removal of the stop would place the next available stop at 973 feet from current location. Relocation of stop would require encroachment, permitting, and upgrading of alternative site at a cost of approximately \$12,000 to \$15,000.
- California State Budget Act signed into law February 20, 2009 eliminates State Transit Assistance (STA) funding through 2013. Elimination of this assistance places METRO's budget for bus stop and shelter improvements currently at \$0.
- Recently the County Redevelopment Agency Work Plan was assigned the project.
- This report is for information purposes only. No action is requested

## III. DISCUSSION

On March 2, 2009 METRO received a letter on behalf of the residents of Greenbrae Lane requesting to relocate or remove the bus stop at 41<sup>st</sup> Avenue and Soquel Drive. The letter (please refer to Written Communication 2-a.1 on March 27, 2009 Board Agenda) expressed several safety concerns regarding traffic conditions impacted by buses servicing the stop and drivers maneuvering around buses attempting to access Greenbrae

5-15.1

Lane. Additional concerns noted were passengers running to catch the bus or exiting the bus, bicyclists in the bicycle lane on Soquel Drive and the lack of a pullout for the bus. Initially the concerns and requests were provided to the County Board of Supervisors, and were subsequently referred to the METRO Board of Directors.

Greenbrae representatives propose having the bus stop removed temporarily until it can be relocated to a safer location, or removed permanently if nearby bus stops provide adequate coverage for the area.

The bus stop in question has been in service for approximately thirty (30) years and is currently served by the routes 53, 70, and 71. Buses serve this stop fifty-four (54) times a day on weekdays, and thirty-one (31) times a day on weekends. When the bus stop is in use, a bus will block the bicycle lane and over four (4) feet of the number 2 westbound lane, which is not uncommon for many of the bus stops on Soquel Avenue and other areas throughout Santa Cruz County. A five (5) year review of incidents/accidents for this location did not reveal any METRO related issues.

The current active stop complies with the Americans with Disabilities Act (ADA) requirements, services a considerable number of persons patronizing local business establishments, and the larger 41<sup>st</sup> Avenue shopping center. If removed, the nearest bus stop would then be nine hundred seventy three (973) feet west from the current stop location, at the intersection of Soquel Drive at Carriker Lane near Rodeo Gulch. METRO considers this distance excessive and inconvenient since it is our policy to maintain a maximum of six hundred (600) feet between bus stops.

Relocation of the bus stop would require costly upgrades to an alternative location in order to meet minimum ADA requirements at a cost of approximately \$12,000 to \$15,000 and would not include a bus turnout. California State Budget Act signed into law February 20, 2009 has eliminated State Transit Assistance (STA) funding through 2013. Elimination of this assistance places METRO's budget for bus stop and shelter improvements at \$0.

Communication with the County Traffic Engineering Department revealed that originally the existing stop at 41<sup>st</sup> Avenue and Soquel Drive was to be completely redesigned and improved to encompass ADA requirements, a bus turnout and Shelter financed by Ocean Honda and Store More America, plans were established in 2005. Greenbrae residents opposed improvements to be performed to the existing stop and requested it be relocated citing aforementioned concerns. An alternative location was found in front of the SMOG Check Business, and extending west into the adjacent parcel approximately 100 ft from the existing bus stop.

The parcel owner was not receptive to the encroachment required onto the property and would not agree to the bus stop design. The County had no authority to impose Eminent Domain since it was not a Public Works project but a Developer project. Recently, the County Board of Supervisors held a public hearing and assigned the 41<sup>st</sup> Avenue and Soquel Drive Bus Stop Project to the County Redevelopment Agency Work Plan. The

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department will be working to relocate the bus stop to the alternative site and incorporate all previously mentioned improvements within the next two to three years.

**IV. FINANCIAL CONSIDERATIONS**

\$12,000. to \$15,000 – Labor and materials for improvements to alternative stop location in order to meet minimum ADA standards, no bus turnout.

**V. ATTACHMENTS**

NONE - Refer to Written Communication 2-a.1 on March 27, 2009 Board Agenda

**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

**Minutes- Board of Directors**

**February 13, 2009**

A Regular Meeting of the Board of Directors of the Santa Cruz Metropolitan Transit District met on Friday, February 13, 2009 at the District's Administrative Office located at 370 Encinal Street in Santa Cruz, California.

Vice Chair Pirie called the meeting to order at 9:00 a.m.

**SECTION 1: OPEN SESSION**

**1. ROLL CALL:**

**DIRECTORS PRESENT**

Dene Bustichi  
Ron Graves  
Donald Hagen  
Michelle Hinkle  
Ellen Pirie  
Mike Rotkin  
Dale Skillicorn  
Pat Spence  
Mark Stone  
Marcela Tavantzis  
Ex-Officio Donna Blitzer (arrived after roll call)

**DIRECTORS ABSENT**

Lynn Robinson

**STAFF PRESENT**

Ciro Aguirre, Operations Manager  
Angela Aitken, Finance Manager  
Frank Cheng, MetroBase Project Manager  
Mary Ferrick, Fixed Route Superintendent  
Terry Gale, IT Manager  
Margaret Gallagher, District Counsel

Shona Harper, Asst Paratransit Superintendent  
Debbie Kinslow, Asst Finance Manager  
Robyn Slater, Human Resources Manager  
April Warnock, Paratransit Superintendent  
Les White, General Manager

**EMPLOYEES AND MEMBERS OF THE PUBLIC WHO VOLUNTARILY INDICATED THEY WERE PRESENT**

Mark Hansen, Mechanic II

Shawn O'Donnell, Fleet Maint. Supervisor

**2. ORAL AND WRITTEN COMMUNICATION TO THE BOARD OF DIRECTORS**

Written:

None.

5-16.1

Oral:

None.

3. **LABOR ORGANIZATION COMMUNICATIONS**

None.

4. **ADDITIONAL DOCUMENTATION TO SUPPORT EXISTING AGENDA ITEMS**

None.

**CONSENT AGENDA**

5-1. **ACCEPT AND FILE PRELIMINARILY APPROVED CLAIMS FOR THE MONTH OF JANUARY 2009**

No questions or comments.

5-2. **ACCEPT AND FILE MONTHLY BUDGET STATUS REPORT FOR DECEMBER 2008**

5-3. **CONSIDERATION OF TORT CLAIMS: None**

No questions or comments.

5-4. **ACCEPT AND FILE THE METRO ADVISORY COMMITTEE (MAC) AGENDA FOR FEBRUARY 18, 2009 AND MINUTES OF DECEMBER 16, 2008**

No questions or comments.

5-5. **ACCEPT AND FILE PARACRUZ OPERATIONS STATUS REPORT FOR THE MONTH OF NOVEMBER 2008**

No questions or comments.

5-6. **ACCEPT AND FILE HIGHWAY 17 STATUS REPORT FOR NOVEMBER & DECEMBER 2008**

No questions or comments.

5-7. **ACCEPT AND FILE NOVEMBER & DECEMBER 2008 RIDERSHIP REPORT**

No questions or comments.

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5-8. ACCEPT AND FILE UNIVERSITY OF CALIFORNIA, SANTA CRUZ SERVICE UPDATE FOR THE MONTHS OF NOVEMBER & DECEMBER 2008

No questions or comments.

5-9. ACCEPT AND FILE METROBASE PROJECT STATUS REPORT

No questions or comments.

5-10. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT RENEWAL WITH CRUZ CAR WASH FOR PARACRUZ VEHICLE WASHING SERVICES

No questions or comments.

5-11. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT RENEWAL WITH STEVE'S UNION FOR PARACRUZ VEHICLE FUELING SERVICES

No questions or comments.

5-12. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT RENEWAL WITH DIXON AND SON TIRES, INC. FOR PURCHASE OF REVENUE AND NON-REVENUE TIRES

Director Tavantzis thanked staff for reworking this contract.

5-13. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXTEND THE CONTRACT WITH PAT PIRAS CONSULTING FOR REVIEW OF THE ADA PARATRANSIT ELIGIBILITY PROCESS

No questions or comments.

5-14. CONSIDERATION OF A RESOLUTION AUTHORIZING TWO NEW SIGNERS ON THE DEPOSIT ACCOUNT FOR THE ADMINISTRATION OF APPROVED WORKERS' COMPENSATION CLAIMS WITH COMERICA BANK

No questions or comments.

5-15. CONSIDERATION OF AN AGREEMENT WITH SANTA CRUZ SEASIDE COMPANY FOR THE PROVISION OF LATE NIGHT SERVICE

No questions or comments.

5-16.3

**5-16. CONSIDERATION OF RECLASSIFICATION OF SENIOR ACCOUNTING TECHNICIAN TO PURCHASING ASSISTANT**

Director Spence pointed out an error in Staff Report in the first sentence under Discussion where it says “SEIU Local 23”, which should be “SEIU Local 521”.

**5-17. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT AMENDMENT FOR A CHANGE ORDER IN THE AMOUNT OF NOT-TO-EXCEED \$2,688.70 FROM JOS. J. ALBANESE TO PROVIDE ADDITIONAL FUNDS TO THE DEMOLITION CONTRACT TO ACCOMMODATE COSTS RELATING TO UNFORESEEN SOILS CONDITION CAUSED BY THE WET WEATHER CONDITIONS**

No questions or comments.

**REGULAR AGENDA**

**6. PRESENTATION OF EMPLOYEE LONGEVITY AWARDS:**

This presentation will take place at the February 27, 2009 Board meeting.

**7. PUBLIC HEARING: CONSIDERATION OF ADOPTION OF THE FY 2008 – FY 2012 SHORT RANGE TRANSIT PLAN**

Public Hearing will take place at the February 27, 2009 Board Meeting.

**Summary:**

Angela Aitken reported that this is the final version of the SRTP that includes revisions requested by the Board to reflect that the trunk and feeder concept not be pursued within the five-year planning horizon of the SRTP and that no revisions be made to the current service delivery model. At the request of the Board, the final version also includes new information on the requirements necessary to successfully implement a trunk and feeder service option. These revisions and new information are contained in Chapter 7: Addendum.

Les White stated that METRO is not in a position to add service and will be lucky to maintain its current service level for the next few years. Mr. White explained the significant impacts on METRO of the proposed state budget, which completely eliminates all public transit funding from the State of California for the next 5 years. METRO will be requesting that the CARB regulations be relaxed to not require METRO to convert its entire fleet to CNG by 2012. This would allow METRO to continue to operate diesel buses, otherwise METRO will be required to stop operating the remaining 30 diesel buses which will result in a 38% service reduction and the lay off of approximately 40% of METRO's workforce in the Fall of 2012.

**Discussion:**

There was a discussion about informing the public of the impact of the proposed state budget on METRO.

5-16.4



Director Spence noted that there were still several errors in the final SRTP that may reflect badly on METRO. Les White suggested that the Board let staff know of any errors and staff could add an errata page because the consultants, Wilbur Smith Associates, have exhausted the grant funding for this project and do not intend to correct their errors unless they are paid by METRO.

8. **CONSIDERATION OF APPROVAL OF RESOLUTION OF APPRECIATION FOR THE SERVICES OF KIRBY NICOL AS A MEMBER OF THE BOARD OF DIRECTORS OF THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

This presentation will take place at the February 27, 2009 Board meeting.

9. **CONSIDERATION OF DECLINING JOB ACCESS REVERSE COMMUTE GRANT FUNDING**

Angela Aitken reported that in October 2008, Caltrans awarded a grant to METRO in \$44,166 in JARC funds with a required local match to operate new transit service for one year assisting low-income workers commuting from Watsonville to employment centers in Capitola and Santa Cruz.

Staff recommends declining the grant and not implementing new service because METRO would be unable to sustain it at the end of one year due to lack of funds.

10. **CONSIDERATION OF PROVIDING DIRECTION TO METRO STAFF REGARDING A BUS STOP BENCH AND/OR SHELTER DONATION PROGRAM INCLUDING ALLOWING DONORS TO PLACE THEIR NAMES OR BUSINESS LOGOS ON THE DONATED FACILITIES**

**Summary:**

Margaret Gallagher reported that the Board was being asked for input today and if the Board was interested in pursuing a donation program, staff could develop a proposed program for the Board's consideration and adoption at a later date.

Ms. Gallagher reported that an inquiry had been received by a member of the public asking if an individual or organization paid the costs of a bus bench and/or shelter could their name or logo be placed on the facility to identify them as a donor.

**Discussion:**

Input from Board Members included that it should be limited to business or individual's names and not be any form of advertising; METRO should receive the funds prior to installation of a bench or shelter; a rate package could be developed outlining what a donor would receive for a fee; perhaps have a preference for local donors to show engagement in the community.

Regarding the installation and upkeep, Mark Hansen, Mechanic II, suggested that Facilities Maintenance could install and maintain engravings created in-house to keep the costs down.

Shawn O'Donnell, Fleet Maintenance Supervisor, suggested naming the program "Adopt a Stop".

5-16.5

**11. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT WITH JACIBO ENTERPRISES, LLC FOR REDESIGN AND IMPLEMENTATION OF METRO'S WEB SITE**

**Summary:**

Angela Aitken reported that METRO requires the services of a web site design firm to re-design METRO's website to be ADA compliant, bilingual, database driven, more user-friendly, accessible and organized.

METRO has budgeted \$75,000 to incorporate all of the different components of the web site redesign project.

Staff is recommending that a contract be established with Jabico Enterprises, LLC for web site re-design and implementation services for an amount not to exceed \$43,100.

**Discussion:**

Director Rotkin agreed that METRO's web site needs updating, but why not use students?

Terry Gale replied that the contractor needs experience in specific areas including ADA compliance, bilingual, engine-driven database, and must be maintainable into the future.

Les White added that it is understandable that people may question this expenditure in lieu of service improvements, but this is a one-time investment that will benefit METRO over the long term while service improvements are on-going expenses.

**ACTION: MOTION: DIRECTOR SKILLICORN SECOND: DIRECTOR ROTKIN**

**Authorize the General Manager to execute a contract with Jabico Enterprises, LLC for web site re-design and implementation services for an amount not to exceed \$43,100.**

**Approve the following contract change order procedures that will apply to this contract:**

- 1. For any change order request from the contractor that exceeds \$25,000, staff will review and present to the Board of Directors for approval.**
- 2. For any change order request from the contractor that is less than \$25,000, staff will review and approval of the change order will require approval from the following personnel:  
Leslie R. White, General Manager  
Terry Gale, Information Technology Manager  
Frank Cheng, MetroBase Project Manager**
- 3. Staff shall report every month to the Board of Directors on all change orders processed for this contract.**

**5-16.6**

**Discussion:**

There was a discussion about the change order procedure.

Vice Chair Bustichi stated that he does not support spending \$43,000 on website improvements after just hearing about the state budget impacts on METRO. Angela Aitken replied that this will take the burden off METRO's overworked IT Department and METRO's website will be ADA compliant.

Director Rotkin suggested the following amendment, which was accepted by the maker of the motion:

**Approve the following contract change order procedures that will apply to this contract:**

1. For any change order request from the contractor that exceeds ~~\$25,000~~ \$10,000, staff will review and present to the Board of Directors for approval.
2. For any change order request from the contractor that is less than ~~\$25,000~~ \$10,000, staff will review and approval of the change order will require approval from the following personnel:

After further discussion of the change order procedure, Director Tavantzis suggested the following amendment, which was accepted by the maker and the second and the following complete motion was voted upon:

**ACTION: MOTION: DIRECTOR SKILLICORN SECOND: DIRECTOR ROTKIN**

**Authorize the General Manager to execute a contract with Jabico Enterprises, LLC for web site re-design and implementation services for an amount not to exceed \$43,100.**

**Approve the following contract change order procedures that will apply to this contract:**

1. For any single or cumulative change order request(s) from the contractor that exceeds ~~\$25,000~~ \$10,000, staff will review and present to the Board of Directors for approval.
2. For any single or cumulative change order request(s) from the contractor that is less than ~~\$25,000~~ \$10,000, staff will review and approval of the change order will require approval from the following personnel:  
Leslie R. White, General Manager  
Terry Gale, Information Technology Manager  
Frank Cheng, MetroBase Project Manager
3. Staff shall report every month to the Board of Directors on all change orders processed for this contract.

**Motion passed with Director Bustichi voting No, Director Graves abstaining, and Director Robinson being absent.**

5-16.7

12. **ORAL ANNOUNCEMENT: NOTIFICATION OF MEETING LOCATION FOR FEBRUARY 27, 2009 – WATSONVILLE CITY COUNCIL CHAMBERS, 275 MAIN STREET, WATSONVILLE**

Vice Chair Pirie announced that the February 27, 2009 Board meeting would be held at the Watsonville City Council Chambers.

13. **REVIEW OF ITEMS TO BE DISCUSSED IN CLOSED SESSION: District Counsel**

Margaret Gallagher reported that the Board would have a conference with its Legal Counsel regarding the Existing Litigation claim of Kimberly Hodge.

14. **ORAL AND WRITTEN COMMUNICATIONS REGARDING CLOSED SESSION**

None.

**SECTION II: CLOSED SESSION**

Vice Chair Pirie adjourned to Closed Session at 10:14 a.m. and reconvened to Open Session at 10:16 a.m.

**SECTION III: RECONVENE TO OPEN SESSION**

15. **REPORT OF CLOSED SESSION**

Margaret Gallagher reported that the Board took no reportable action in Closed Session.

**ADJOURN**

There being no further business, Vice Chair Pirie adjourned the meeting at 10:16 a.m.

Respectfully submitted,

CINDI THOMAS  
Administrative Services Coordinator

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**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

**Minutes- Board of Directors**

**February 27, 2009**

A Regular Meeting of the Board of Directors of the Santa Cruz Metropolitan Transit District met on Friday, February 27, 2009 at the Watsonville City Council Chambers, 275 Main Street, Watsonville, CA.

Chair Bustichi called the meeting to order at 9:02 a.m.

**SECTION 1: OPEN SESSION**

**1. ROLL CALL:**

**DIRECTORS PRESENT**

Dene Bustichi  
Ron Graves  
Donald Hagen  
Michelle Hinkle  
Ellen Pirie  
Lynn Robinson  
Mike Rotkin  
Dale Skillicorn  
Pat Spence  
Mark Stone  
Marcela Tavantzis  
Ex-Officio Donna Blitzer

**DIRECTORS ABSENT**

**STAFF PRESENT**

Ciro Aguirre, Operations Manager  
Angela Aitken, Finance Manager  
Frank Cheng, MetroBase Project Manager  
Mary Ferrick, Fixed Route Superintendent  
Margaret Gallagher, District Counsel

Shona Harper, Asst Paratransit Superintendent  
Debbie Kinslow, Asst Finance Manager  
Robyn Slater, Human Resources Manager  
April Warnock, Paratransit Superintendent  
Les White, General Manager

**EMPLOYEES AND MEMBERS OF THE PUBLIC WHO VOLUNTARILY INDICATED THEY WERE PRESENT**

Katie Axt, AMBAG  
Jose Gonzalez  
Carolyn Hamm, SEA  
Brenda Malphrus, Bus Operator  
Manny Martinez, PSA  
Bonnie Morr, UTU

Kirby Nicol, Former Director  
Karena Pushnik, SCCRTC  
Will Regan, VMU  
Amy Weiss, Spanish Interpreter  
Bob Yount, MAC

5-16.9

**2. ORAL AND WRITTEN COMMUNICATION TO THE BOARD OF DIRECTORS**

Written:

None.

Oral:

Bob Yount reported that MAC recently held its elections and elected him as Vice Chair and re-elected Naomi Gunther as Chair.

**3. LABOR ORGANIZATION COMMUNICATIONS**

Les White reported that METRO employee Francisco Devillires passed away last Friday and his services would be held tomorrow afternoon.

**4. ADDITIONAL DOCUMENTATION TO SUPPORT EXISTING AGENDA ITEMS**

None.

**CONSENT AGENDA**

- 5-1. **ACCEPT AND FILE PRELIMINARILY APPROVED CLAIMS FOR THE MONTH OF JANUARY 2009**
- 5-2. **ACCEPT AND FILE MONTHLY BUDGET STATUS REPORT FOR DECEMBER 2008**
- 5-3. **CONSIDERATION OF TORT CLAIMS: None**
- 5-4. **ACCEPT AND FILE THE METRO ADVISORY COMMITTEE (MAC) AGENDA FOR FEBRUARY 18, 2009 AND MINUTES OF DECEMBER 16, 2008**
- 5-5. **ACCEPT AND FILE PARACRUZ OPERATIONS STATUS REPORT FOR THE MONTH OF NOVEMBER 2008**
- 5-6. **ACCEPT AND FILE HIGHWAY 17 STATUS REPORT FOR NOVEMBER & DECEMBER 2008**
- 5-7. **ACCEPT AND FILE NOVEMBER & DECEMBER 2008 RIDERSHIP REPORT**
- 5-8. **ACCEPT AND FILE UNIVERSITY OF CALIFORNIA, SANTA CRUZ SERVICE UPDATE FOR THE MONTHS OF NOVEMBER & DECEMBER 2008**
- 5-9. **ACCEPT AND FILE METROBASE PROJECT STATUS REPORT**
- 5-10. **CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT RENEWAL WITH CRUZ CAR WASH FOR PARACRUZ VEHICLE WASHING SERVICES**
- 5-11. **CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT RENEWAL WITH STEVE'S UNION FOR PARACRUZ VEHICLE FUELING SERVICES**
- 5-12. **CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT RENEWAL WITH DIXON AND SON TIRES, INC. FOR PURCHASE OF REVENUE AND NON-REVENUE TIRES**

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- 5-13. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXTEND THE CONTRACT WITH PAT PIRAS CONSULTING FOR REVIEW OF THE ADA PARATRANSIT ELIGIBILITY PROCESS
- 5-14. CONSIDERATION OF A RESOLUTION AUTHORIZING TWO NEW SIGNERS ON THE DEPOSIT ACCOUNT FOR THE ADMINISTRATION OF APPROVED WORKERS' COMPENSATION CLAIMS WITH COMERICA BANK
- 5-15. CONSIDERATION OF AN AGREEMENT WITH SANTA CRUZ SEASIDE COMPANY FOR THE PROVISION OF LATE NIGHT SERVICE
- 5-16. CONSIDERATION OF RECLASSIFICATION OF SENIOR ACCOUNTING TECHNICIAN TO PURCHASING ASSISTANT
- 5-17. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXECUTE A CONTRACT AMENDMENT FOR A CHANGE ORDER IN THE AMOUNT OF NOT-TO-EXCEED \$2,688.70 FROM JOS. J. ALBANESE TO PROVIDE ADDITIONAL FUNDS TO THE DEMOLITION CONTRACT TO ACCOMMODATE COSTS RELATING TO UNFORESEEN SOILS CONDITION CAUSED BY THE WET WEATHER CONDITIONS
- 5-18. CONSIDERATION OF AUTHORIZING THE GENERAL MANAGER TO EXTEND THE CONTRACT WITH TELEPATH CORPORATION FOR RADIO MAINTENANCE AND REPAIR SERVICES
- 5-19. ACCEPT AND FILE MINUTES REFLECTING VOTING RESULTS FROM APPOINTEES TO THE SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION FOR THE JANUARY 2009 MEETING(S)
- 5-20. APPROVE REGULAR BOARD MEETING MINUTES OF JANUARY 9 & 23, 2009

ACTION: MOTION: DIRECTOR ROTKIN SECOND: DIRECTOR PIRIE

Approve the Consent Agenda

Motion passed unanimously with all Directors present.

**REGULAR AGENDA**

**6. PRESENTATION OF EMPLOYEE LONGEVITY AWARDS:**

The following employees were presented with longevity awards for their years of service:

**TEN YEARS**

Jukka Naukkarinen, Bus Operator  
Brenda H. Malphrus, Bus Operator  
Eloise Kelly, Bus Operator

**7. PUBLIC HEARING: CONSIDERATION OF ADOPTION OF THE FY 2008 – FY 2012 SHORT RANGE TRANSIT PLAN**

**Summary:**

Angela Aitken reported that METRO contracted with Wilbur Smith Associates to develop a Short Range Transit Plan (SRTP). In July 2008, the draft was presented to the Board. The proposed

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plan included a new service delivery model: the Trunk and Feeder Service Option. Staff was directed to determine the feasibility of the proposed service model and presented findings to the Board in December 2008 recommending that the Trunk and Feeder Service Option be removed because it was such a drastic change making it unfeasible to implement within the five-year planning horizon of the SRTP.

The Board directed staff to have Wilbur Smith revise the document and this is the final version of the SRTP that includes revisions requested by the Board to reflect that the trunk and feeder concept not be pursued within the five-year planning horizon of the SRTP and that no revisions be made to the current service delivery model. At the request of the Board, the final version also includes new information on the requirements necessary to successfully implement a trunk and feeder service option. These revisions and new information are contained in Chapter 7: Addendum.

**Discussion:**

Director Spence stated that she felt the Addendum was inadequate and suggested adding the Board minutes and voting.

Les White explained that METRO is very unhappy with this document, including the development of it, particularly the inadequate outreach to the community, members of the Board and interaction with staff. This document contains numerous mistakes, it is not reflective of the forward-looking plan that METRO expected, and at the same time, the consultants have exhausted the grant funding and are in the position of charging METRO for any corrections or revisions to the document. Staff does not recommend paying the consultants any further beyond what has already been paid to them.

Mr. White further explained that the changes of the magnitude that would have been required for a rescoping of METRO's service delivery to a trunk and feeder system would require resources that were far beyond what METRO had envisioned. This document should now be considered a "Status Quo" for the next five years with the intent to revisit service options when the economy improves. In today's economy, METRO is not in a position to add service and will be lucky to maintain its current service level with no service cuts, fare increases, or staff reductions over the next three years.

METRO staff members that worked on determining the feasibility of the trunk and feeder system have retired, so any revisions that METRO may want to make to this plan now would require additional compensation to WSA to revise the document further, which staff does not recommend.

Director Spence clarified that she was not suggesting that staff go back to WSA, but thought staff had mentioned adding an errata page. Les White confirmed that was originally the intent, but the staff member that was to do that has retired also. Mr. White offered to do it himself if directed by the Board to drop everything else and work on this document. Director Spence suggested just adding the Board minutes to the document.

5-16.12



Director Stone agreed this was a very disappointing process and document that should not go back to WSA for additional compensation to fix errors. It should be adopted with the understanding that METRO is very unhappy with it.

Director Rotkin agreed with adding the minutes to the back of the document and suggested adding a sticker on the front that directs interested people to obtain a recording of the discussion regarding how the Board viewed this document when it was adopted.

Director Hagen stated that he would not approve this document for anything other than shredding unless major changes were made.

**CHAIR BUSTICHI OPENED THE PUBLIC HEARING AT 9:19 A.M.**

Bob Yount stated that he was very unhappy with this inadequate document, which he feels is student quality work and does not reflect the quality of METRO. Mr. Yount feel the document is completely unacceptable and he would not pay WSA any more or use them again for anything.

Katie Axt, AMBAG, stated that AMBAG provided the funding for this project which required a 30-day public comment period prior to adoption and AMBAG is not aware of that requirement being met.

Les White suggested deferring action today to allow for a 30-day public comment period prior to adoption and confirmed that there would be no consequences involved in deferring action.

Karena Pushnik, SCCRTC, stated that the RTC agrees with comments previously made and believes this document could benefit from more public discussion and input. The RTC is hopeful that METRO can revisit the plan prior to 2012. Ms. Pushnik provided a hard copy of the RTC's comments, which is attached to the file copy of these minutes.

**CHAIR BUSTICHI CLOSED THE PUBLIC HEARING AT 9:30 A.M.**

**ACTION: MOTION: DIRECTOR ROTKIN SECOND: DIRECTOR TAVANTZIS**

**Defer action to allow for a 30-day public comment period**

**Motion passed with Director Hagen voting No and all Directors present.**

**8. CONSIDERATION OF APPROVAL OF RESOLUTION OF APPRECIATION FOR THE SERVICES OF KIRBY NICOL AS A MEMBER OF THE BOARD OF DIRECTORS OF THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

The Board, staff, and union representatives thanked Former Director Kirby Nicol for his years of service on the METRO Board. Mr. Nicol thanked METRO for the opportunity to serve on the Board.

**5-16.13**

**ACTION: MOTION: DIRECTOR TAVANTZIS SECOND: DIRECTOR ROTKIN**

**Adopt Resolution of Appreciation for the services of Kirby Nicol as a member of the Board of Directors of the Santa Cruz Metropolitan Transit District**

**Motion passed unanimously with all Directors present.**

**9. CONSIDERATION OF DECLINING JOB ACCESS REVERSE COMMUTE GRANT FUNDING**

**Summary:**

Angela Aitken reported that in October 2008, Caltrans awarded a grant to METRO in \$44,166 in JARC funds with a required local match to operate new transit service for one year assisting low-income workers commuting from Watsonville to employment centers in Capitola and Santa Cruz.

Staff recommends declining the grant and not implementing new service because METRO would be unable to sustain it at the end of one year due to lack of funds.

**ACTION: MOTION: DIRECTOR SPENCE SECOND: DIRECTOR HAGEN**

**Decline a one-year Job Access Reverse Commute (JARC) grant**

**Motion passed unanimously with all Directors present.**

**10. CONSIDERATION OF ADOPTING A RESOLUTION SUPPORTING THE ACTIONS OF THE CALIFORNIA TRANSIT ASSOCIATION (CTA) IN EXPLORING THE FEASIBILITY OF SUBMITTING AN INITIATIVE THAT WOULD PRESERVE AND PROTECT PUBLIC TRANSIT FUNDING**

**Summary:**

Les White reported that the state has diverted over \$6 billion in transit funding to the General Fund and the current budget signed by the Governor on February 20, 2009 completely eliminates all public transit funding for the next 5 years. Mr. White explained the significant impact of the state's actions on METRO.

Staff recommends adopting the attached resolution which supports the actions of the CTA in determining the feasibility of developing a transit funding protection initiative.

**ACTION: MOTION: DIRECTOR SPENCE SECOND: DIRECTOR ROBINSON**

**Adopt Resolution supporting the efforts of the California Transit Association to conduct polling and focus group activities in order to determine the feasibility of placing a transit funding protection initiative before the California voters that would protect public transit funding**

**5-16.14**

**Motion passed unanimously with all Directors present.**

**11. CONSIDERATION OF THE CALIFORNIA STATE BUDGET AND ITS IMPACT ON METRO**

**Summary:**

Les White reported that the state has diverted over \$6 billion in transit funding to the General Fund and the current budget signed by the Governor on February 20, 2009 completely eliminates all public transit funding for the next 5 years. Mr. White explained the significant impact of the state's actions on METRO as outlined in Attachment A which includes placing METRO projects on indefinite hold, a 38% service reduction and the layoff of approximately 150 METRO employees in the Fall of 2012.

In order to avoid these impacts at METRO, staff recommends immediately implementing the following three-part strategy:

1. The first part of the recommended strategy is to request that the timetable from the California Air Resources Board (CARB) for the elimination of diesel buses from the fleet be delayed from 2012 to 2015.
2. The second part of the strategy is to seek support from the Members of the Legislature that represent Santa Cruz to achieve legislative action authorizing the sale of \$800 million in PTMISEA Bonds as soon as the market is appropriate. Included in this area is the goal of achieve full construction of the Operations Building and support facilities at a cost not to exceed \$ 20 million leaving approximately \$7 million in PTMISEA funds to be used to purchase replacement buses. I propose to augment these funds with the FY 2011, though FY 2015 funds received from the federal Small Cities Transit Intensive Cities funds. This finding will generate approximate \$3.75 million. The achievement of these funds will require METRO to actively advocate for, and successfully achieve, the retention of the STIC Program in the federal Authorization Bill that should be enacted prior to October 1, 2009.
3. The third part of the strategy is to achieve acceptance by the Legislature that the \$743 million level of state formula funding identified in SB 79 in 2007 is the base level of funding that the state needs to provide to transit systems on a permanent basis. The \$ 743 million funding level would provide approximately \$5.1 million / year to Santa Cruz using the current STA formula.

**Discussion:**

There was a discussion about the state budget and its significant impact on METRO.

**12. CONSIDERATION OF THE STATUS OF THE PRESIDENT'S ECONOMIC STIMULUS PROGRAM AND ITS IMPACT ON METRO**

**Summary:**

5-16.15

Les White reported that on January 23, 2009 the Board of Directors approved projects for submission to the Santa Cruz County Regional Transportation Commission (SCCRTC) to compete for funding that they may receive from the American Recovery and Reinvestment Act.

The funding that will be received by the SCCRTC from American Recovery and Reinvestment Act the can be used for both road and transit investments. The funding that will be received by METRO can only be used for transit investments.

As METRO will be able to fund critical projects with “transit only” American Recovery and Reinvestment Act funds staff recommends that METRO reprioritize the projects submitted to the SCCRTC so that critical road projects can be funded from the funds allocated to them.

**ACTION: MOTION: DIRECTOR ROTKIN SECOND: DIRECTOR ROBINSON**

**Approve staff recommendation to reprioritize the project list previously submitted to the RTC and allow the projects to be used by the RTC as a last resort to avoid losing any funding should any other projects fail to meet their needs**

**Motion passed unanimously with all Directors present.**

**13. CONSIDERATION OF A REQUEST TO EXPAND THE SERVICE BOUNDARY FOR THE PARACRUZ SERVICE TO INCLUDE THE MONTEREY BAY HORSEMANSHIP AND THERAPEUTIC CENTER LOCATED AT 783 SAN ANDREAS ROAD, LA SELVA BEACH, CALIFORNIA**

**Summary:**

Les White reported that METRO had received a request from the Monterey Bay Horsemanship and Therapeutic Center to expand the ParaCruz service boundary to provide service to their center located at 783 San Andreas Road in La Selva Beach, which is approximately 2.75 miles beyond the  $\frac{3}{4}$  mile service boundary.

**Discussion:**

There was a discussion about making special exceptions and noted that METRO would be overwhelmed with requests if they were granted.

**ACTION: MOTION: DIRECTOR ROTKIN SECOND: DIRECTOR SKILLICORN**

**Deny the request from the Monterey Bay Horsemanship and Therapeutic Center for a variance in the ParaCruz Service Area Boundary that would allow direct service to the 783 San Andreas Road, La Selva Beach facility**

**Motion passed unanimously with all Directors present.**

5-16.16

**14. REVIEW OF ITEMS TO BE DISCUSSED IN CLOSED SESSION: District Counsel**

Margaret Gallagher reported that the Board would have a conference with its Labor Negotiators regarding SEIU, Local 521, and UTU, Local 23, ParaCruz Division.

**15. ORAL AND WRITTEN COMMUNICATIONS REGARDING CLOSED SESSION**

None.

**SECTION II: CLOSED SESSION**

Chair Bustichi adjourned to Closed Session at 11:00 a.m. and reconvened to Open Session at 11:40 a.m.

**SECTION III: RECONVENE TO OPEN SESSION**

**16. REPORT OF CLOSED SESSION**

Chair Bustichi reported that the Board took no reportable action in Closed Session.

**ADJOURN**

There being no further business, Chair Bustichi adjourned the meeting at 11:41 a.m.

Respectfully submitted,

CINDI THOMAS  
Administrative Services Coordinator

5-16.17

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009  
**TO:** Board of Directors  
**FROM:** Robyn Slater, Human Resources Manager  
**SUBJECT: PRESENTATION OF EMPLOYEE LONGEVITY AWARDS**

## I. RECOMMENDED ACTION

**Staff recommends that the Board of Directors recognize the anniversaries of those District employees named on the attached list and that the Board Chair present them with awards.**

## II. SUMMARY OF ISSUES

- None.

## III. DISCUSSION

Many employees have provided dedicated and valuable years to the Santa Cruz Metropolitan Transit District. In order to recognize these employees, anniversary awards are presented at five-year increments beginning with the tenth year. In an effort to accommodate those employees that are to be recognized, they will be invited to attend the Board meetings to receive their awards.

## IV. FINANCIAL CONSIDERATIONS

None.

## V. ATTACHMENTS

**Attachment A:** Employee Recognition List

**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
EMPLOYEE RECOGNITION**

**TEN YEARS**

None

**FIFTEEN YEARS**

None

**TWENTY YEARS**

Bonnie L. Morr, Bus Operator  
Dennis Neil Dougherty, Custodial Service Worker I

**TWENTY-FIVE YEARS**

Francisco J. Contreras Navarro, Bus Operator  
Juanita Archibeque, Bus Operator

**THIRTY YEARS**

None

BEFORE THE BOARD OF DIRECTORS OF THE  
SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

Resolution No. \_\_\_\_\_  
On the Motion of Director: \_\_\_\_\_  
Duly Seconded by Director: \_\_\_\_\_  
The Following Resolution is Adopted:

**A RESOLUTION OF APPRECIATION FOR THE SERVICES OF  
IAN MCFADDEN AS TRANSIT PLANNER  
FOR THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

**WHEREAS**, the Santa Cruz Metropolitan Transit District was formed to provide public transportation to all of the residents of Santa Cruz County, and

**WHEREAS**, the provision of public transportation service requires a competent, dedicated workforce, and

**WHEREAS**, the Santa Cruz Metropolitan Transit District, requiring an employee with expertise and dedication appointed Ian McFadden to serve in the position initially of Bus Operator, subsequently promoting him to the position of Transit Planner.

**WHEREAS**, Ian McFadden served as a member of the Operations Department of the Santa Cruz Metropolitan Transit District for the time period of November 18, 1985 to May 23, 2001, and then served as a member of the Administration Department of Santa Cruz Metropolitan Transit District for a time period of May 24, 2001 to April 15, 2009, and

**WHEREAS**, Ian McFadden provided the Santa Cruz Metropolitan Transit District with dedicated service and commitment during the time of employment, and

**WHEREAS**, Ian McFadden served the Santa Cruz Metropolitan Transit District with distinction, and

**WHEREAS**, the service provided to the residents of Santa Cruz County by Ian McFadden resulted in reliable, quality public transportation being available in the most difficult of times, and

**WHEREAS**, during the time of Ian McFadden's service, METRO expanded service, developed new operating facilities, purchased new equipment, developed accessible bus stops, opened new transit centers, improved ridership, responded to the challenges of the Loma Prieta Earthquake, responded to adverse economic conditions, implemented bi-directional UCSC service, assumed direct operational responsibility for the Highway 17 Express service and the Amtrak Connector service, and assumed direct operational responsibility for the ParaCruz service, and

**WHEREAS**, the quality of life in Santa Cruz County was improved dramatically as a result of the exemplary service provided by Ian McFadden.

**NOW, THEREFORE, BE IT RESOLVED**, that upon his retirement as Bus Operator, the Board of Directors of the Santa Cruz Metropolitan Transit District does hereby commend Ian McFadden for efforts in advancing public transit service in Santa Cruz County and expresses sincere appreciation on behalf of itself, Santa Cruz Metropolitan Transit District staff and all of the residents of Santa Cruz County.

7.1 \_\_\_\_\_



**BE IT FURTHER RESOLVED**, that a copy of this resolution will be presented to Ian McFadden, and that a copy of this resolution be entered into the official records of the Santa Cruz Metropolitan Transit District.

**PASSED AND ADOPTED** this 27th day of March 2009 by the following vote:

**AYES: Directors -**

**NOES: Directors -**

**ABSTAIN: Directors -**

**ABSENT: Directors -**

**APPROVED** \_\_\_\_\_

DENE BUSTICHI  
Board Chair

**ATTEST** \_\_\_\_\_

LESLIE R. WHITE  
General Manager

**APPROVED AS TO FORM:**

\_\_\_\_\_  
MARGARET GALLAGHER  
District Counsel

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

## STAFF REPORT

**DATE:** March 27, 2009

**TO:** Board of Directors

**FROM:** Margaret Gallagher, District Counsel

**SUBJECT: CONSIDERATION OF MODIFICATIONS TO METRO'S DISCOUNT FARE POLICY IMPLEMENTING NEW SECTIONS AND REVISING THE VERIFICATION OF DISABILITY STATUS FORM AND CHANGING THE FORMAT**

### I. RECOMMENDED ACTION

**Accept and approve modifications to the Discount Fare Policy and Verification of Disability Status Form.**

### II. SUMMARY OF ISSUES

- METRO's Discount Fare Policy has been in place for many years in order to implement the Urbanized Area Formula Program (Section 5307) grant requirements.
- In 2008, METRO staff determined that modifications to the Discount Fare Policy were necessary in order to update the policy, and consolidate various aspects of the policy into one format.
- METRO staff reviewed the proposed modified policy with the Elderly and Disabled Transportation Advisory Committee (E&D TAC) and METRO's Advisory Committee (MAC). Both Committees reviewed the proposed Discount Fare Program and provided recommendations, some of which have been incorporated into the Policy. Both Committees approved the recommended modifications.

### III. DISCUSSION

The Federal Urbanized Area Formula Program (Section 5307) requires fixed-route grantees to allow 1.) Elderly persons, 2.) Persons with disabilities, and 3.) Medicare cardholders to ride fixed-route service during the off-peak hours for a fare that is not more than one-half the base fare charged other persons during the peak hours. METRO has received Section 5307 grant funds for many years. In 2009, METRO will receive a §5307 grant for capitol and operating assistance (\$3,496,293 for general operating assistance and \$700,000 for capitol improvements for METROBASE). As a result of this funding, METRO continues to be required to offer discounted fares in accordance with the §5307 requirements during off-peak hours. Therefore, METRO's fixed route service, during non-peak hours, must provide a discounted fare for elderly persons (defined as 65 years or older), and persons with disabilities that is no greater than 50% of the fare applicable during peak hours of service. Additionally, the discounted fare rates must

apply to any person presenting a Medicare Card issued pursuant to the Social Security Act.

Originally, in implementing its Discount Fare Program, METRO chose to authorize discount fares during all hours of service on all its fixed routes. Additionally, it determined that it would define "elderly" as 62 years or older for purposes of this program. Further, METRO allows a parent with disabilities to register his/her children for the Program by completing a short Registration Form to receive a discounted fare for his/her children when accompanying the parent who has a disability.

In the Spring of 2008, it was determined that METRO's Discount Fare Program (*Attachment A*) should be updated. The proposed Discount Fare Program (*Attachment B*) provides information that is not contained in the current policy, and separates out the requirements for an individual who qualifies for discount fare based on age (age 62 and over), and an individual who qualifies for discount fare based on his/her disability status.

METRO staff has added sections to the proposed Discount Fare Policy regarding the use of Personal Care Attendants, locations where an individual can purchase Discount ID Cards, and locations of METRO Pass Outlets throughout Santa Cruz County. Additionally, the proposed regulation explains how an individual with temporary disabilities may qualify for a Temporary Discount Fare Card and how an individual can order METRO passes by mail. These sections have been added to provide further information to customers who meet the eligibility criteria and wish to purchase a Discount ID Card.

The Verification of Disability Status Form has been revised to correspond with the proposed Discount Fare Program. An individual who wishes to purchase a Discount Fare based on his/her age is not required to complete a certification form, as proper identification of age at the time of ticket purchase will suffice.

METRO staff attended meetings of E&D TAC and MAC to obtain their input on the proposed changes to the regulation. *Attachment C* contains questions that members of the E&D TAC posed to METRO staff with answers that were provided back to the Committee. While reviewing the proposed Discount Fare Program, a discussion developed of how METRO came to use 62 years of age to define "elderly" for this program. Some E&D TAC members asked if METRO would consider using the standard for service under the Older Americans Act, 60 years of age, to encourage bus ridership habits among the aging population.

According to the applicable FTA regulations, the definition of "elderly" for the issuance of discount passes must "at a minimum include all persons 65 years of age or over." FTA regulations, however, also allow transit agencies, at their discretion, to use a definition that extends this fare to younger (e.g. 62 and over, or 60 and over) persons. The California Vehicle Code authorizes the Department of Motor Vehicles to issue Senior Citizen Cards to "any person 62 years of age or older" (*Cal. Vehicle Code*

§13000(b)). METRO chose the mid-point age of 62 and over. At this time, METRO staff believes retaining the definition of “elderly” to include only those persons age 62-years and above not only exceeds the federal guidelines, but also encourages ridership for the aging population.

At the suggestion of METRO Staff, the term “elderly” has been replaced with “older adult” throughout the proposed policy. This language is consistent with the Easter Seal/Project Action *Transit Operator’s Pocket Guide* published in August 2007. According to Clay Kempf, Executive Director for Senior Services, there is no one term that has been universally accepted to describe those individuals who are 60 years or older.

E&D TAC also recommended that METRO consider revising its current policy to allow eligible METRO ParaCruz passengers to ride fixed route buses free of charge by showing their valid METRO ParaCruz ID Cards. While incentives to encourage use of fixed route services are important to METRO staff, this modification is not being recommended at this time. METRO staff is concerned that if this policy was permitted, some difficulties might arise, as eligibility for paratransit service is generally limited to those individuals whose disabilities prevent them from being able to access the fixed route service. Additionally, METRO staff do not believe that METRO can financially afford to expand fare discounts at this time. METRO is already allowing the Discount Fare Passes to be utilized during non-peak service hours and by Older Adults who are younger than 65 years of age, both of which go beyond the minimum federal requirements.

E&D TAC also requested that METRO consider making the Discount ID Cards free, instead of charging a fee of \$2.00 as METRO does now. The estimated actual cost including labor exceeds \$2.00, as the materials alone cost approximately \$1.65. METRO staff is not recommending a change in the cost of the Discount ID Card at this time.

Currently, METRO allows the children (under the age of 18) of METRO passengers using METRO Discount Photo ID Cards to ride at the discounted rate with their qualifying parent. This practice will continue and language has been added to the policy (*Section 5.04*) to insure that this practice continues uninterrupted. Parents must complete a registration form available at the Santa Cruz METRO Center (Pacific Station) and Watsonville Transit Centers to qualify for this extended coverage. In addition, the registration form for Reduced Children’s Fare with Disability ID Card has been revised.

In the Fall of 2008, E&D TAC members expressed a concern about the availability of discount application forms. In January 2009, METRO obtained a fixed route ticket vendor in Aptos. Community Bridges/Lifeline will now be selling METRO fixed route passes. As more vendors agree to sell the passes, their names and locations will be added to the policy.

**IV. FINANCIAL CONSIDERATIONS**

During the Fiscal year (July 2007 -- June 2008), METRO issued the following:

8,397 S&D Monthly Passes (\$25/each)	\$209,925.00
1,674 Discount Convenience Cards (\$11.25/each)	\$ 18,832.50
981 Discount Day Passes (\$2.25/each)	\$ 2,207.25
391 Photo ID Cards (\$2.00/each)	\$ 782.00
15 Photo ID Cards (\$5.00/each)	\$ 75.00

**VI. ATTACHMENTS**

- A: Current Policy
- B: Proposed Older Adult and Persons with Disabilities Fixed Route Discount Fare Program
- C. Questions from E&D TAC re: Discount Fare Policy with METRO staff's answers

**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

**ELIGIBILITY CRITERIA FOR DISCOUNT FARE  
FOR PERSON WITH DISABILITY**

**GENERAL PROVISIONS**

The Attached Eligibility Criteria were developed in conjunction with service agency personnel and members of the persons with disability community. The Eligibility Criteria are the sole bases for the determination of a mass transportation person with disability on the Santa Cruz Metropolitan Transit District System.

The Eligibility Criteria are subject to review on a periodic basis. Changes to the Eligibility Criteria shall be made at the discretion of the Transit District with recommendations by service agency representatives and the person with disability community.

Discount cards for permanently person with disability are valid for the life of the fare structure policy granting the discount, although it will be required to renew the cards every three years.

The District's fiscal obligations may require modification of this program at anytime, however any change in the percentage of discount or hours of operation granted to person with disability in no way invalidates discount fare privileges extended to persons who qualify under the Eligibility Criteria.

The Eligibility Criteria (definition of person with disability) were developed based on a person's ability or inability to use mass transportation services and presume a level of personal mobility and independence to the degree that use of public transportation systems would be a reasonable expectation.

A functional definition of a person with disability follows: A mass transportation person with a is any incapacity or a person with disability which results in the inability of a person to perform one or more of the following functions necessary for the effective use of mass transportation facilities without significant difficulty;

1. Negotiating a flight of stairs, escalator or ramp;
2. Boarding and alighting from a public transit vehicle;
3. Standing in a moving public transit vehicle;

**NOTICE TO PHYSICIANS,  
STATE AND FEDERAL AGENCY PERSONNEL**

Discount fares for the Santa Cruz Metropolitan Transit District are now available to person with disability who are certified by a physician or State or Federal agency as meeting definitions described on the attached Eligibility Criteria list. If you are requested to certify a person with disability for discount fare eligibility, please follow the procedure described below:

1. Determine if the person meets the permanent or temporary criteria described in the Eligibility Criteria based on appropriate medical records. Note the Section Number.
2. Fill out the attached Certificate Form indicating the Section Number and the person's address and birth date.
3. Determine if the person requires attendant care while travelling and check the appropriate space.
4. If temporary person with disability, indicate period disabled in appropriate space.
5. Sign the Certificate Form and fill out address and telephone section and license number, if applicable.

NOTE: STATE AND FEDERAL AGENCY PERSONNEL

Certificate Forms may only be signed by those persons whose name(s) and title (s) are on file with the Santa Cruz Metropolitan Transit District as designated personnel. Agencies need notify Santa Cruz Metropolitan Transit District of any change in designated personnel.

The Certificate Forms will remain on file with the Santa Cruz Metropolitan Transit District as medical records, not subject to public review.

Please return the form to the person requesting certification transmittal to their transit agency.

Thank you for your cooperation.

8. a2

**PERSON WITH DISABILITY  
ELIGIBILITY CRITERIA**

**SUBJECT**

NON-AMBULATORY DISABILITIES .....	1
SEMI-AMBULATORY DISABILITIES	
Mobility Aids .....	1
Arthritis.....	1
Amputation.....	1
Cerebrovascular Accident (Stroke) .....	1
Pulmonary Ills .....	2
Cardiac Ills .....	2
Dialysis .....	3
SIGHT DISABILITIES .....	3
HEARING DISABILITIES .....	4
DEVELOPMENTAL DISABILITIES	
Mental – Person With Disability.....	4
Cerebral Palsy .....	4
Epilepsy .....	5
Autism .....	5
Neurological – Person With Disability.....	5
MENTAL DISORDERED PERSON WITH DISABILITY	
Emotionally Disturbed .....	5
VETERANS ADMINISTRATION EXCEPTION FOR 100% PERSON WITH DISABILITY.....	6
CERTIFICATE FORM	



## **ELIGIBILITY CRITERIA FOR DISCOUNT FARE FOR PERSON WITH DISABILITY**

### **PHYSICAL PERSON WITH DISABILITY**

**Section 1:** Non-Ambulatory Person With Disability.

Impairments that, regardless of the cause, confine individual permanently to wheelchairs.

**Section 2:** Semi-Ambulatory Person With Disability.

Impairments that cause individuals to walk with difficulty or insecurity including individuals using a long leg brace, or walker or crutches to achieve mobility.

**Section 3:** Semi-Ambulatory Person With Disability.

Persons who due to any cause, suffer arthritis which causes a functional motor deficit in any two major limbs (arms and/or legs). American Rheumatism Association criteria may be used as a guideline for the determination of arthritic Person With Disability. Therapeutic Grade III or worse and Functional Class III or worse and Anatomical State III or worse are evidence of arthritic handicap.

**Section 4:** Semi-Ambulatory Person With Disability.

Persons who suffer amputation of; or anatomical deformity of (i.e. loss of major function due to degenerative, changes associated with vascular or neurological deficits, traumatic loss of muscle mass or tendons and x-ray evidence of bony or fibrous ankylosis at an unfavorable angle, joint subluxation or instability).

- a. Both hands; or
- b. One hand and one foot;
- c. Amputation of lower extremity at or above the tarsal region (one or both legs).

**Section 5:** Semi-Ambulatory Person With Disability.

Cerebrovascular accident (stroke) with one of the following four months post-CVA:

- a. Pseudobulbar palsy; or
- b. Functional motor deficit in any two extremities; or
- c. Ataxia affecting two extremities substantiated by appropriate cerebellar signs or proprioceptive loss.

**Section 6:** Semi-Ambulatory Person With Disability -Pulmonary Ills.

Persons suffering respiratory impairment (dyspnea) as defined by The Journal of the American Medical Association, Guides to the Evaluation of Permanent Impairment, The Respiratory System, 11/22/65.

Classes of Respiratory Impairment

- Class 3      Dyspnea does not occur at rest but does occur during the usual activities of daily living. However, the patient can walk a mile at his own pace without dyspnea although he cannot keep pace with others of the same age and body build. Percent Person With Disability 40-50.
- Class 4      Dyspnea occurs during such activities as climbing one flight of stairs or walking 100 level, or less exertion or even at rest.
- Class 5      Dyspnea present on slightest exertion, such as dressing talking, at rest.

**Section 7:** Semi-Ambulatory Person With Disability -Cardiac Ills.

Persons suffering functional classifications of cardiac disease, Classes III and IV and therapeutic classification, Classes C, D, E as defined by Diseases of the Heart and Blood Vessels – Nomenclature and Criteria for Diagnosis, 6<sup>th</sup> Edition, Boston, Little, Brown and Company by the New York Heart Association.

Functional Classification

- Class III      Patients with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary physical activity causes fatigue, palpitation, dyspnea, or anginal pain. For instance, inability to walk one or more level blocks or climbing flight of ordinary stairs.

Class IV Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome may be present even at rest. If any physical activity is undertaken, discomfort is increased.

Therapeutic Classification

Class C Patients with cardiac disease whose ordinary physical activity should be moderately restricted, and whose more strenuous efforts should be discontinued.

Class D Patients with cardiac disease whose ordinary physical activity should be markedly restricted.

Class E Patients with cardiac disease who should be at complete rest, confined to bed or chair.

**Section 8:** Semi-Ambulatory Person With Disability – Dialysis

Persons who in order to live must use a kidney dialysis machine.

**Section 9:** Sight - Person With Disability

This section includes only the legally blind.

- a. Those persons whose vision in the better eye after best correction is 20/200 or less; and
- b. Those persons whose visual field is contracted (commonly known as tunnel vision)
  - i. to 10 degrees or less from a point of fixation, or
  - ii. so the widest diameter subtends to an angle no greater than 20 degrees.

**Section 10:** Hearing - Person With Disability

Deafness or hearing incapacity that may make an individual insecure in public areas because the individual is unable to communicate or hear warning signals, including only those persons whose hearing loss is 90dba or greater in the 500, 1000, 2000 Hz ranges.

**Section 11:** Person With Disability of Incoordination

This section includes those persons suffering faulty coordination or palsy from brain, spinal or peripheral nerve injury and any person with a functional motor deficit in any two limbs or who suffers manifestations which significantly reduce mobility, coordination and perceptiveness not accounted for in previous categories.

**DEVELOPMENTAL - Person With Disability**

Those persons, not psychotic, who are so developmentally disadvantaged "from infancy or before reaching maturity that they are incapable of managing themselves and their affairs independently, with ordinary prudence, or of being taught to do so, and who require supervision, control, and care, for their own welfare, or for the welfare of others, and for the welfare of the community." (Welfare and Institutions Code, State of California, Section 6500) and "any person who is unable, or likely to be unable, to physically or mentally respond to an oral instruction relating to danger and unassisted take appropriate action relating to such danger." (Health and Safety Code, State of California, Section 13131.3). This section includes only those persons with the following disorders who are participating in a State or Federally funded or State recognized program.

**Section 12:** Mental - Person With Disability

Refers to sub-average general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior (a general guideline is an IQ, which is, more than two standard deviations below the norm). This section also applies to adults who by reason of illness or accident suffer mental Person With Disability.

**Section 13:** Cerebral Palsy

A disorder dating from birth or early infancy, non-progressive, although if not treated, there is marked regression in functioning characterized by examples of aberrations of motor functions (paralysis, weakness, uncoordination) and often other manifestations of organic brain damage such as sensory disorders, seizures, mental Person With Disability, learning difficulty and behavioral disorders.

**Section 14:** Epilepsy (Convulsive Disorder)

Clinical disorder involving impairment of consciousness, characterized by major motor seizures (grand mal or psychomotor) substantiated by EEG, occurring more frequently than once a month in spite of prescribed treatment. With:

- a. Diurnal episodes (loss of consciousness and convulsive seizure); or
- b. Nocturnal episodes which show residuals interfering with activity during the day.

**Section 15:** Autism

1. A syndrome described as consisting of withdrawal, very inadequate social relationships, exceptional object relationships, language disturbances, and monotonously repetitive motor behavior; many children with autism will also be seriously impaired in general intellectual functioning:
2. This syndrome usually appears before the age of 6 and is characterized by severe withdrawal and inappropriate response to external stimuli.

**Section 16:** Neurological - Person With Disability

A syndrome characterized by learning, perceptual and/or behavioral disorders of an individual whose IQ is not less than two standard deviations below the norm. These characteristics exist as a result of brain dysfunction (any disorder in learning or using the senses), neurological disorder, or any damage to the central nervous system whether due to genetic, hereditary, accident, or illness factors. This section includes persons with severe gait problems who are restricted in mobility.

**MENTALLY DISORDERED PERSON WITH DISABILITY**

This section carries no age restriction.

**Section 17:** Emotionally Disturbed

To the extent of total Person With Disability and

- a. Living in a board and care home and receiving State or Federal financial assistance and participating in a State or Federally funded work activity center or workshop; or
- b. Living at home under supervision and may or may not receive State or Federal financial assistance and participating in a State or Federally funded State or Federal work activity center or workshop.

**NOTE:** VETERANS ADMINISTRATION EXCEPTION

Any veteran who holds a person with disability rating for aid and attendance, housebound or permanent and total rated at the 100% level is immediately eligible for a fare discount and criteria section number requirement is waived on the Certificate Form.

All other veterans are subject to the above Eligibility Criteria.

Any veteran wishing to apply for certification to the Veterans Administration should include his or her Social Security number and VA file number on the Certificate Form or attachment sheet when mailing to the Veterans Administration.

4. Hearing announcements by train conductors, bus drivers or station agents;
5. Walking more than 200 feet.

The Transit District reserves the right to verify Certificate Forms by contacting persons completing the forms.

Any fees charged for the completion of Certificate Forms are not the responsibility of the Transit District.

Certificate Forms will be confidential records and kept on file with the Transit District.

#### EXCLUSIONS

Persons whose sole incapacity is:

1. Any physical, mental or psychological person with disability or incapacity; of less than three months duration;
2. Pregnancy;
3. Obesity;
4. Acute or chronic alcoholism or drug addiction;
5. Contagious diseases;

Are specifically excluded from discount fare eligibility.

8.a10

CARD ISSUED: P or T <hr/> (date)
--

I certify that \_\_\_\_\_ meets the  
 (Please Print – Person’s Name)

Santa Cruz Metropolitan Transit District’s Eligibility Criteria as Person With Disability,  
 Section

\_\_\_\_\_ and is \_\_\_\_\_ eligible for a discount fare.

Length of Person with Disability \_\_\_\_\_  
 (No. of months – Must be at least 3 months to qualify.)

**ATTENDANT CARE WHILE TRAVELLING:**

- Is Necessary and Required on Public Transportation
- Is Not Necessary and Not Required on Public Transportation

Birthdate \_\_\_\_\_

Person’s Address \_\_\_\_\_

I, \_\_\_\_\_ agree to the release of this information to the Santa Cruz Metropolitan Transit District for the purpose of discount fare eligibility certification.

**Please Type or Print:**

\_\_\_\_\_  
 Name of Person Completing this Form

\_\_\_\_\_  
 Name of Certifying Agency

\_\_\_\_\_  
 Job Title (if applicable)

\_\_\_\_\_  
 Address

\_\_\_\_\_  
 Telephone

\_\_\_\_\_  
 City

\_\_\_\_\_  
 Zip

\_\_\_\_\_  
 Physician’s License Number (if applicable)

\_\_\_\_\_  
 Claims Dept. Signature (if applicable)

\_\_\_\_\_  
 Signature of Certifying Person

\_\_\_\_\_  
 Date of Signature

\_\_\_\_\_  
 Date of Signature

8.11



# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

Regulation Number: AR-[get from Cindi]

Attachment **B**

Computer Title: [get from Cindi]

Effective Date: [date GM signs]

Pages: 11

**TITLE: OLDER ADULT AND PERSONS WITH DISABILITIES FIXED ROUTE DISCOUNT FARE PROGRAM**

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Procedure History

**NEW POLICY**

**SUMMARY OF POLICY**

**APPROVED**

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## **I. POLICY**

- 1.01 It is the policy of the Santa Cruz Metropolitan Transit District (METRO) that older adult persons and persons with disabilities or an individual presenting a Medicare card, will be charged a discounted fare for transportation on METRO's fixed route service.
- 1.02 This policy sets forth the criteria that METRO employees must follow in order to insure that qualified individuals receive the discount that is allowed by this regulation.

## **II. APPLICABILITY**

- 2.01 This policy is applicable to METRO employees and qualified individuals using the fixed route service.

## **III. DEFINITIONS**

- 3.01 "**Discount Fare**" means one-half the regular fare.
- 3.02 "**Older Adult**" means any person who is at least 62 years old.
- 3.03 "**Individual with a Disability**" means an individual whose disability and/or medical condition meets one or more of the categories set forth in Section 4.04, or an individual who has one of the valid documents listed in Section 4.01(b) of this policy.
- 3.04 "**Temporary Disability**" means an individual whose disability and/or medical condition meets one or more of the categories set forth in Section 4.04, and that disability is not permanent.

8.61

#### IV. ELIGIBILITY

4.01 To qualify for a **discount** fare or ticket pursuant to this policy, a qualified individual must present one of the following to the bus operator, transit center ticket agent, or at a METRO Pass Outlet (See Section VIII) when paying a fixed route fare:

a. **For Older adult (at least 62 years of age):**

- i.) METRO Discount Photo Identification Card;
- ii.) METRO ParaCruz Identification Card;
- iii.) Paratransit Identification Card issued by another Transit Agency;
- iv.) Senior Citizen Identification Card;
- v.) Discount Photo Identification Card issued by another Transit Agency;
- vi.) Identification that displays date of birth (i.e. passport, or birth certificate);
- vii.) Current State Driver's License, or current State Identification Card;

b. **For Persons with Disabilities:**

- i.) METRO Discount Photo Identification Card;
- ii.) METRO ParaCruz Identification Card;
- iii.) Paratransit Identification Card issued by another Transit Agency;
- iv.) Discount Photo Identification Card issued by another Transit Agency;
- v.) Medicare Identification Card;
- vi.) Identification Card for a California Disabled Parking Placard;
- vii.) Proof of Veterans Disability-a copy of valid Service Connected Disability Identification Card or a Veterans Administration Certification demonstrating a disability rating for aid and attendance or a service-connected disability with a rating level of 50% or higher.

4.02 To qualify for a METRO **Discount Fare Card**, an applicant must provide METRO Customer Service with one of the valid documents listed in Section 4.01(a) or 4.01(b) of this policy.

4.03 If an individual does not have one of the valid identification cards listed in Section 4.01(a) or 4.01(b) of this policy, he/she may still be eligible for a **METRO Discount Fare Card**. An additional way to qualify for a **METRO Discount Fare Card** is to submit a completed “Professional Verification of Disability Status” (*Attachment A*). Attachment A must identify the appropriate eligibility category from Section 4.04 and must be completed by one of the following licensed professionals for such category:

- a. Licensed physicians with a Doctor of Medicine (M.D.) or Doctor of Osteopathic Medicine (D.O.) degree, licensed physician’s assistants and nurse practitioners may certify in all categories in which they are licensed to diagnose;
- b. Licensed chiropractors, may certify in categories 1,2, 3 and 4;
- c. Licensed podiatrists, may certify disabilities involving the feet under categories 1,2,3 and 4;
- d. Licensed optometrists, may certify in category 9;
- e. Licensed audiologists, may certify in category 10;
- f. Licensed clinical psychologists and licensed educational psychologists, may certify in categories 12, 15, 16 and 17;
- g. Licensed marriage and family counselors (MFCC) and licensed clinical social workers (LCSW) may certify in Category 17.

4.04 To qualify for **METRO Discount Fare Card** based on a disability, the individual must meet one of the following categories as determined by a qualified individual identified in Section 4.03:

1. **Non-ambulatory Disabilities**—Impairments that, regardless of cause, require individuals to use a wheelchair for mobility;
2. **Mobility Aids**—Impairments that cause individuals to walk with significant difficulty, including individuals using a leg brace, cane walker, or crutches to achieve mobility;
3. **Musculo-Skeletal Impairment (Including Arthritis)**—Musculo-skeletal impairment such as muscular dystrophy, osteogenesis imperfecta or any type of arthritis; such as functional Class III or anatomical Stage III;
4. **Amputation** – Persons who suffer amputation of, or anatomical deformity of (i.e. loss of major function due to degenerative changes associated with vascular or neurological deficits, traumatic loss of muscle mass or tendons and x-ray evidence of bony or fibrous ankylosis at an unfavorable angle, joint subluxation or instability): (a) both hands; or (b) one hand and one foot; or (c) amputation of lower extremity at or above the tarsal region (one or both legs);

5. **Cerebrovascular Accident (Stroke)**—With one of the following: (a) pseudobulbar palsy; or (b) functional motor deficit in any of two extremities; or (c) ataxia affecting two extremities substantiated by appropriate cerebellar signs or proprioceptive loss post 4 months.
6. **Pulmonary Ills**—Respiratory Impairments of Class 3 and 4. Class 3: FVC between 51 percent and 59 percent of predicted; or FEV between 41 percent and 59 percent of predicted. Class 4: FVC less than or equal to 50 percent of predicted; or FEV less than or equal to 40 percent of predicted.
7. **Cardiac Ills**—Cardiovascular impairments of functional Class III or IV. Functional Classification: Class III: Individuals with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary physical activity causes fatigue, palpitation, dyspnea or anginal pain. For instance, inability to walk one or more level blocks or climbing a flight of ordinary stairs. Class IV: Individuals with cardiac disease resulting in inability to carry out any physical activity without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome may be present even at rest. If physical activity is undertaken, discomfort is increased.
8. **Dialysis**—Individuals whose disability requires the use of a kidney dialysis machine.
9. **Sight Disabilities**—Those individuals whose vision in the better eye, after best correction, is 20/200 or less; or those individuals whose visual field is contracted (commonly known as tunnel vision): (a) to 10 degrees or less from a point of fixation; or (b) so the widest diameter subtends an angle no greater than 20 degrees; and (c) individuals who are unable to read information signs or symbols for other than language reasons.
10. **Hearing Disabilities**—Deafness or hearing incapacity that makes an individual unable to communicate or hear warning signals, including only those persons whose hearing loss is 70 dba or greater in the 500, 1000, 2000 Hz. Ranges.
11. **Disabilities of Incoordination**—Individuals suffering faulty coordination or palsy from brain, spinal or peripheral nerve injury and any person with a functional nerve injury and any person with a functional motor deficit in any two limbs or who suffers manifestations which significantly reduce mobility, coordination or perceptiveness not accounted for in previous categories;
12. **Intellectual Disability**—Individuals characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. This disability generally originates during the developmental period before

the age of 18 or as the result of illness or accident later in life and is associated with impairment in adaptive behavior (a general guideline is an IQ which is more than two standard deviations below the norm).

13. **Cerebral Palsy**—A disorder dating from birth or early infancy or as the result of illness or accident later in life, non-progressive, although if not treated there is marked regression in functioning characterized by examples of aberrations of motor functions (paralysis, weakness, incoordination) and often other manifestations of organic brain damage such as sensory disorders, seizures, mental retardation, learning difficulty and behavioral disorders.
14. **Epilepsy (Convulsive Disorder)**—A clinical disorder involving impairment of consciousness, characterized by seizures (e.g., generalized, complex partial, major motor, grand mal, petit mal or psychomotor), occurring more frequently than once a month in spite of prescribed treatment, with (a) diurnal episodes (loss of consciousness and convulsive seizure); (b) nocturnal episodes which show residual interfering with activity during the day; or (c) a disorder involving absence (petit mal) or mild partial (psychomotor) seizures occurring more frequently than once per week in spite of prescribed treatment with 1) Alteration of awareness or loss of consciousness; and 2) Transient postictal manifestations of conventional or antisocial behavior. Person exhibiting seizure-free control for a continuous period of more than six (6) months duration are not included in the statement of Epilepsy defined in this category.
15. **Infantile Autism**—A syndrome described as consisting of withdrawal, very inadequate social relationships, language disturbance and monotonously repetitive motor behavior. Many children with autism will also be seriously impaired in general intellectual functioning. This syndrome usually appears before the age of six and is characterized by severe withdrawal and inappropriate response to external stimuli.
16. **Neurological Impairment**—A syndrome characterized by learning, perception and/or behavioral disorders of an individual who's IQ is not less than two standard deviations below the norm. These characteristics exist as a result of brain dysfunctions (any disorder in learning using the senses), neurologic disorder or any damage to the central nervous system, whether due to genetic, hereditary, accident or illness factors. This section includes people with severe gait problems who are restricted in mobility.
17. **Mental Disorders**—Individuals whose mental impairment substantially limits one or more of their major life activities. This includes inability to learn, work or care for oneself. A principal diagnosis from the SSM IV classification in one of the following areas is required for eligibility:

Organic Mental Disorders, Schizophrenic Disorders, Paranoid Disorders, Psychotic Disorders not elsewhere classified, Affective Disorders, Somata Form Disorders, Dissociative Disorders, Adjustment Disorders, Psychological Factors Affecting Physical Condition, and Post Traumatic Stress Syndrome. These diagnoses must be at Class 3 to 5 levels:

- Class 3-Moderate Impairment. Levels compatible with some, but not all, useful functions.
- Class 4-Marked Impairment. Levels significantly impede useful functioning.
- Class 5-Extreme Impairment. Levels preclude useful functioning,

(**Note:** If a person's disorder is in remission or primary incapacity is acute or chronic alcoholism or drug addiction, they are specifically excluded from discount fare eligibility.)

18. **Chronic Progressive Debilitating Disorders**—Individuals who experience chronic and progressive debilitating diseases that are characterized by constitutional symptoms such as fatigue, weakness, weight loss, pain and changes in mental status that, taken together, interfere in the activities of daily living and significantly impair mobility. Examples of such disorders include: (a) Progressive, uncontrollable malignancies (i.e., terminal malignancies or malignancies being treated with aggressive radiation or chemotherapy); (b) Advanced connective tissue diseases (i.e., advance stages of disseminated lupus erythematosus, scleroderma or polyarteritis nodosa); (c) Symptomatic HIV infection (i.e., AIDS or ARC) in CDC defined clinical categories B and C.

19. **Multiple Impairments**—This category may include, but not be limited to, persons disabled by the combined effects of more than one impairment, including those related to age. The individual impairments themselves may not be severe enough to qualify as a Transit Dysfunction; however, the combined effects of the disabilities may qualify the individual for the program.

## V. PURCHASING METRO DISCOUNT ID CARDS

- 5.01 An eligible individual may purchase a METRO **Discount Fare Card** at either of the following locations at the times indicated:
- a. Santa Cruz Metro Center (Pacific Station) Information Booth on weekdays. Please contact (831-425-8600) METRO for specific times.
  - b. Watsonville Transit Center at West Lake and Rodriguez Streets every Tuesday generally. Please contact (831-425-8600) METRO for specific times.

- 5.02 An eligible individual must present one of the forms of Identification listed in Section 4.01 or other acceptable proof of age in order to qualify for a METRO Discount Fare Card based on being 62 years of age or older.
- 5.03 a. To purchase a METRO **Discount Fare Card** based on disability without proof of disability set forth in Section 4.01(b), the individual must provide a completed "Professional Verification of Disability Status" (*Attachment A*). Attachment A must be certified by a licensed medical practitioner or other licensed professional verifying that the individual has a disability (see Section IV), which may qualify the individual for a discounted fare.

**\* Verification of Disability Status Forms can be picked up at:**

*Santa Cruz Metro Center (Pacific Station) Information Booth*, or requested by phone at (831) 425-860;

*METRO's Accessible Services Coordinator* at (831) 423-3868 or the California Relay System at 800-735-2929.

The forms are also available on-line at METRO's website:

**[www.scmtfd.com](http://www.scmtfd.com)**

- b. **COST OF DISCOUNT ID CARD:** Those eligible individuals will pay \$2.00 for the Card, \$2.00 for the first replacement of a lost card, and \$5.00 for the replacement of a lost card thereafter.
- 5.04 Children (under the age of 18) of METRO passengers using Metro Discount Photo ID Cards can ride at the discounted rate when accompanying their qualifying parent. Parents must complete a registration form (*Attachment B*), available at the Santa Cruz Metro Center (Pacific Station) and Watsonville Transit Centers to qualify for this extended coverage. The registration form is also available on METRO's website (**[www.scmtfd.com](http://www.scmtfd.com)**).

## **VI. PERSONAL CARE ATTENDANTS**

- 6.01 Persons with Disabilities are eligible to have one personal care attendant travel with him/her without paying a second fare. To qualify, the Verification of Disability Status Form must indicate a need for a Personal Care Attendant, which is certified by a licensed medical practitioner or other licensed professional. Upon acceptance by METRO, the eligible individual will be provided with specific identification that authorizes transportation with one Personal Care Attendant.
- 6.02 An individual who has a METRO Discount Fare Card or Paratransit Card issued by another Transit Agency, or a METRO ParaCruz Eligibility Card, which indicates the need for one Personal Care Attendant, may ride on METRO's fixed route with one Personal Care Attendant without paying a second fare.

## VII. TEMPORARY DISABILITIES

- 7.01 Persons with temporary disabilities, who meet one or more of the Categories listed in Section 4.04 of this Policy, may qualify for a Temporary (non-permanent) METRO **Discount Fare Card** (Peach colored Discount Card).
- 7.02 This Temporary Discount Fare Card will reflect an expiration date, which corresponds with the individual's "Certification of Disability Status" Form. Once expired, the person would be required to receive a new "Certification of Disability Status" Form from a licensed professional in Section 4.03 in order to extend his/her METRO **Discount Fare Card**.

## VIII. METRO PASS OUTLETS

- 8.01 METRO Bus Passes can be purchased starting five working days prior to the beginning of the month at the following locations:

### APTOS

\*Community Bridges/Lifeline, 236 Santa Cruz Avenue

### BOULDER CREEK

Boulder Creek Pharmacy, 13081 Highway 9

### CAPITOLA

SaveMart Supermarket, 1475 – 41<sup>st</sup> Avenue

### FELTON

Felton Pharmacy (inside New Leaf Market), 6240 Highway 9

### LIVE OAK

\*Live Oak Family Resource Center, 1438 Capitola Road

### SANTA CRUZ

\*Metro Center, 920 Pacific Avenue

\*Emily's Bakery, 1129 Mission Street (Mission & Laurel)

\*Walgreen's Pharmacy, 1718 Soquel Avenue

### SCOTTS VALLEY

\*Epic Adventure Games, 222 Mt. Hermon Road, Suite A

### WATSONVILLE

SaveMart Supermarket, 1465 Main Street

Watsonville Transit Center, 475 Rodriguez Street



\*Highway 17 Monthly Pass sold only at these locations. All bus passes, including the Highway 17 Monthly may also be purchased by mail using the order form provided inside the *Headways* bus schedule.

## **IX. ORDER PASSES BY MAIL**

9.01 Individuals who currently hold a valid METRO **Discount Fare Card**, or have previously purchased Discounted Passes and are on file with Santa Cruz METRO, can order bus passes by mail. The form is available in the *METRO Headways*, or at the METRO Information Booth (Pacific Station). Mail the completed form along with a self-addressed, stamped envelope to:

**Santa Cruz Metro  
920 Pacific Avenue, Suite 21  
Santa Cruz, CA 95060**

9.02 Please allow 7 business days from the date the order is received by METRO. If you have any questions regarding orders for discount passes, call (831) 425-3822.

## **X. ADMINISTRATION OF REGULATION**

10.01 The Operations Manager or designee is responsible for the following:

- a. Ensuring that this regulation is disseminated to all existing fixed route drivers, customer service agents and transit center ticket agents.
- b. Ensuring that this regulation is disseminated to all new and future fixed route drivers, customer service agents and transit center ticket agents.
- c. Providing guidance, training and assistance to all employees, customer service agents and transit center ticket agents who are responsible for issuing METRO Discount ID Cards and passes.

10.02 METRO will integrate the METRO Discount Fare Card Program into its Policies and Procedures.

Attachment A

**PROFESSIONAL VERIFICATION OF DISABILITY STATUS**

I, \_\_\_\_\_ agree to the release of the medical information disclosed on this form to the Santa Cruz Metropolitan Transit District for the purpose of METRO Discount Fare eligibility.

**INDIVIDUAL'S SIGNATURE:** \_\_\_\_\_ **Date:** \_\_\_\_\_

*Date of Birth:* \_\_\_\_\_

\*\*\*\*\*

\*This portion of form to be completed by a Licensed Professional as described in Regulation # \_\_, Section 4.03 (i.e.: licensed physician, chiropractor, podiatrist, optometrist, audiologist, clinical psychologist, marriage & family counselor, as appropriate, based on disability category).

**PROFESSIONAL VERIFICATION:**

The above named individual has requested a Discounted Fare from Santa Cruz METRO Transit District. By my signature, I certify that the information below is true and correct. **I have reviewed the eligibility criteria as outlined in Regulation # \_\_\_\_\_ Section IV re: Eligibility and determined that my client is eligible for this program.**

**The individual identified above is eligible for a discounted fare, due to his/her illness, injury, or incapacity, as listed below: (Check all that apply)**

The above named individual is a person who by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity or disability (including, any individual who is a wheelchair user or has semi-ambulatory capabilities), is unable, without special facilities, planning, or design, to utilize public transportation facilities and services as effectively as a person who is not so affected. (\*See Section 4.04 for Category descriptions). Please list the Category disability that this individual has \_\_\_\_\_.

The Disability is permanent.

The disability is not permanent and will expire on \_\_\_\_\_.

The above named individual requires the use of a **Personal Care Attendant (PCA)**.

How long do you anticipate the need for a PCA?

Permanent; or

Temporary

\_\_\_\_\_  
(Specify expiration date)

**Signature of Licensed Professional:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Print Name of Licensed Professional: \_\_\_\_\_

Professional Title: \_\_\_\_\_ License Number: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: ( ) \_\_\_\_\_

8.610



**Attachment B**

**REQUEST FOR REDUCED CHILDREN'S FARE  
WITH DISABILITY I.D. CARD**

I wish to request certification to allow my children, under the age of 18, (listed below) to travel with me when I use my Disability ID Card and pay the Disability Reduced Fare while traveling on METRO Fixed Route service.

**CHILDREN:**

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

**Disability ID Card Holder:**

Print Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Signature: \_\_\_\_\_ *Date:* \_\_\_\_\_

\*\*\*\*\*

After completing the top portion of this form, please submit the completed form to the Customer Service Agent at Santa Cruz Metro Center (Pacific Station), or Watsonville Transit Center. The Customer Service Agent will then place a sticker on your Discount ID Card, which allows you to pay Discount Fare for your children when they accompany you on METRO Fixed Route bus service.

8.611

## Questions from E & D TAC re Discount Fare Policy

**1. Question: Will current Discount Fare Card holders have to reapply?**

Answer: Currently, certain Discount Fare Cardholders (Senior and Disabled as identified as having a permanent disability; Blue Card) have been designated as “Permanent”; these cardholders will not have to reapply. These cards will never expire. “Temporary” Cardholders (Peach Card) have an expiration date. For these, when the temporary card expires, the individual will have to reapply.

**2. Question: Will Discount Fare Cards designated as “Permanent” have an expiration date?**

Answer: No

**3. Question: From where does the designation of 62 years of age as elderly come?**

Answer: The FTA regulations define “elderly” for purposes of discount passes as “at a minimum include all persons 65 years of age or over.” FTA regulations, however also allow transit agencies to use a definition that extends this fare to younger (e.g. 62 and over, or 60 and over) persons. METRO chose the mid-point age of 62 and over.

**4. Question: Would METRO consider using the standard for service under the Older Americans Act, 60 years of age, to encourage bus ridership habits for the aging population?**

Answer: No, not at this time. METRO believes retaining the definition of elderly to include only those persons 62 years old and above not only exceeds the federal guidelines but also encourages ridership for the aging population.

**5. Question: Will certification forms be available to download from the METRO’s website?**

Answer: Yes. METRO will make the new forms available on the METRO website but the individual will still have to come to either Pacific Station or the Watsonville Transit Center to have their picture taken and their card made.

- 6. Question: Would certification forms also be available at sites other than METRO facilities, such as Metro pass/ticket agents and doctors' offices?**

Answer: Yes. METRO will make the new forms available to the Ticket Agents; however, passengers will still have to come to either Pacific Station or the Watsonville Transit Center to obtain a completed Discount Card.

- 7. Question: Why doesn't METRO have a ticket agent in the Aptos/La Selva area?**

Answer: METRO is always on the lookout for new ticket agents. At the last E&D TAC meeting the Community Bridges representative offered to be a ticket agent. That offer is currently being investigated.

- 8. Question: Can a customer use a credit card to get a bus pass through the mail?**

Answer: Currently, no. A customer can pay by check through the mail. METRO is investigating its ability to sell bus passes on METRO's website by credit card.

- 9. Question: When will METRO provide a swipe card system to accommodate paying bus fare?**

Answer: Congressman Sam Farr is currently carrying an earmark request on behalf of METRO and Monterey-Salinas Transit to fund a regional Smart Card System. Any support for this project would be greatly appreciated.

- 10. Question: What information is taken by Customer Service personnel from seniors and stored by METRO?**

Answer: Name and Date of Birth

- 11. Question: What safeguards are there against identity theft?**

Answer: After the forms are completed and inputted into the computer the forms are shredded.

- 12. Question: Currently METRO allows the children of a passenger paying a Discount Fare to also pay a discounted fare; will that policy continue?**

8.c2

Answer: Yes, this policy will continue for passengers who have a Discount Fare Card based on having a disability and it will be included in the regulation itself. The parent will continue to be required to complete a registration form at either Pacific Station or the Watsonville Transit Center. The eligible parent's Discount Fare Card will have a "C" sticker placed on it to confirm that this parent's children may ride the fixed route service at the discounted rate.

**13. Question: Would METRO consider certifications to be validated by school counselors and/or rehabilitation counselors?**

Answer: No, not at this time. METRO is allowing the following licensed professionals to certify an individual as having a disability: physicians with a Doctor of Medicine or Doctor of Osteopathic Medicine degree, physician's assistants and nurse practitioners, chiropractors, podiatrists, optometrists, audiologists, psychologists and educational psychologists and marriage and family counselors and clinical social workers.

**14. Question: Would METRO revise its policy to allow eligible METRO ParaCruz passengers to ride fixed route buses free of charge by showing their valid METRO ParaCruz ID cards?**

Answer: No. While incentives to encourage use of fixed route are important, METRO cannot financially afford to expand fare discounts at this time. METRO is already allowing the Discount Pass to be utilized during non-peak service hours and by Seniors who are younger than 65 years of age, both of which expand the federal minimum requirements.

BEFORE THE BOARD OF DIRECTORS OF THE  
SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

Resolution No. \_\_\_\_\_  
On the Motion of Director: \_\_\_\_\_  
Duly Seconded by Director: \_\_\_\_\_  
The Following Resolution is Adopted:

**A RESOLUTION OF  
APPRECIATION AND REMEMBRANCE FOR THE SERVICES OF  
DALE SKILLICORN AS A MEMBER OF THE BOARD OF DIRECTORS  
FOR THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

**WHEREAS**, the Santa Cruz Metropolitan Transit District was formed to provide public transportation to all of the residents of Santa Cruz County, and

**WHEREAS**, the provision of public transportation service requires a dedicated Board of Directors, and

**WHEREAS**, the City of Watsonville, requiring an representative with expertise and dedication, appointed Dale Skillicorn to serve in the position of Director, and

**WHEREAS**, Dale Skillicorn served as a member of the Board of Directors of the Santa Cruz Metropolitan Transit District for the time period of January 2004 to March 2009, and

**WHEREAS**, Dale Skillicorn provided the Santa Cruz Metropolitan Transit District with dedicated guidance, leadership, and commitment during the time of his service, and

**WHEREAS**, Dale Skillicorn served the Santa Cruz Metropolitan Transit District, the residents of Watsonville, and all of the residents of Santa Cruz County with distinction, and

**WHEREAS**, the service provided to the residents of Santa Cruz County by Dale Skillicorn resulted in safe, reliable, quality public transportation being available in the most difficult of times, and

**WHEREAS**, during the time that Dale Skillicorn served in the position of Director, METRO expanded service, developed new facilities, purchased new equipment, improved ridership, and enhanced the alternative transportation options for the residents of Santa Cruz County, and

**WHEREAS**, the quality of life in Santa Cruz County was improved dramatically as a result of the dedication and leadership provided by Dale Skillicorn and,

**WHEREAS**, Dale Skillicorn passed away on March 14, 2009.

**NOW, THEREFORE, BE IT RESOLVED**, that in recognition of service and commitment, the Board of Directors of the Santa Cruz Metropolitan Transit District does hereby posthumously commend Dale Skillicorn for his efforts in advancing public transit service in Santa Cruz County and expresses sincere appreciation on behalf of itself, Santa Cruz Metropolitan Transit District staff and all of the residents of Santa Cruz County.

**BE IT FURTHER RESOLVED**, that a copy of this resolution be presented to the Family of Dale Skillicorn and that a copy of this resolution be entered into the official records of the Santa Cruz Metropolitan Transit District.

**PASSED AND ADOPTED** this 27<sup>th</sup> day of March 2009 by the following vote:

**AYES: Directors -**

**NOES: Directors -**

**ABSTAIN: Directors -**

**ABSENT: Directors -**

**APPROVED** \_\_\_\_\_

DENE BUSTICHI  
Board Chair

**ATTEST** \_\_\_\_\_

LESLIE R. WHITE  
General Manager

**APPROVED AS TO FORM:**

\_\_\_\_\_  
MARGARET GALLAGHER  
District Counsel

9.2



BEFORE THE BOARD OF DIRECTORS OF THE  
SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

Resolution No. \_\_\_\_\_  
On the Motion of Director: \_\_\_\_\_  
Duly Seconded by Director: \_\_\_\_\_  
The Following Resolution is Adopted:

**A RESOLUTION OF  
APPRECIATION AND REMEMBRANCE FOR THE SERVICES OF  
FRANCISCO DEVILLIRES  
AS AN ADMINISTRATIVE SECRETARY AND CUSTODIAL SERVICES  
WORKER  
FOR THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

**WHEREAS**, the Santa Cruz Metropolitan Transit District was formed to provide public transportation to all of the residents of Santa Cruz County, and

**WHEREAS**, the provision of public transportation service requires a competent, dedicated workforce, and

**WHEREAS**, the Santa Cruz Metropolitan Transit District, requiring an employee with expertise and dedication appointed Francisco Devillires to serve in the positions of Administrative Secretary and Custodial Service Worker, and

**WHEREAS**, Francisco Devillires served as a member of the Administration and Maintenance Departments of the Santa Cruz Metropolitan Transit District for the time period of June 13, 2001 to February 20, 2009, and

**WHEREAS**, Francisco Devillires provided the Santa Cruz Metropolitan Transit District with dedicated service and commitment during the time of employment, and

**WHEREAS**, Francisco Devillires served the Santa Cruz Metropolitan Transit District with distinction, and

**WHEREAS**, the service provided to the residents of Santa Cruz County by Francisco Devillires resulted in safe, reliable, quality public transportation being available in the most difficult of times, and

**WHEREAS**, during the time that Francisco Devillires served in the positions of Administrative Secretary and Custodial Service Worker, METRO expanded service, developed new facilities, purchased new equipment, improved ridership, and enhanced the alternative transportation options for the residents of Santa Cruz County, and

**WHEREAS**, the quality of life in Santa Cruz County was improved dramatically as a result of the exemplary service provided by Francisco Devillires and,

**WHEREAS**, Francisco Devillires passed away on February 21, 2009.

**NOW, THEREFORE, BE IT RESOLVED**, that in recognition of service and commitment, the Board of Directors of the Santa Cruz Metropolitan Transit District does hereby posthumously commend Francisco Devillires for efforts in advancing public transit service in Santa Cruz County and expresses sincere appreciation on behalf of itself, Santa Cruz Metropolitan Transit District staff and all of the residents of Santa Cruz County.

**BE IT FURTHER RESOLVED**, that a copy of this resolution be presented to the Family of Francisco Devillires and that a copy of this resolution be entered into the official records of the Santa Cruz Metropolitan Transit District.

**PASSED AND ADOPTED** this 27th day of March 2009 by the following vote:

**AYES:** Directors -

**NOES:** Directors -

**ABSTAIN:** Directors -

**ABSENT:** Directors -

**APPROVED** \_\_\_\_\_

DENE BUSTICHI  
Board Chair

**ATTEST** \_\_\_\_\_

LESLIE R. WHITE  
General Manager

**APPROVED AS TO FORM:**

\_\_\_\_\_  
MARGARET GALLAGHER  
District Counsel

10.2

# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009

**TO:** Board of Directors

**FROM:** Angela Aitken, Finance Manager  
Terry Gale, Information Technology Manager

**SUBJECT: CONSIDERATION OF AWARD OF CONTRACT WITH SJB  
GLOBALNET, INC. FOR PURCHASE AND INSTALLATION OF A NEW  
VOIP TELEPHONE SYSTEM FOR AN AMOUNT NOT TO EXCEED  
\$144,943**

## I. RECOMMENDED ACTION

**That the Board of Directors authorize the General Manager to execute a contract with SJB GlobalNET, Inc. for purchase and installation of a new VOIP telephone system for an amount not to exceed \$144,943.**

## II. SUMMARY OF ISSUES

- METRO's current telephone system in use at most of the facilities is more than 25 years old, is inefficient, and does not enable METRO to effectively communicate and leverage information technology resources.
- A competitive procurement was conducted to solicit proposals from qualified firms to replace the current phone system at all facilities with a unified system which allows for dialing between sites by extension.
- Seven firms submitted proposals for METRO's review.
- A four-member evaluation committee comprised of METRO staff and a hired consultant reviewed and evaluated the proposals.
- The top two rated firms provided presentations to a METRO users group, ParaCruz managers, and to the Information Technology Department.
- Staff is recommending that a contract be established with SJB GlobalNET, Inc. for purchase and installation of a new VOIP telephone system for an amount not to exceed \$144,943.

## III. DISCUSSION

METRO's current telephone system in use at most of the facilities is more than 25 years old, is inefficient, and does not enable METRO to effectively communicate and leverage information technology resources. A competitive procurement was conducted to solicit proposals from

qualified firms to replace the current phone system at all facilities with a unified system which allows for dialing between sites by extension. The proposed telephone communications system is to be based on Internet Protocol telephony technology to support and satisfy current and future operational requirements necessary to the daily workings of METRO. The new system is expected to enable METRO employees to more effectively communicate and leverage information technology resources and allow the reduction in the number of METRO phone lines overall for ongoing savings.

On December 24, 2008 METRO Request for Proposals No. 09-07 was mailed to sixty-four firms, was legally advertised, and a notice was posted on METRO's web site. On January 28, 2009, proposals were received and opened from seven firms. A list of these firms are provided in Attachment A. A four-member evaluation committee comprised of METRO staff and a hired consultant reviewed and evaluated the proposals.

The evaluation committee used the following criteria as contained in the Request for Proposals:

<b>Evaluation Criteria</b>	<b>Points Value</b>
1. Product/Manufacturer-Status, History and Future Roadmap	25 Points
2. Proposing/Servicing Proposer-Capabilities	25 Points
3. Implementation/Migration Plan - Level-of-Completeness/Flexibility	25 Points
4. Capital Expense and Lifecycle-Costs	25 Points
5. Disadvantaged Business Enterprise Participation	5 Points
<b>Total Points Possible</b>	<b>105 Points</b>

The top two rated firms provided presentations to a METRO users group, ParaCruz managers, and to the Information Technology Department. The evaluation committee is recommending that a contract be established with SJB GlobalNET, Inc. for purchase and installation of a new VOIP telephone system for an amount not to exceed \$144,943. Contractor will provide all equipment, installation and maintenance services meeting all of METRO's specifications and requirements.

#### **IV. FINANCIAL CONSIDERATIONS**

Funds to support this contract are included in IT Projects and the Admin Facility project items in the FY09 & FY10 Revised Capital budget.

#### **V. ATTACHMENTS**

- Attachment A:** List of firms that submitted a proposal  
**Attachment B:** Contract with SJB GlobalNET, Inc.

Prepared By: Lloyd Longnecker, Purchasing Agent

**Note: The RFP along with its Exhibits and any Addendum(s) are available for review at the Administration Office of METRO or online at [www.scmtd.com](http://www.scmtd.com)**

# Attachment A

## List of firms that submitted a proposal in regards to RFP No. 09-07 for VOIP Telephone System

1. SJB GlobalNET, Inc. of Palo Alto, CA
2. Packet Fusion, Inc. of San Mateo, CA
3. Matrix Technologies, Inc. of Pleasanton, CA
4. Capture Technologies, Inc. of Oakland, CA
5. Computerland of Silicon Valley of San Jose, CA
6. Bear Data Systems, Inc. of Santa Clara, CA
7. Advantel, Inc. of San Jose, CA

**CONTRACT FOR PURCHASE AND INSTALLATION OF A  
VOIP TELEPHONE SYSTEM (09-07)**

THIS CONTRACT is made effective on March 30, 2009 between the SANTA CRUZ METROPOLITAN TRANSIT DISTRICT, a political subdivision of the State of California ("METRO"), and SJB GLOBALNET, INC. ("Contractor").

1. RECITALS

1.01 METRO's Primary Objective

METRO is a public entity whose primary objective is providing public transportation and has its principal office at 370 Encinal Street, Suite 100, Santa Cruz, California 95060.

1.02 METRO's Need For Purchase And Installation Of A VOIP Telephone System.

METRO has the need for the purchase and installation of a VOIP telephone system. In order to obtain these services, METRO issued a Request for Proposals, dated December 24, 2008, setting forth specifications for such services. The Request for Proposals is attached hereto and incorporated herein by reference as Exhibit "A".

1.03 Contractor's Proposal

Contractor is a firm/individual qualified to provide and install a VOIP telephone System and whose principal place of business is 22455 El Camino Real, Suite B, Palo Alto, California. Pursuant to the Request for Proposals by METRO, Contractor submitted a proposal for purchase and installation of a VOIP telephone system, which is attached hereto and incorporated herein by reference as Exhibit "B."

1.04 Selection of Contractor and Intent of Contract

On March 27, 2009, METRO selected Contractor as the offeror whose proposal was most advantageous to METRO, to provide for the purchase and installation of a VOIP telephone system described herein. This Contract is intended to fix the provisions of these services.

METRO and Contractor agree as follows:

2. INCORPORATED DOCUMENTS AND APPLICABLE LAW

2.01 Documents Incorporated in this Contract

The documents below are attached to this Contract and by reference made a part hereof. This is an integrated Contract. This writing constitutes the final expression of the parties' contract, and it is a complete and exclusive statement of the provisions of that Contract, except for written amendments, if any, made after the date of this Contract in accordance with Section 13.14.

A. Exhibit "A"

Santa Cruz Metropolitan Transit District's "Request for Proposals" dated December 24, 2008 including Addendum No. 1 dated January 16, 2009.

B. Exhibit "B" (Contractor's Proposal)

Contractor's Proposal to METRO for the purchase and installation of a VOIP telephone system, signed by Contractor and dated January 28, 2009.

2.02 Conflicts

Where in conflict, the provisions of this writing supersede those of the above-referenced documents, Exhibits "A" and "B". Where in conflict, the provisions of Exhibit "A" supercede Exhibit "B".

2.03 Recitals

The Recitals set forth in Article 1 are part of this Contract.

3. DEFINITIONS

3.01 General

The terms below (or pronouns in place of them) have the following meaning in the contract:

3.01.01 CONTRACT - The Contract consists of this document, the attachments incorporated herein in accordance with Article 2, and any written amendments made in accordance with Section 13.14.

3.01.02 CONTRACTOR - The Contractor selected by METRO for this project in accordance with the Request for Proposals issued December 24, 2008.

3.01.03 CONTRACTOR'S STAFF - Employees of Contractor.

3.01.04 DAYS - Calendar days.

3.01.05 OFFEROR - Contractor whose proposal was accepted under the terms and conditions of the Request for Proposals issued December 24, 2008.

3.01.06 PROVISION - Any term, agreement, covenant, condition, clause, qualification, restriction, reservation, or other stipulation in the contract that defines or otherwise controls, establishes, or limits the performance required or permitted by either party.

3.01.07 SCOPE OF WORK (OR "WORK") - The entire obligation under the Contract, including, without limitation, all labor, equipment, materials, supplies, transportation, services, and other work products and expenses, express or implied, in the Contract.

4. TIME OF PERFORMANCE

4.01 Term

The term of this Contract will be for a period not to exceed one (1) year and shall commence upon the issuance of the contract by METRO. This contract agreement may be extended upon mutual written consent.

5. COMPENSATION

5.01 Terms of Payment

METRO shall compensate Contractor in an amount not to exceed the amounts/rates agreed upon by METRO. METRO shall reasonably determine whether work has been successfully performed for purposes of payment. Compensation shall be made within thirty (30) days of METRO written approval of Contractor's written invoice for said work. Contractor understands and agrees that if



he/she exceeds the \$144, 943 maximum amount payable under this contract, that it does so at its own risk.

5.02 Invoices

Contractor shall submit invoices with a purchase order number provided by METRO on a monthly basis. Contractor's invoices shall include detailed records showing actual time devoted, work accomplished, date work accomplished, personnel used, and amount billed per hour. Expenses shall only be billed if allowed under the Contract. Telephone call expenses shall show the nature of the call and identify location and individual called. Said invoice records shall be kept up-to-date at all times and shall be available for inspection by METRO (or any grantor of METRO, including, without limitation, any State or Federal agency providing project funding or reimbursement) at any time for any reason upon demand for not less than four (4) years after the date of expiration or termination of the Contract. Under penalty of law, Contractor represents that all amounts billed to METRO are (1) actually incurred; (2) reasonable in amount; (3) related to this Contract; and (4) necessary for performance of the project.

6. NOTICES

All notices under this Contract shall be deemed duly given upon delivery, if delivered by hand; or three (3) days after posting, if sent by registered mail, receipt requested; to a party hereto at the address hereinunder set forth or to such other address as a party may designate by notice pursuant hereto.

METRO

Santa Cruz Metropolitan Transit District  
370 Encinal Street  
Suite 100  
Santa Cruz, CA 95060  
Attention: General Manager

CONTRACTOR

SJB GlobalNET, Inc.  
2455 El Camino Real  
Suite B  
Palo Alto, CA 94306  
Attention: Sean Bender, President

7. AUTHORITY

Each party has full power and authority to enter into and perform this Contract and the person signing this Contract on behalf of each has been properly authorized and empowered to enter into this Contract. Each party further acknowledges that it has read this Contract, understands it, and agrees to be bound by it.

Signed on \_\_\_\_\_

METRO - SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

\_\_\_\_\_  
Leslie R. White  
General Manager

CONTRACTOR – SJB GLOBALNET, INC.

By \_\_\_\_\_  
Sean Bender  
President

Approved as to Form:

\_\_\_\_\_  
Margaret Rose Gallagher  
District Counsel

# **EXHIBIT - A**

## **SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

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### **Request for Proposals (RFP) For VOIP Telephone System METRO RFP No. 09-07**

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**Date Issued: December 24, 2008**

**Proposal Deadline: 5:00 P.M., January 28, 2009**

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### **Contents of this RFP**

Part I.	Instructions to Offerors
Part II.	General Information Form
Part III.	Specifications
Part IV.	General Conditions
Part V.	Contract/Agreement
Part VI.	FTA Requirements for Non-Construction Contracts
Part VII.	Protest Procedures
Attachment A	Glossary
Schedule A 1.1	Hardware Software and Licensing
Schedule A 1.2	Professional Services – All Users Installed
Schedule A 1.3	Hardware and Software Maintenance
Appendix A	METRO 110 Vernon VOIP Layout
Appendix B	METRO Pacific and ParaCruz VOIP Layout

## **PART I**

### **INSTRUCTIONS TO OFFERORS**

1. **GENERAL:** These instructions form a part of the contract documents and shall have the same force as any other portion of the contract. Failure to comply may subject the proposal to immediate rejection.
2. **OFFEROR RESPONSIBILITY:** METRO has made every attempt to provide all information needed by offerors for a thorough understanding of project terms, conditions, and requirements. It is expressly understood that it is the responsibility of offerors to examine and evaluate the work required under this RFP and the terms and conditions under which the work is performed. By submitting a proposal, Offeror represents that it has investigated and agrees to all terms and conditions of this RFP.
3. **DELIVERY OF PROPOSALS TO METRO:** Proposals (1 original and 4 copies) must be delivered to METRO Purchasing Office, 110 Vernon Street, Suite B, Santa Cruz, California, 95060 on or before the deadline noted in the RFP.

Any contract or purchase order entered into as a result of this RFP shall incorporate the RFP and the proposal submitted by successful offeror. In the event of conflict between the proposal and any other contract document, the other contract document shall prevail unless specified otherwise by METRO. Telephone or electronic proposals will not be accepted.

4. **LATE PROPOSALS:** Proposals received after the date and time indicated herein shall not be accepted and shall be returned to the Offeror unopened.

Requests for extensions of the proposal closing date or time will not be granted. Offerors mailing proposals should allow sufficient mail time to ensure timely receipt of their proposals before the deadline, as it is the offerors responsibility to ensure that proposals arrive before the closing time.

5. **MULTIPLE PROPOSALS:** An offeror may submit more than one proposal. At least one of the proposals shall be complete and comply with all requirements of this RFP. However, additional proposals may be in abbreviated form, using the same format, but providing only the information that differs in any way from the information contained in the master proposal. Master proposals and alternate proposals should be clearly labeled.
6. **PARTIAL PROPOSALS:** No partial proposals shall be accepted.
7. **WITHDRAWAL OR MODIFICATION OF PROPOSALS:** Proposals may not be modified after the time and date proposals are opened. Proposals may be withdrawn by Offeror before proposal opening upon written request of the official who is authorized to act on behalf of the Offeror.
8. **CHANGES TO THE RFP RECOMMENDED BY OFFERORS:** All requests for clarification or modification of the RFP shall be made in writing. Offerors are required to provide the value of each proposed modification and a brief explanation as to why the change is requested. Value shall be defined as the cost or savings to METRO and the advantage to METRO of the proposed change.
9. **ADDENDA:** Modifications to this RFP shall be made only by written addenda issued to all RFP holders of record. Verbal instructions, interpretations, and changes shall not serve as official expressions of METRO, and shall not be binding. All cost adjustments or other changes resulting from said addenda shall be taken into consideration by offerors and included in their proposals.
10. **OFFEROR'S PROPOSAL TO METRO:** Offerors are expected to thoroughly examine the scope of work and terms and conditions of the RFP. Offerors' terms, conditions, and prices shall constitute a firm offer to METRO that cannot be withdrawn by the Offeror for ninety (90) calendar days after the closing date for proposals,

unless a longer time period is specified by METRO in the RFP. Offerors shall identify all proprietary information in their proposals. Information identified as proprietary shall not be made available to the public or other offerors.

11. **SINGLE OFFEROR RESPONSIBILITY:** Single Offeror responsibility is required under this RFP. Each Offeror responding to this RFP must respond to all professional services and provide all materials, equipment, supplies, transportation, freight, special services, and other work described or otherwise required herein.
12. **EXPERIENCE AND QUALIFICATIONS:** Offeror may be required upon request of METRO to substantiate that Offeror and its proposed subcontractors have the skill, experience, licenses, necessary facilities, and financial resources to perform the contract in a satisfactory manner and within the required time.
13. **SUBCONTRACTING:** The requirement for single-point responsibility does not prohibit subcontracts or joint ventures provided that the single successful Offeror assumes the following responsibilities: (1) serves as the sole general contractor with METRO; (2) assumes full responsibility for the performance of all its subcontractors, joint venturers, and other agents; (3) provides the sole point of contact for all activities through a single individual designated as project manager; (4) submits information with its proposal documenting the financial standing and business history of each subcontractor or joint venturer; and, (5) submits copies of all subcontracts and other agreements proposed to document such arrangement.

Without limiting the foregoing, any such legal documents submitted under item "5" above must (a) make METRO a third-party beneficiary thereunder; (b) grant to METRO the right to receive notice of and cure any default by the successful offeror under the document; and (c) pass through to METRO any and all warranties and indemnities provided or offered by the subcontractor or similar party.

14. **EVALUATION CRITERIA AND AWARD OF CONTRACT:** The award of the contract will be made to the responsible Offeror whose proposal is most advantageous to METRO. Specific evaluation criteria are identified in the Specifications section of the RFP.
15. **METRO'S PREROGATIVE:** METRO reserves the right to contract with any single firm or joint venture responding to this RFP (without performing interviews), based solely upon its evaluation and judgment of the firm or joint venture in accordance with the evaluation criteria. This RFP does not commit METRO to negotiate a contract, nor does it obligate METRO to pay for any costs incurred in preparation and submission of proposals or in submission of a contract.

METRO reserves and holds at its discretion the following rights and options in addition to any others provided by the Public Utility Code, Section 98000 and the Public Contract Code: (1) to reject any or all of the proposals; (2) to issue subsequent requests for proposals; (3) to elect to cancel the entire request for proposals; (4) to waive minor informalities and irregularities in proposals received; (5) to enter into a contract with any combination of one or more prime contractors, subcontractors, or service providers; (6) to approve or disapprove the use of proposed subcontractors and substitute subcontractors; (7) to negotiate with any, all, or none of the respondents to the RFP.

16. **EXECUTION OF CONTRACT:** The final contract shall be executed by the successful offeror and returned to METRO Administrative Office no later than ten (10) calendar days after the date of notification of award by METRO. All required bonds and insurance certificates shall also be submitted by this deadline. In the event successful offeror does not submit any or all of the aforementioned documents on or before the required deadline, METRO may award the contract to another offeror; in such event, METRO shall have no liability and said party shall have no remedy of any kind against METRO.
17. **DISADVANTAGED AND WOMEN'S BUSINESS ENTERPRISES:** The Board of Directors of the Santa Cruz Metropolitan Transit METRO has adopted a Disadvantaged Business Enterprise Policy to promote the participation of disadvantaged business enterprises (DBE) in all areas of METRO contracting to the maximum extent practicable. Consistent with the DBE Policy, the successful offeror selected for this project shall take all necessary and reasonable steps to ensure that DBE firms have the maximum practicable opportunity to participate in the performance of this project and any subcontracting opportunities thereof.

18. NONDISCRIMINATION: The Santa Cruz Metropolitan Transit District will not discriminate with regard to race, color, creed, ancestry, national origin, religion, sex, sexual preference, marital status, age, medical condition or disability in the consideration for award of contract.

***ADDITIONAL INSTRUCTIONS TO OFFERORS ARE SET FORTH IN  
OTHER SECTIONS OF THIS REQUEST FOR PROPOSALS***







**CERTIFICATION OF PROPOSED CONTRACTOR REGARDING DEBARMENT,  
SUSPENSION AND OTHER INELIGIBILITY AND VOLUNTARY EXCLUSION**

(Contractor) \_\_\_\_\_ certifies to the best of its knowledge and belief, that it and its principals:

Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

Have not within a three year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;

Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and

Have not within a three year period preceding this bid had one or more public transactions (Federal, State or local) terminated for cause or default.

If the Proposed Subcontractor is unable to certify to any of the statements in this certification, it shall attach an explanation to this certification.

(Contractor) \_\_\_\_\_, CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET. SEQ. ARE APPLICABLE THERETO.

\_\_\_\_\_  
Signature and Title of Authorized Official

**LOBBYING CERTIFICATION**  
**(Only for Contracts above \$100,000)**

**Lobbying Certification for Contracts Grants, Loans and Cooperative Agreements (Pursuant to 49 CFR Part 20, Appendix A)**

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions and as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96).
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and Contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Bidder/Offeror certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Bidder/Offeror understands and agrees that the provisions of 31 U.S.C. A 3801, et. seq. apply to this certification and disclosure, if any.

Firm Name \_\_\_\_\_

Signature of Authorized Official \_\_\_\_\_

Name and Title of Authorized Official \_\_\_\_\_

Date \_\_\_\_\_

**BUY AMERICA PROVISION**  
**(Only for Contracts above \$100,000)**

This procurement is subject to the Federal Transit Administration Buy America Requirements in 49 CFR part 661.

A Buy American Certificate, as per attached format, must be completed and submitted with the bid. A bid which does not include the certificate will be considered non-responsive.

A false certification is a criminal act in violation of 18 U.S.C. 1001. Should this procurement be investigated, the successful bidder/proposer has the burden of proof to establish that it is in compliance.

A waiver from the Buy America Provision may be sought by SCMTD if grounds for the waiver exist.

Section 165(a) of the Surface Transportation Act of 1982 permits FTA participation on this contract only if steel and manufactured products used in the contract are produced in the United States.

**BUY AMERICA CERTIFICATE**

The bidder hereby certifies that it will comply with the requirements of Section 165(a) or (b) (3) of the Surface Transportation Assistance Act of 1982, and the applicable regulations in 49 CFR Part 661.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Company Name: \_\_\_\_\_

Title: \_\_\_\_\_

OR

The bidder hereby certifies that it cannot comply with the requirements of Section 165(a) or (b) (3) of the Surface Transportation Act of 1982, but may qualify for an exception to the requirement pursuant to Section 165(b)(2) or (b)(4) of the Surface Transportation Assistance Act of 1982, as amended, and regulations in 49 CFR 661.7.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Company Name: \_\_\_\_\_

Title: \_\_\_\_\_

# CONTRACTOR DBE INFORMATION

CONTRACTOR'S NAME \_\_\_\_\_ CONTRACTOR'S ADDRESS \_\_\_\_\_  
 DBE GOAL FROM CONTRACT \_\_\_\_\_ % \_\_\_\_\_  
 FED. NO. \_\_\_\_\_  
 COUNTY \_\_\_\_\_ PROPOSAL AMOUNT \$ \_\_\_\_\_  
 AGENCY \_\_\_\_\_ PROPOSAL OPENING DATE \_\_\_\_\_  
 CONTRACT NO. \_\_\_\_\_ DATE OF DBE CERTIFICATION \_\_\_\_\_  
 SOURCE \*\* \_\_\_\_\_

This information must be submitted during the initial negotiations with METRO. By submitting a proposal, offeror certifies that he/she is in compliance with METRO's policy. Failure to submit the required DBE information by the time specified will be grounds for finding the proposal non-responsive.

CONTRACT ITEM NO.	ITEM OF WORK AND DESCRIPTION OF WORK OR SERVICES TO BE SUBCONTRACTED OR MATERIALS TO BE PROVIDED *	CERTIFICATION FILE NUMBER	NAME OF DBE	DOLLAR AMOUNT DBE ***	PERCENT DBE

TOTAL CLAIMED DBE  
 PARTICIPATION      \$ \_\_\_\_\_ %

\_\_\_\_\_  
SIGNATURE OF CONTRACTOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
AREA CODE/TELEPHONE

(Detach from proposal if DBE information is not submitted with proposal.)

\* If 100% of item is not to be performed or furnished by DBE, describe exact portion, including plan location of work to be performed, of item to be performed or furnished by DBE.

\*\* DBE's must be certified on the date proposals are opened.

\*\*\* Credit for a DBE supplier who is not a manufacturer is limited to 60% of the amount paid to the supplier.

**NOTE:** Disadvantaged business must renew their certification annually by submitting certification questionnaires in advance of expiration of current certification. Those not on a current list cannot be considered as certified.

# CONTRACTOR DBE INFORMATION

CONTRACT ITEM NO.	ITEM OF WORK AND DESCRIPTION OF WORK OR SERVICES TO BE SUBCONTRACTED OR MATERIALS TO BE PROVIDED *	CERTIFICATION FILE NUMBER	NAME OF DBE	DOLLAR AMOUNT DBE ***	PERCENT DBE
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TOTAL CLAIMED DBE  
PARTICIPATION      \$ \_\_\_\_\_      \_\_\_\_\_ %

## PART III

### SPECIFICATIONS FOR VOIP TELEPHONE SYSTEM

#### 1. INTRODUCTION

The Santa Cruz Metropolitan Transit District (METRO) is requesting proposals from qualified firms to undertake the following activities related to provide and install a VOIP Telephone System. The specifications described below set forth the minimum requirements for the quantity and quality of work to be provided hereunder. The VOIP Telephone System shall meet or exceed the specifications attached hereto. As used herein, the term "work" refers to the articles, equipment, materials, supplies and labor as specified, designated or otherwise required by the Request for Proposals (RFP). Additional terms, conditions and requirements pertaining to the methods and manner of performing the work are described elsewhere in the RFP.

Except where specified to the contrary herein, all work shall be new and shall be supplied with the equipment and accessories indicated as standard equipment in manufacturer's published descriptions, owner's manuals, and other literature for said work. No advantage shall be taken by the Contractor in omitting any unspecified minor article that goes into making the unit complete. Brand Names described below are used to indicate levels of quality. Approved equals requests must be made fourteen (14) days in advance of the bid date.

#### 1.1 OVERVIEW

- a) METRO is requesting proposals for a new communications system based on IP (Internet Protocol) telephony technology to support and satisfy current and future operational requirements necessary to the daily workings of its organization.
- b) The new system is expected to enable METRO employees to more effectively communicate and leverage information technology resources.
- c) The Proposer's (Proposer is the qualified reseller or manufacture that is the *Prime Contractor* for this project) objective for this RFP is to provide METRO with a fully modern and forward-looking, functional and feature-rich voice, dial-tone, messaging and contact center system(s) to replace outdated telecommunications hardware.
- d) This complete IP-based PBX communications solution sought by this RFP shall have the ability to integrate with the current data network and the applications used by METRO today, and looking forward for a likely minimum of ten (10) years software upgrade capability, and a useful life of greater than twenty (20) years.

#### 1.1.1 General RFP Goals

- a) Provide *feature-rich, cost-effective* and *highly-available* voice and messaging system functionality for all METRO Users at METRO facilities using VOIP and IPPBX technology and leveraging the METRO data network for telecom services.
- b) Provide the METRO with an *IP-network converged* voice communications solution that is well suited to simplify future moves, the consolidation of facilities and movement of Users.
- c) Provide systems "*Ease-of-Use*" for Administrators and Users of the telecom system allowing in-house *moves, ads and changes*.
- d) Provide an "*Open*" systems platform with *3<sup>rd</sup> Party Inter-Operability* using *Industry-Standards* support for IP-based Trunks, End-Points and Applications.
- e) Provide a solution with a wide-range of quality system *End-Points* (IP-based phonesets) in various "*Form Factors*".
- f) Provide a *Fully-Upgradeable* Hardware and Software based solution that is "*Future-Proof*" to the greatest extent possible.

- g) Provide a solution that is *Manageable* by the METRO Information Technology Department (IT), and *Secure* from likely network hacks and exploits.
- h) Provide competent *Certified Professional Services* for Planning, Installation, Configuration, Applications Integration, Testing, Documentation, Training, and Maintenance.

### **1.1.2 Current Telecommunications Systems**

- a) The current antiquated telecom systems are to be abandoned as new systems cutover and replace them.
- b) Old PBX systems may be left in place as well as old phoneset hardware and wiring all of which is to be abandoned.
- c) The currently PBX and ACD system at the ParaCruz/Research Park site has a relatively modern Nortel BCM IP PBX that currently handles phones and messaging and basic contact center in a standalone configuration. METRO plans to bring this site into a converged and centrally managed part of the global IP phone system.

## **1.2 INSTRUCTIONS AND GENERAL INFORMATION**

- a) Proposer is expected to read this RFP from start to finish determining whether they are qualified for this project before responding to this RFP.

### **1.2.1 Locations of Work**

#### **Encinal/Administration/NOC**

370 Encinal Street, Suite 100  
Santa Cruz, CA 95060

#### **Golf Club/Minor Maintenance**

138 Golf Club Drive  
Santa Cruz, CA 95060

#### **Vernon**

110 Vernon Street  
Santa Cruz, CA 95060

#### **Pacific Station/Customer Service**

902 Pacific Avenue  
Santa Cruz, CA 95060

#### **River/Operations**

1200 River Street  
Santa Cruz, CA 95060

#### **Research Park /ParaCruz**

2880 Research Park Drive, Suite 160  
Soquel, CA

NOTE: Appendix A only references 5 locations for the purposes of this Proposal since METRO is planning to relocate Administration, IT and Facilities from Encinal to the METRO owned facility at Vernon mid 2009. Initial installation of the core VOIP system is expected to be installed at the current Encinal building before this move. Any cost or labor associated with the move of this equipment will be born by METRO.

### **1.2.2 Acknowledgment of RFP**

- a) Proposer (a person or entity that submits a proposal) by submitting an RFP (request for proposal) response acknowledges this RFP as a pre-contract guide and specification for a complete contracted solution.
- b) The proposer will respond to each section of this RFP with at the least the word “Acknowledged” after the relevant section.

### **1.2.3 Reservations and Assumptions**

- a) This document is a part of the Scope of Work in that, by setting requirements herein and asking relevant questions, METRO is able to determine the best “solution” for upgrading telecom services. Upon award of contract, this document and any METRO addendum processed and the Proposer’s proposal will serve as the Scope of Work as contracted.
- b) This RFP is not an offer by METRO to contract, but is an invitation to Proposers to make an offer which the METRO may accept or reject and which shall be conclusively presumed not to create any legal or equitable obligations or other duties against or upon METRO.
- c) Any costs incurred by the Proposer as a result of this Request for Proposal shall be the Proposer’s sole responsibility.
- d) Any statement or conduct on the part of METRO that a Proposer is the successful Proposer is not an award of the contract for the RFP and absolutely no liability shall accrue against METRO prior to METRO actually so executing the Agreement forming a part of the Scope-of-Work by an individual duly empowered and authorized in writing to sign said Agreement on behalf of METRO.
- e) The submission of a Proposal by any Proposer shall constitute the agreement of the Proposer to the above and all other matters contained in the Scope-of-Work. Any notification by METRO that a Proposer is the successful Proposer shall be conclusively presumed to be an expression that METRO holds an option to enter into a contract with the successful Proposer, executable by METRO in its sole and absolute discretion, within ninety (90) calendar days after the Proposals receipt date.

#### **1.2.4 Proposer’s Qualifications**

- a) To be considered as eligible to submit a proposal, Proposer should currently be approved as a California State Contractor with C-7 (low-voltage electrical) license (or state who is the C-7 licensed sub-contractor) and **MUST** be authorized to install and configure the proposed systems by the OEM (original equipment manufacturer) of the solution proposed, or the Proposer may be the OEM vendor of the solution if the OEM has professional services available for this type of project.
- b) Proposer please state what *vendor* and *professional certifications* your company holds related to this proposal, and especially for the engineer or technician that will be doing the installation for this proposal.
- c) Proposer must demonstrate it has the skills and qualified personnel to install the system, provide training and cutover support at six (6) physical locations.
- d) Proposer shall include in their response a minimum of three (3) references from similar type projects, of similar size, or greater, and in a similar civil campus environment. The proposal is to include contact information on all references.
- e) If proposer is using a subcontractor(s) list all subcontractors on the Part II General Information Form.

#### **1.2.5 Documentation**

All Proposers shall do all of the following prior to submitting a Proposal to METRO:

- a) Each Proposer shall carefully examine this RFP. It is the responsibility of the Proposer to submit written questions in the allotted time period to clarify any detail needed to make a fully-qualified proposal. Each Proposer shall thoroughly familiarize himself/herself (and shall be conclusively presumed to have done so) with all applicable laws, ordinances, rules and regulations of governmental bodies and laws of the State of California.

#### **1.2.6 RFP Questions**

- a) Questions shall be asked in writing by email or faxed to (831) 426-2918 to the following person only: Lloyd Longnecker, Purchasing Agent, email address: llongnecker@scmtd.com
- b) All questions will be answered in a written addendum.
- c) **NO TELEPHONE CALLS** or any verbal communication will be allowed for questions during this RFP process.
- d) It is anticipated that no one Proposer will know all the answers and that no solution will satisfy all the requirements. Just try to answer all the questions accurately with YES and NO unless they need more description and please be brief and concise with responses.



### **1.2.7 Addenda**

a) Any Addenda will be sent by email, postal mail and posted on METRO's web site during the proposal process.

### **1.2.8 Preparation of Proposal**

- a) Completed documents shall be without interlineations, alteration or erasure to these original documents.
- b) Respond to and acknowledge each request for information of this RFP. Be aware that unless otherwise stated all RFP sections are mandatory to accurately respond. If you don't know an answer then respond: "Don't Know".
- c) Proposer's legal name, Company name and address of nearest location and headquarters shall be fully stated with contact information for those involved on this RFP response (see Part II General Information Form).
- d) Proposals shall be signed, in ink, by an individual duly empowered and authorized in writing to execute contracts for their firm.
- e) Proposals by partnerships shall indicate the full names of all Partners and shall be signed in the partnership name by one of the partners, or by a duly authorized representative, followed by the designation of the capacity of the person signing.
- f) Proposals by corporations shall be signed by legal name of the corporation, followed by the name of the State of incorporation and by the signature and designation of the corporate office authorized to bind the corporation.
- g) When requested by METRO, satisfactory evidence of power and authority to execute shall be immediately furnished. All Proposers shall state in the Proposal the State in which it exists as a legal entity, the State of its principal offices and the street address thereof, and its regular office, or the office that will primarily service METRO.
- h) If sub-contractors are to be used for this project, list them in Part II General Information Form and describe their capabilities in detail.
- i) The envelope containing the Proposal shall be sealed and shall be conspicuously labeled "Telephone System Project RFP No. 09-07" The outside of the envelope shall show the name and address of the Proposer, and the name of the Project.
- j) In the event the Proposer chooses to submit multiple proposals, the base proposal shall be labeled "Telephone System Project RFP No. 09-07 Base Proposal" and alternate proposals shall be labeled "Telephone System Project RFP No. 09-07 Alternate Proposal No.09-07. Alternate proposals must meet the requirements of this RFP.
- k) The Proposer, by making its Proposal, is indicating that its firm possesses the capabilities, hardware, software, facilities and personnel to provide an efficient, successful installation and operation of the services described in the RFP.

### **1.2.9 Costs for Proposal Response Preparation**

a) Any costs associated with the preparation of the response to this RFP shall be borne by the responding Proposer. METRO will not accept any charges for response preparation, regardless of whether or not a Proposer is selected to provide the described systems and products, including any cost in the pre-contract phase of presentation and demonstration, or "proof-of-concept".

### **1.2.10 Right to Use Ideas**

a) All proposals and other material submitted become the property of METRO.

### **1.2.11 Confidentiality**

a) No news release, public announcement, or any other reference to this RFP or any phase of any program or project described herein shall be made public without the prior written consent of METRO.

### **1.2.12 Proprietary Data**

a) All proprietary data contained in Proposer's RFP response must be clearly identified as proprietary and marked with copy write and/or trademark, and or be patented as the METRO will make public this RFP and Proposer's proposal.

### **1.2.13 Effect and Format of Proposal Response**

- a) Proposals must be in the same format as this RFP with respect to the paragraph headings and numbers. In the event that there is no Proposer response to a requested paragraph it can be deemed to be "Non-Responsive".
- b) If one RFP response addresses several questions then that response must be provided following each pertinent question; briefly, accurately and concisely.
- c) Responses referencing other sections are not permissible.
- d) Responses are expected to be customized to METRO's requirements. Generic responses are discouraged.
- e) Add paragraph-heading numbers and content into the areas where you are proposing "advantages to METRO" not specifically requested herein. These additional items should be separate and entitled "ADVANTAGES TO METRO."
- f) METRO, at its option, may incorporate any or all parts of the Proposer's proposal in the final contract with reasonable METRO remedies to provide the Proposer incentive to perform in the manner represented in the Proposer's proposal. These "changes" to the Proposers proposal are to be negotiated between the Proposer and METRO prior to contracting.
- g) Any comments, exhibits, etc., beyond what is asked for in the questions herein this RFP are encouraged, but will not substitute for item-by-item compliance and answering the questionnaire format.
- h) If there are any questions regarding the intent of a given question, we strongly recommend that you request clarification – Inaccurate responses may be grounds for rejection of proposals.
- i) Proposers are advised to be extremely careful to follow all rules and directives set forth herein this RFP document. Failure to do so shall be grounds for disqualification of the proposal and/or Proposer.
- j) RFP response document section numbers (and letters) shall remain the same for easy comparison to the original RFP document.
- k) In the event of any alteration of the RFP, the original document shall take precedent.
- l) An original and four (4) **copies** of the completed RFP response document shall be submitted.
- m) Printing may be two-sided in accordance with METRO's commitment to environmental conservation.
- n) Keep answers as **brief as possible** to accurately acknowledge questions and requirements.  
**Y** (YES), **N** (NO) or **O** (Optional) is suitable for many answers.
- o) Provide specification data-sheets for all proposed hardware and software.

### **1.2.14 Contract Documents and Documents Referenced in Proposal**

a) All proposals shall include completed forms with requisite signatures. Failure to provide all forms filled out and completed is grounds for dismissal of proposal.

### **1.2.15 Schedule Of Events**

<b>EVENT</b>	<b>DATE</b>
RFP Release Date	December 24, 2008
Proposer Questions Submittal Deadline	January 12, 2009
Responses To Proposer Questions	January 16, 2009
Proposal Due Date	January 28, 2009, 5:00 P.M.
Review Of Proposals	January 29 <sup>th</sup> through February 5 <sup>th</sup> , 2009
Proposer Presentations By Invitation	February 9 – 12, 2009
Pre-Selection Negotiation	February 13, 2009
Board Approval of Contract Award	February 27, 2009
Notice to Proceed	Approximately March 1, 2009

### **1.2.16 Review of Project Scope**

- a) Proposer shall include in any proposal all costs necessary to cover all contingencies essential to the proper installation of any system, equipment or service proposed.
- b) No claims for compensation will be considered or allowed for extra work resulting from ignorance of any existing condition on the part of the Proposer.

### **1.2.17 Inclusion of Support Materials**

- a) Include in the RFP response document brochures and manuals providing technical specifications as well as specific descriptions of the operation of hardware and software applications to be proposed.
- b) Include clear and accurate photographs of all phonesets, supervisory and administrative interfaces, hardware based BLF consoles and any other system equipment and applications interfaces.
- c) Clear and accurate photographs or drawings of all system equipment, cabinets, servers, gateways, firewalls, routers, etc. shall be included with proposal.
- d) If the literature, photographs or drawings differ in any manner from the systems and equipment being proposed, such differences must be explained in detail.

## **1.3 GENERAL EVALUATION CRITERIA**

Proposals will be evaluated based on each of the categories listed below:

<b>Evaluation Criteria</b>	<b>Points Value</b>
1. Product/Manufacturer-Status, History and Future Roadmap	25 Points
2. Proposing/Serviceing Proposer-Capabilities	25 Points
3. Implementation/Migration Plan - Level-of-Completeness/Flexibility	25 Points
4. Capital Expense and Lifecycle-Costs	25 Points
5. Disadvantaged Business Enterprise Participation	5 Points
<b>Total Points Possible</b>	<b>105 Points</b>

### **1.3.1 Evaluation Criteria: Product/Manufacturer**

Evaluation in this category will be based on:

- a. How well the proposed system meets or exceeds METRO's requirements.
- b. The degree of functionality and integration of productivity applications.
- c. Compatibility between METRO's planned network environment and the proposed solution.
- d. Reliability, flexibility and adaptability of systems and equipment proposed.
- e. Manufacturer(s) complete product line, market position, future roadmap, track record, financial strength and commitment to proposed product(s).
- f. Perceived overall service level proposed system configuration will provide.
- g. Ease of use and administrative "maintainability" of proposed systems and equipment.
- h. Manufacture response time for critical systems under maintenance contract.

### **1.3.2 Evaluation Criteria: Proposing/Serviceing Proposer**

Evaluation in this category will be based on:

- a. Design, engineering, installation and service experience, expertise and performance track record in the industry.
- b. Experience and expertise with systems of similar type, size and configuration.
- c. Experience and expertise with specific systems being proposed.
- d. Completeness of proposal.
- e. Quantity and quality of local technical staff.

- f. Ability and willingness to work closely with other resellers/integrators whose systems will integrate with and/or interface to the proposed solution.

### **1.3.3 Evaluation Criteria: Implementation/Migration Plan**

Evaluation in this category will be based on:

- a. Quality and completeness of the overall plan (including installation, telephone room layout, software database development, testing, training, and cutover process for ALL systems proposed).
- b. Proposer's commitment of technical personnel to this project.
- c. Contingency plan in the event of problems
- d. Initial and ongoing training commitments
- e. Degree of disruption and confusion to both Metro Users and outside callers
- f. Degree and quality of documentation to be provided during and after implementation (associated with all systems and equipment, trunks and circuits, software, etc.).
- g. Degree to which Proposers is explicit in their proposed work schedule and implementation plan.
- h. The degree that the Proposer is willing to be flexible in 'piecing' out services for various tasks involved in installation and configuration.

### **1.3.4 Evaluation Criteria: Capital Expense and Lifecycle Cost**

Cost items to be included in the financial analysis for each qualified proposal shall include:

- a. All system equipment, software, license purchase cost.
- b. All system/equipment labor/installation/configuration costs.
- c. All system training cost for Users and Administrators.
- d. Annual maintenance costs for the proposed system.

### **1.3.5 Post Proposal Submission Communication**

- a) METRO will communicate with Proposers if it has further any questions with respect to the Proposers response(s) and to notify the "Finalist(s)" of the date and time of an opportunity to do an oral presentation/product demonstration.

### **1.3.6 Proposer Presentations & System Demonstration**

- a) Upon receipt of Proposals in response to this RFP and METRO's subsequent evaluation of such, one or more Proposers may be selected and asked to attend oral presentation session(s) to discuss their proposals and/or provide live demonstrations of the proposed system(s).
- b) METRO will notify all firms submitting proposals for review on the evaluation committee's scoring results. METRO will determine a short list of the top firms to make a presentation as described above.

## **1.4 PARTIAL PROPOSAL AWARD**

- a) METRO reserves the right to retain, and/or delete certain portions of a successful Proposer's proposal (i.e., work related to such elements as voice messaging system(s) and other application(s), or services from contract award.
- b) If METRO exercises this option, such action shall not increase successful Proposer's obligations for any remaining portion of their proposal and is subject to prior contract approval of both Parties.
- c) METRO shall not extract from award any portion of a proposal that, in its reasonable judgment, materially affects the Proposer's ability to perform its obligations under the remainder of the proposal or contract.

### **1.4.1 Contract Negotiations**

The final contract package shall include the RFP and any Addendums, your proposal response, and any

*Proposal Amendments* made after Proposal submission and prior to final contract.

#### **1.4.2 Contract Approval**

Contract will be approved by METRO's Board of Directors prior to submittal to Contractor for review and signature.

#### **1.5 AUTHORIZED DISTRIBUTOR & SERVICE PROVIDER**

- a) Proposals from Proposers who cannot provide total local warranty and service capabilities for all systems and equipment being proposed in the geographic areas where the system(s) will be located may be rejected.
- b) At the time the proposal is submitted, the Proposer must be an approved Reseller by the manufacturer of all major system elements proposed or must provide in their proposal evidence from an official of each manufacturer whose equipment is being proposed stating that the Proposer is qualified and has the authority to:
  - 1) Re-sell new equipment of the type being proposed.
  - 2) Pass the manufacturer's warranty through to METRO with all first holder benefits of the warranty.
  - 3) Perform installation to include on-site service as the manufacturer's authorized service representative.

#### **1.6 PRIOR EXPERIENCE**

- a) In order to be considered, Proposer must have a minimum of three (3) years experience in all substantive areas of work contemplated in this RFP and must be able to substantiate and demonstrate such prior experience to METRO's satisfaction through references provided herein, and any other means deemed appropriate by METRO.
- b) A high-level of data network expertise is required.

#### **1.7 FINANCIAL CONDITION**

- a) The Proposer shall demonstrate to METRO's satisfaction that the manufacturer(s) of the proposed telecommunications systems and equipment are financially sound and are likely to remain strongly committed to the telecommunications field and all geographic locations where systems may be located for the next ten (10) years.
- b) At the request of the METRO (option) Proposer must submit, with the proposal, a copy of the most recent annual report of each manufacturer whose systems/equipment is being proposed. If any manufacturer is a subsidiary of another company, this requirement shall also apply to the parent company.
- c) At the request of the METRO (option) Proposer may also submit, with the proposal, a copy of their most recent annual report. If Proposer is not a public corporation, has no annual report available, other audited, verifiable financials of a comparable nature maybe provided.

#### **1.8 AVAILABILITY OF PROPOSED SYSTEMS AND EQUIPMENT**

- a) In order to be considered, all systems and equipment proposed herein must be of current manufacture and all primary system platforms must have been available in the United States as non-beta site installations for a minimum of two (2) years. Proposer must provide written evidence to support this claim.
- b) All equipment Proposed shall be new.
- c) METRO's existing telecom equipment may not be considered for re-use.
- d) Proposer shall demonstrate to METRO's satisfaction that the systems and equipment being proposed are main products of their respective manufacturers and that the systems and equipment will remain as main products with continuous development and improvement over the next ten (10) years.
- e) Proposer shall demonstrate to METRO's satisfaction that the systems and equipment being proposed is fully "supportable" and maintainable on the proposed system over the next ten several years.
- f) All system hardware and software proposed shall have the licensing cost included in Proposers Proposal.

## **2.0 GENERAL FUNCTIONAL REQUIREMENTS**

### **2.1 BASE REQUIREMENTS**

Statements made in this section in no way limit the responsibilities of Proposer, and where conflicts with other statements or requirements in this RFP occur, the statement or requirement resulting in the greatest benefit or value to METRO, as unilaterally determined by METRO, shall be deemed the binding one. This section has been developed in order to provide Proposers a brief overview of the nature and magnitude of the project. Statements in this section are intended to assist Proposers to ensure that their proposals encompass all necessary aspects of the project.

Acknowledge and explain how your proposal addresses each section.

### **2.2 GENERAL SYSTEM REQUIREMENTS:**

Provide an option for a turn-key fully-installed and configured system solution as specified in this RFP.

Shall include, but not necessarily be limited to: planning designing, engineering, ordering, delivering, installing, testing, developing and inputting data, integrating proposed components, cutting-over PSTN, documenting and warranting all systems and applications proposed unless otherwise negotiated prior to contracting.

Ensure that all existing systems are not adversely impacted by the new systems being proposed especially on WAN links.

Telco (carrier) services will be coordinated by METRO and are not included in this Scope of Work.

It is envisioned the telephone system and voice mail system will have the “look and feel” of a single system so that in general:

- 1) Intra-METRO calls may be made using an abbreviated dialing plan
- 2) Voice mail messages may be forwarded to any subscriber in METRO, regardless of subscriber’s physical location
- 3) Voice mail distribution lists will include subscribers at any physical location
- 4) All Users will be in a global directory accessible to all Users from a phoneset.

METRO’s (WAN) is to be used for inter-METRO voice communications and access to a centralized voice mail system. Proposed systems need to support voice solutions such that intra-METRO calls will traverse the data network. If unable to do so; then they dial-out via the PSTN.

METRO’s data network will be used to support proposed phonesets and system components.

METRO’s existing cable infrastructure will be used to support telephone sets and computer terminals (mostly thin-client).

The call accounting system will capture and process all inbound, outbound and internal voice calls, log system faults, and send email to the Administrator on all alarms.

A call detail reporting application will log all relevant information including ACD groups.

Contractor is to perform all tasks necessary to Plan, develop, install and integrate all operating systems, and user databases using the OEM’s “System Planning Guide” as a default guide for installation customization.

Enter all system, user and application database(s) into the appropriate systems and test them comprehensively – including name and extension directories, COS and other parameters.

It is contemplated that some programming “fine-tuning” will be required after the final phase of cutover. Therefore, Proposers will be required to provide reasonable changes to the database at METRO’s request for thirty (30) calendar days after the final phase of cutover at no additional charge to METRO.

Develop and conduct training programs specifically designed for the system(s) being proposed, including system administration, main answering points and end-user training. The extent, nature and scheduling of such training shall be described in detail.

The system **must** be based on a technically strong, leading-edge platform and have a high-probability of accommodating evolving METRO needs and new applications as they arise and are deemed appropriate for implementation (i.e., system must be robust and from a major corporation (OEM) with minimum 3 years in telecommunications.

**All Proposal submissions must include requisite hardware, operating systems, software, media and licensing. Requiring METRO to provide hardware or other systems, devices, software, etc., other than network connectivity, equipment rack space and AC power, is not permissible.**

The proposed solution must be flexible and easy to move when facilities change physical location.

**2.3 SYSTEM FEATURES**

- a) It is understood and assumed for the purposes of this RFP that IPPBX systems support hundreds or even thousands of features and functions. Most features are basic and included on most systems and it is understood that no system will have every feature, and that some systems will have additional features. The Proposer should be familiar enough with the proposed solution to answer the questions below even if the feature is called by another name by individual OEMs.
- b) Below is a list of generally desirable features.
- c) Please answer **Y** (YES) or **N** (No) to indicate if the feature is (or is not) included in your proposed solution. Included means that the feature will be supported by the proposed hardware, software and licensing included in your proposal without additional cost. If a feature is Optional, indicate with an **O** (OPTIONAL). State the cost of Optional features by itemizing as *an option* in Schedule A.

**2.3.1- Features Q&A:**

	Questions	Answers
1	Call Forward - the ability to forward an inbound call that arrives at a phone to another destination	
2	Call Forward - All Users can direct all calls to another station or location	
3	Call Forward – Busy- User can redirect calls to another station or location when busy.	
4	Call Forward - Ring No Answer- User can redirect calls to another station or location after specified number of rings.	
5	Call Forward - Call forward can be programmed on the phone either via a button or menu selection	
6	Call Forward - Call forward can be programmed via the user interface from a Thin-Client Terminal	
7	Call Forward - Call forward state can be viewed by the phone display	
8	Call Forward - One-button send all calls automatically redirects all calls to coverage with a single button push.	
9	Call Forward - Voice Mail Must support direct call forward to an individual Voice Mail Box	
10	Call Forward - The ability to forward a call based on Call Screening options	
11	Call Forward - Class of Service Override -The ability to limit a User's ability to forward calls based on their COS	
12	Call Handling - The ability to place, terminate and manipulate calls from a phone	
13	Call Handling - Call Drop - No On hook Terminate the call without hanging up the receiver.	
14	Call Handling - Call Drop - On hook- Terminate the call by placing the phone on hook	

15	Call Handling - Call Place - No Off Hook - The ability to place a call without going off hook	
16	Call Handling - Call Place - Off Hook - The ability to place a call after going on hook	
17	Call Handling - Call Return - Calls back the last incoming number	
18	Call Handling - Last Number Redial - Redials last number called	
19	Call Handling - Hands Free Support - Incoming calls will be auto answered in the hands free mode going to the speaker phone with no User intervention	
20	Call Handling - Headset support- Plantronics and other 3 <sup>rd</sup> party headsets are supported	
21	Call Handling - Mute Button on all phones to disable the microphone for handset and speakerphone.	
22	Call Handling - Volume control for speaker, handset, and ringer.	
23	Call Handling - Call duration - Display the duration of the call on the terminal display	
24	Call Handling - Do Not Disturb – One button ability to change call ring state	
25	Call Handling - Forward to Vmail - One button to forward inbound call to voice mail	
26	Call Handling - Hold - One button touch to place call on hold	
27	Call Handling - Speaker Phone - Toggle Transition call to/from speaker function with single button	
28	Call Handling - Date & Time Ability to view the current date and time on phone display	
29	Call Handling - Line Status - Ability to view line status visually from phone with BLF (6 lines or greater)	
30	Call Handling - Transfer - The ability to invoke a call transfer feature through single button	
31	Call Handling - Call Hold Timer - The ability to alert a user they have a call on hold exceeding a configurable length of time	
32	Call Handling - Call Hold Indicator -The ability to indicate visually to a user that they have a call on hold	
33	Call Handling - Feature Help - The ability to indicate to a user, through a Thin-Client Terminal and GUI interface, who is invoking a feature interactive Help	
34	Call History - Display to the user recent call activity on their phone	
35	Calling History - User can view the last few missed calls, answered calls and dialed calls through the display on the phone	
36	Calling History - User can view the last few missed calls, answered calls and dialed calls through the phone display	
37	Call History - Missed call indicator - Visual indication that at least one call has been missed	
38	Call History - Remote View - missed call through the web interface	
39	Call Hold - Reminder Audible reminder - when the held call has crossed a time threshold	
40	Call Hold - Consultation - The ability for users in a hunt group to collaborate while a call is on hold	
41	Call Hold - Music on Hold-The ability for a user who is placed on hold to "hear" a defined recording based on department or location	
42	Call Hold - Music on Hold - Customer group - A caller hears music when placed on hold and this can be customized per user or per group	
43	Call Hold - Music on Hold - The ability for the system administrator to define what "recording" a caller hears while on hold based on department or group	
44	Call Park/Pickup - The ability for a user to place a call on hold and have another user pickup the call and talk to the calling party	
45	Call Park/Pickup - Call Park Timeout-The call comes back to the original party once the park timer expires	
46	Call Park/Pickup - System Park Range The ability for the system administrator to set a range of call park numbers	
47	Call Park/Pickup - One Touch - The ability for a user to pickup a call with one touch assuming they have configured their phone to do so	
48	Call Park/Pickup - Directed – Protected-The ability to pickup a remote ringing phone from another device with authorization code	
49	Call Park/Pickup - Group - System Range The ability for the system administrator to set a range of call park numbers for a specified group	



50	Call Park/Pickup - Group - The ability for the system administrator to add a user to a pickup group	
51	Call Park/Pickup - Call pickup - A user can answer a call ringing on another extension where both extensions are part of a pickup group	
52	Call Park/Pickup - Multi-site call Park - The ability to park and pickup a call across different call processors	
53	Call Screening - Gives the system administrator and user the ability to be aware of inbound calls and limit their access to their phone	
54	Call Screening - Black List - Gives the user the ability to block incoming calls based on specific numbers or patterns –	
55	Call Screening - Toll Screening - Block Access list to restrict the User's ability to make toll calls	
56	Call Screening - Call Blocking Allows users to selectively block calls from administrator - defined origins (e.g. specific extensions, ANIs, off-net calls in general)	
57	Call Screening - Distinctive Ring – Anonymous - Ability for a user to select a specific ring tone to be played for inbound call that have their Caller ID suppressed	
58	Call Screening - Distinctive Ring - Internal Ability for a user to select a specific ring tone to be played for inbound calls that are internal METRO calls	
59	Call Screening - Distinctive Ring – External - Ability for a user to select a specific ring tone to be played for inbound calls that are external callers to the system	
60	Call Screening - Calling Number Delivery - The ability to display the calling parties number	
61	Call Screening - Calling Name Delivery - The ability to display the calling parties name (for internal calls only)	
62	Call Screening – Preferences - The ability for an end user to configure their call screening privileges via the web interface	
63	Call Screening - Type of Service - The ability for the system administrator to define a User's default call screening preferences	
64	Call Screening - Class of Service - The ability for the system administrator to define the basic calling rights of an end- user	
65	Class of Service - Class of Service - The ability for the system administrator to define the basic calling rights of an end- user	
66	Class of Service - Internal Calls - The ability for the system administrator to limit Internal calls	
67	Class of service - Local Calls - The ability for the system administrator to limit local calls	
68	Class of Service - Long distance calls - The ability for the system administrator to limit long distance calls	
69	Class of service - International Calls - The ability for the system administrator to limit international calls	
70	Class of Service - Toll Calls - The ability for the system administrator to limit Toll calls	
71	Class of Service - Toll Free Calls - The ability for the system administrator to limit Toll Free Calls	
72	Class of Service - Operator Assisted Calls - The ability for the system administrator to limit Operator assisted calls	
73	Class of Service - Emergency Calls - The ability for the system administrator to limit Emergency Calls	
74	Class of Service - Redirected Calls - The ability for the system administrator to limit call redirections	
75	Class of Service - After Hour Calls - The ability for the system administrator to limit after hour calls	
76	Class of Service – Override - The ability for the system administrator to specify class of service override functions (account codes)	
77	Type of Service - The ability for a system administrator to define the specific calling features and user or group of users has access to	
78	Type of Service - Feature Access-Assignment - The ability for the system administrator to define which features a user can access	

79	Type of Service - Feature Default Settings - The ability for the system administrator to define the default setting of user and group features	
80	Type of Service - Hunt Group Creation - The ability for the system administrator to create hunt groups	
81	Type of Service - Hunt Group Assignment - The ability for the system administrator to assign users to hunt groups	
82	Type of Service - Pickup Group Creation - The ability for the system administrator to create pickup groups	
83	Type of Service - Pickup up Group – Assignment - The ability for the system administrator to assign users to pickup groups	
84	Type of Service - Bridged Line Assignment - The ability for the system administrator to create bridged extensions	
85	Type of Service - System Speed dial – Creation - The ability for the system administrator to create system speed dials globally	
86	Type of Service - Class of Service- Assignment - The ability for the system administrator to assign users COS	
87	Type of Service - Line Appearance- Assignment - The ability for the system administrator to define how many line appearances a user may have	
88	Type of Service - Number Assignment- The ability for the system administrator to assign a user an extension(s)	
89	Type of Service - User Account – Creation- The ability for the system administrator to create a user account	
90	Call Transfer - Consultative - One Button - The ability to transfer a call after consulting with the 3 <sup>rd</sup> party via one button	
91	Call Transfer - Blind - One Button The ability to transfer a call without consultation via one button	
92	Call Transfer - Voice Mail Directed Automatically redirects all calls to voicemail with a single button push.	
93	Call Transfer - Blind - Call Coverage - The ability to transfer a blind transfer to the third parties call coverage after "ring no answer"	
94	Call Transfer - Class of Service- Enforcement - The ability to limit blind transfer call coverage and transferor to be limited by their class of service definition	
95	Call Transfer - Release - The ability to release the transferor's line appearance once the call transfer is completed	
96	Camp On - The ability for a user to request that the system seize an end users line appearance when it returns to the idle state	
97	Camp On - Call back - The ability to receive an inbound call when the camped on extension becomes idle (i.e. place a call between two users)	
98	Camp On - Multi-site The ability to camp on an extension that is on a different call processor or remote site on the system	
99	Camp On - Time Out - The ability to specify a time out on a camp on request	
100	Camp On - Queuing - Multiple calls can be camped on to the same extension and the call will be returned in the order in the queue	
101	Dialing Plan - The ability to create a private dial-plan	
102	Dialing Plan - 3 Digit Dialing Plan - The ability to create a private dialing plan based on 3 digits	
103	Dialing Plan - 4 Digit Dialing Plan The ability to create a private dialing plan based on 4 digits (abbreviated dialing)	
104	Dialing Plan - Internal Number - The ability for the system to identify that the number dialed is an on-net call even though the call was not indicated as such	
105	Dialing Plan - Pattern - Internal Calls - The ability for the system administrator to define internal call patterns	
106	Dialing Plan - Pattern - Local Calls - The ability for the system administrator to define local call patterns	
107	Dialing Plan - Pattern - Long distance calls - The ability for the system administrator to	

	define long distance patterns	
108	Dialing Plan - Pattern - National calls - The ability for the system administrator to define national call patterns	
109	Dialing Plan - Pattern - International Calls - The ability for the system administrator to define International call patterns	
110	Dialing Plan - Pattern - Toll Calls - The ability for the system administrator to define Toll call patterns	
111	Dialing Plan - Pattern - Toll Free Calls The ability for the system administrator to define Toll Free Call pattern	
112	Dialing Plan - Pattern - Emergency Calls - The ability for the system administrator to define Emergency Call pattern	
113	Hotelling or Hot-Seating- Ability for a user to log into a device and make it appear as though it was their own extension	
114	Hotelling - Open Access - Ability to allow any user to log into a phone with an infinite or defined log in time or timeout	
115	Hotelling - Multiple Access - Ability to allow a user to log into more than one device at a time	
116	Hunt Group – “Ring All” Groups-The group has its own extension. The second call to the group will queue behind the first ringing call.	
117	Hunt Group – Circular-Hunt groups may also be referred to as a round robin. The group has its own extension. The next available member answers new call	
118	Hunt Group – Linear - The group has its own extension. Calls distributed to the next agent in line.	
119	Hunt Group - Voicemail box is available for huntgroup members which can be automatically created. Hunt group mailbox is available in the global directory	
120	Hunt Group Coverage - Hunt groups can have time-based, holiday-based call coverage	
121	Hunt Group –Chaining - Hunt groups can be chained together as a multi level hunt group	
122	Hunt Group - Distinctive Ring - Calls coming into a hunt group can have a distinctive ring	
123	Hunt Group - Delayed Ring - Hunt group members can select delays so that they can have delayed ringing	
124	Hunt Group - Queue Threshold - Call threshold traps are sent to the phones based on time a caller spends in the queue	
125	Hunt Group - Queue Threshold - Call threshold traps are sent to the phones based on the number of callers in the queue	
126	Hunt Group - Queue Announcement - Announcements are played when a user enters a hunt group queue	
127	Hunt Group - Call Reports - Call Reports are generated for every hunt group	
128	Hunt Group - Multi-site - Hunt group members can be part of a distributed telephony system Hotline	
129	Direct phone to gateway dialing - Provides remote survivability in case of call processor failures, such that the phone dials out/in directly to PSTN.	
130	Hot Ring Down - The phone connects to a predetermined number as soon as the user picks up the phone.	
131	Warm Ring Down (Warmline) The phone connects to a predetermined number if the user picks up the phone and does not dial a number within a period of time	
132	MWI - Message Waiting Indication - MWI A visual indicator of a voicemail message. (I.e. blinking lamp)	
133	MWI - Visual - A visual indication (BLF) that one or more messages is available	
134	MWI - Count - A visual indication in the display to the number of messages that are available	
135	MWI – Type - An indication to the type of messages that are available (voice, email or fax)	
136	MWI – Multiple MWIs on a single phone	
137	Paging – Phoneset - The ability send audible messages to users or groups of users without them having to take any action	

138	Paging - Group (Zone) Send a page to a group of Users that may be distributed at different physical locations on the system	
139	Paging - Overhead - Send a page to an overhead paging system by attaching a SIP based endpoint	
140	Speed Dial - One Touch Programmable one-touch speed dial on a phone set.	
141	Speed Dial - Feature Code Program Speed dial feature keys	
142	Speed Dial - Global administrated administrator defined speed dial number	
143	Speed Dial - Personal Provisioning - Program speed dials from web interface	
144	Speed Dial - BLF Speed Dials phones have busy line field functionality, thus displaying the status of the extension mapped on the device	
145	User Directory –Global - The user directory is available on the phone display and through the user web portal.	
146	The User Directory is searchable and can be used directly to initiate calls In on one, out on another...	
147	Trunk to Trunk - via Redirection - The ability to redirect a trunk call to trunk out to another number through the PST	
148	PSTN to PSTN Routing - Support for creating routes to make calls using VOIP for transparent trunking	
149	PSTN to IP Routing - Support for creating routes to provide phone numbers to IP destinations	
150	IP to PSTN Routing - Support for creating routes to make calls to PSTN destinations	
151	IP to IP routing Support for e-mail/URL(SIP) addresses	
152	NANP Support for 7/10/11 digit North American Numbering Plan	
153	NPA Routing Route calls based on the NPA of the called number in NANP	
154	NPA NXX Routing Route calls based on the NPA NXX of the called number in NANP	
155	Support for dialing prefixes - This feature allows the use of country specific prefixes used for make local/national/international calls.	
156	Alternate Routing to provide alternate routes to reach the same endpoint	
157	Network Abbreviated Dialing - Support for abbreviated numbers	
158	Call Blocking - Block calls to a specific number or a specific numbering plan	
159	Outbound Restriction Ability - to restrict outbound calls from an endpoint	
160	Time of day Routing - The ability to route calls based on the time of day	
161	Calendar Routing - The ability to route calls based on the day	
162	Forward fax as email	
163	Retrieve faxes as email	
164	Send fax from PC or thin-client terminal	
165	Send Messages - Record a message to be sent	
166	Send Messages - Play back the message before sending	
167	Send Messages - Delete a message before it is stored	
168	Send Messages - Send to Extension(s) Send a message to an extension	
169	Send Messages - Send to Group List(s) - Send a message to a group	
170	Send Messages - Mark Private - Mark a message private so that it cannot be forwarded	
171	Send Messages - Mark Priority (urgent) - Mark a message urgent	
172	Send Messages - Schedule future date/time - Schedule a message for future delivery	
173	Get Messages and Respond - Play back message – Play a message	
174	Get Messages and Respond - Rewind a message Play a message	
175	Get Messages and Respond - Back >Up (3-4 words at a time) a message	
176	Get Messages and Respond - Advance (3-4 words at a time) a message	
177	Get Messages and Respond - Skip a message	
178	Get Messages and Respond - Save a message	
179	Get Messages and Respond - Delete a message before it is stored	
180	Get Messages and Respond - Undelete (prior to disconnecting) - Undelete a message before disconnecting	
181	Get Messages and Respond - Forward with comment - Forward a message with comments	

182	Greeting Administration - Listen to current greetings (up to 9) Listen to the current greetings	
183	Greeting Administration - Ability to add, delete, approve greetings voice mail greetings	
184	Record User Name - Record, Delete user names	
185	Password Management - Change Password System can force the password to be changed at a periodic administrator configurable time	
186	Password Management -Cannot use consecutive digits System can force the password to be such that no consecutive digits are used	
187	Password Management - Cannot be same as extension - System can force the password to be different from the extension	
188	Password Management - Length of password - System can force the length of the password	
189	Auto Attendant - Auto-attendant functionality with user directory functionality at DTMF tone	
190	Auto Attendant- Configurable for phone, user, extension, department and location	
191	Call Return - Return a call to the person leaving the message after hearing the message	
192	Custom Greetings - Users can provide their customized greetings for voice mails/ find me follow me	
193	Distribution Lists - System distribution lists that can be accessed by a group of users.	
194	Extended Absence Greetings - Users can set customized greeting for extended absence.	
195	FAX auto delivery - When there is an event in the mailbox a fax notification is sent via fax	
196	FAX mailbox - Ability to receive faxes in a mailbox	
197	Find Me Follow Me - Gives the user the ability to program the call coverage points based on time of day.	
198	Find Me Follow Me - Gives the user the ability to program the call coverage points based on day of week	
199	Find Me Follow Me - Gives the user the ability to program the call coverage points based on ANI (caller ID)	
200	Future Delivery - Record message to be delivered at a future time	
201	Fwd email as - FAX Email is sent to a fax machine	
202	Fwd voice as email - Voice can be forwarded as email through a WAV attachment	
203	The system supports IMAP4 and POP3	
204	Mailbox full - Alert Alerts the user when the mailbox is full	
205	Message Annotation - Can annotate a message before forwarding to another party	
206	Message Broadcast – system supports a mechanism for all user mailbox to be notified with a message	
207	Message Notification - Message notification can call internal/external and/or send an email notification	
208	Help – Is Help available through the voice mail system	
209	Out-dial from inbox - Provides the user the ability to out-dial a number once he enters into the voice mail system	
210	Personal Auto Attendant - Configure a personal auto-attendant for features such as find me follow me	
211	Print Fax to Printer - The user can print faxes onto a printer from interface	
212	Fax Cover Sheets -Ability to provide a personalized fax cover sheet	
213	Prompts Bypass - Provides the ability to bypass prompts using DTMF tones	
214	Voice Mail/Fax/Email integration - Retrieve voice mail or faxes as email in an email client	
215	Microsoft Active Directory and LDAP supported throughout. If not now, when?	

**2.3.2 Additional Telephone Features Proposers Wish to Propose/Provide**

Feature Description	Provided – Yes or No	Cost if not Standard

**2.4 IP TELEPHONY/NETWORKING**

**2.4.1 Routers**

- a) Please propose a routed environment to assure proper functionality.
- b) As to whether the current Adtran Netvanta 3430 model routers are suitable and will allow full-functionality of the proposed voice/ messaging system is the responsibility of the Proposer. Please certify here that this existing router infrastructure will work correctly with the proposed solution.
- c) If current routers are not suitable please specify replacements as part of your proposal and include them as an itemized cost.
- d) Include in your proposal all needed interface modules for T1 and PRI applications for the proposed solution as an itemized cost.

**2.4.2 Data Switches**

- a) The Proposed solution must work with complete intended functionality on the current (LAN) switched network at all the sites in this RFP or you are required to propose updates to the switched environment as part of your proposal if needed. See Appendixes A & B.
- b) Verify that the proposed solution is completely *inter-operable* with the switched infrastructure diagramed in Appendixes A & B.

### **2.4.3 Firewall**

- a) The current Internet firewall is a Fortinet Fortigate FG-100a.
- b) Will the current firewall support up to ten concurrent remote users so that they can work effectively with data and voice.
- c) With an expectation of quality service, and with METRO understanding that the “Internet” cannot support QoS tags (Quality of Service) will your proposed solution provide most remote users an acceptable level of service?

### **2.4.4 Management and Administration**

- a) A system *management solution* is desired and must to be able to have “*Visibility*” of phonesets on the network, including 3<sup>rd</sup> party devices.
- b) *Visibility* is defined as the ability to see the all phonesets and softphones after the management suit has performed a network “discovery” and automatically populated a GUI (graphical user interface) with the complete list of these devices.
- c) The management utility should be able to see and access the interfaces to all system components that require administration with a GUI User interface either WEB based or software client. These options must be tested on METRO’s Citrix thin-client terminals prior to bid award.

### **2.4.5 Network Management Administration**

- a) The ability to manage the IP telephony solution and other network components such as switches, routers, wireless bridges, optical bridges, and other components from a single application interface is very desirable.
- b) Please propose options for managing the complete data network and voice solution if possible.
- c) What Troubleshooting features does the proposed solution have?
- d) Describe what features your proposed solution has for monitoring network and voice performance.

### **2.4.6 Addressing Scheme and VLANs**

- a) The existing IP addressing scheme is expected to remain in place, and new subnets may be added to METRO’s network environment when new sites come on-line.
- b) Dynamic Host Configuration Protocol (DHCP) for all phoneset stations must be provided anywhere on the METRO network in your proposal. Briefly explain how it is to be implemented and managed. If using existing Metro network equipment please explain in detail here how this will work and be managed effectively.
- c) A voice (VLAN) is required for all phonesets in the METRO network environment.
- d) Explain how your proposed solution configures new and moved phonesets to the voice VLAN in the METRO network environment.
- e) Can the proposed solution lock MAC (Media Access Control) addresses to the switch port?

### **2.4.7 Antivirus**

- a) A “fully-qualified” anti-virus solution is required in your proposed solution if any Microsoft platform is being proposed. Explain in detail how the proposed solution safe-guards Windows-based systems from virus attacks and how “patches” are managed and kept updated.
- b) Are ALL Microsoft patch management duties automated?

### **2.4.8 Security**

- a) Explain to what extent METRO is susceptible to “hackers” in the proposed network and system environment after the proposed solution is implemented, and what steps are included, and what is optional to prevent intrusion and other exploits.

#### **2.4.9 Quality of Service (QoS)**

- a) Proposer shall configure QoS for LAN and WAN segments to best support METRO's current applications and the new IP telephony environment.
- b) Explain how QoS is implemented for every phoneset on the proposed WAN and LAN hardware.

#### **2.4.10 Wide Area Network**

- a) Existing T1 circuits from an ATT State contract are to be retained. Similar State contracts are to be used for provisioning of PRI and analog circuits if needed.
- b) Explain how you propose to install and configure WAN segments during business hours and what hardware is used for WAN termination.
- c) Digital lines require both a [channel service unit](#) (CSU) and a [data service unit](#) (DSU). The CSU provides termination for the digital signal and ensures connection integrity through error correction and line monitoring.
  - 1) Is the CSU/DSU *embedded* or an add-on "module" in the proposed solution? How many Ports can be supported by each device?
  - 2) Describe the proposed solution.
- d) What type of compression, if any, do you propose to implement for WAN voice connectivity?
- e) Is WAN "Packet Shaping" or "WAN Acceleration" included in your proposal? Explain how it works and if optional...
- f) How would you implement QoS (Quality of Service) to prioritize voice calls on the WAN connected network?
- g) What will be the impact to METRO's data applications across the network?
- h) Can your router solution work effectively on the carrier T1 data circuits?

#### **2.4.11 Data Environment for the Purposes of the RFP**

- a) Existing CAT5 or greater wiring is to be assumed, for the purposes of this RFP to be currently in use at all existing METRO sites, and it is assumed to meet TIA/EIA standard 568a or greater (CAT5) and is terminated in a female RJ-45 termination at the end-user station.
- b) The proposed voice solution must be certified to run perfectly on these *older* infrastructures (CAT5) and those that have superseded such as the TIA/EIA 568b standard.
- c) There is no phoneset station Gigabit connection interface required in this RFP, but 10/100Mb Ethernet pass-through is required thin-client terminals and PCs or MACs to connect through the phoneset.
- d) It is preferred by METRO to retain the *Physical Layer* (cable plant) of the network environment CAT 5 cable existing now; as well as termination panels.
- e) Power over Ethernet (IEEE 802.3af c3) is assumed to be available to all station ports.
- f) No changes to the cable-plant in this Scope of Work except interconnect fiber and copper patch cables if needed to connect phonesets and system hardware.
- g) Any changes, new additions to the cable-plant "fixes" that may be needed for proper functioning of an end-point station device (IP phoneset) on the existing cable-wire-plant at ALL METRO sites are off-contract and not in this Scope of Work. Proposer may be asked to quote under separate contract for cable work if discovered to be needed, but METRO retains right to contract elsewhere for this as it is off-contract.

#### **2.5 IP TELEPHONY ENVIRONMENT**

- a) The Proposer is required to include in their proposal everything needed to complete, modify and/or upgrade the data network environment including the LAN and WAN so as to fully support and manage Proposer's proposed voice/messaging/ACD solution for its full functionality.
- b) Proposer is cautioned to remember that METRO operates under *tight fiscal budgets*. Proposers are urged to find cost-effective solutions to the best of their ability assuring long-term viability by providing high-quality and competitive cost.



- c) Fill in Schedule A Itemization with any additions or changes to the active network components (LAN & WAN) as needed to assure proper functioning of the complete proposed solution.

### **2.5.1 Call Processor**

- a) Call-Processor/Server/Gatekeeper portion is to be fully redundant and run in an active/active failover mode with zero down time for Users when a processor fails for any reason.
- b) The call management platform may be centralized at the Network Operations Center (NOC) or distributed at sites, but must provide active/active failover without loss of service to Users at the administration main site even during a WAN failure.
- c) Servers included in the proposal must be from a “Tier 1” manufacture of server hardware and be fully supported by the OEM of the proposed solution.
- d) No “white box” server platforms allowed. Server platform must be from Tier 1 Vendor. Prefer a server platform that has an OEM part number and support from the voice solution OEM (option).
- e) Describe the processors supporting the total system. For example, does a single processor support all system functions or are there separate processors for different functions?
- f) What is the manufacturer and model for each processor?
- g) How long has each processor been utilized within this system and how long will this processor be retained?
- h) In the event of a processor failure, discuss how its backup processor (if any) will take control of the task. What happens to calls in progress, new calls, and messaging in a failure?
- i) Is the change-over automatic without any human intervention when failover occurs?
- j) How long is the processor changeover process at system capacity? What is the effect on other applications such as messaging, call management, etc.?
- k) What is the maximum number of calls that can be supported by each call processor?
- l) What is the operating system for the call processor? Is this OS subject to virus and other exploits on the network? Explain if Yes.
- m) How many future versions will the processor likely support before its hardware must be replaced?
- n) Is the call processor memory upgradeable or fixed; to support future versions?
- o) NO OPEN SOURCE software solutions will be considered in this RFP. Only Tier 1 OEMs of IPPBX solutions with a long history of vendor support will be considered for this RFP.
- p) NO HOSTED IP-VOICE solutions will be considered in this RFP. Only Tier 1 OEMs of IPPBX solutions with a long history of vendor support will be considered for this RFP.

### **2.5.2 Switching Matrix**

- a) Provide a detailed description of the switching matrix for the proposed system(s). For example, is it based on Time-Division Multiplexing (TDM), IP, etc? Describe all elements that comprise the call switching matrix.
- b) How many simultaneous conversations can the system support?
- c) Is there system degradation should the system be supporting its maximum number of simultaneous conversations? Can a higher level of compression be automatically applied if a WAN link is saturated?
- d) Describe how Proposer will load balance/failover the system. Describe Proposers concept of load balancing and failover.
- e) Explain whether compression at the LAN or WAN level is proposed. Describe the impact for different compressions standards included in your proposed solution and the Proposers recommended compressions standard.
- f) What is the impact of using compression on network resources and sound quality?
- g) Is it possible with the proposed solution to provide one level of compression on the LAN environment and another on the WAN environment?

### **2.5.3 System Memory**

- a) Is system memory upgradeable for call processors and messaging platforms?
- b) Is system memory available from the OEM manufacture of the proposed system or from a third party?

- c) What hardware in your proposal does not support memory upgrades?
- d) How do these components stay current with future platform software versions that have higher requirements?

#### **2.5.4 System Redundancy**

Redundancy is loosely defined as the capability of an additional system component, of equal or greater functionality, to take over for the failed system component. Redundancy is perceived to be a critical element to METRO.

- a) The Proposer shall include a “robust” level of redundancy for the core system.
- b) Describe in detail each component of the “fail-over” process.
- c) Does both the call processor and messaging platform have fully redundant hardware?
- d) What happens to call processing and calls-in-process during this “fail-over” process?
- e) What is the effect on system statistics, records in memory, logs when a failover occurs?
- f) What is the length of time required to “fail-over” to the redundant system?
- g) Is each redundant element in “hot-standby” and/or “load-sharing” mode?
- h) What level of redundancy is included for messaging platform(s)?
- i) What level of redundancy is included for PSTN failover?
- j) What level of redundancy is for emergency outgoing calls?

#### **2.5.5 System Reliability and Availability**

- a) Proposer’s design should support a minimum of 99.999% Reliability at the system core for both call processor and messaging. Describe how your system supports this goal?
- b) What is the system availability for the proposed system? Define how your firm defines system availability.
- c) Provide a list of single points of failure with the proposed system.
- d) What is OEM stated Mean Time between Failures (MTBF) for the various system components Proposed?
- e) What trunk (PSTN) line redundancy is required so that there is no single-point-of-failure at any physical METRO sites?

#### **2.5.6 Migration Path**

- a) Proposer shall describe the OEM’s ‘migration path’ between versions of manufacturer’s system solutions.
- b) Explain what hardware/software/license(s) would be retained while future versions are brought in to the environment and, which will not be retained.
- c) Can the system’s complete, database be retained between version migrations?
- d) What is the impact to other applications and equipment such as call center systems, unified message, etc. when a system version upgrade is installed?
- e) Give a brief description of past system migrations to the current version. Are they compatible both forwards and backwards?
- f) Has there been a long history of backwards compatibility with the OEM’s previous software code versions, system hardware and phonesets?
- g) What happens when the system platform moves to a new operating system?
- h) Does your proposed system run on either Microsoft XP Professional, Windows Server 2000 or 2003.
  - 1) If so describe the migration path to the next version of system software after the OS is retired?
  - 2) Does your proposal include new OS and/or hardware to accommodate the next 4-5 system version upgrades?

#### **2.5.7 PSTN Connectivity**

- a) In the context of this RFP PSTN consists of interconnection to PSTN and T1 carrier circuits for point to point data communication.
- b) Any new telephone system configuration proposed must have the ability to effectively interface with the

local exchange central office, long-distance carriers via direct T-1 or PRI circuit from the central office as well as analog trunk and SIP trunk.

c) SIP trunks capability is to be included in the proposed solution. Although they are may not be implemented immediately, the functionality is to be included in your proposal. Include hardware, software and licensing for up to forty (40) SIP trunks.

d) 8-Ports *analog* (FXS/FXO) trunks are to be hardware enabled for the NOC physical location which is the main METRO administration site. These should be configured for system dial-tone failover and to provide the ability to run fax machines locally (FXS/FXO) and provide dial-out for 911 and other calls during a WAN failure.

e) Can (FXS/FXO) ports be placed anywhere on the network by means of a distributed processor or gateway appliance? Please include as specified in Schedule A.

f) 4-Ports *analog* (FXS/FXO) trunks are to be hardware enabled at the Golf Club and Pacific physical locations. These should be configured for system dial-tone failover and to provide the ability to run one (1) fax machines locally (FXS/FXO) and provide dial-out for 911 and other calls during a WAN failure.

g) The ParaCruz- Research Park site must have **Stand Alone Capability** for voice/dial-tone, messaging, CDR, ACD and call recording, or Proposer may propose a routed “compression” or acceleration solution on the WAN connections to assure adequate bandwidth and survivability for the above mentioned features.

h) All METRO sites shall be configured for system dial-tone failover and to provide the ability to run fax machines locally (FXS/FXO) and provide dial-out for 911 and other calls during a WAN failure at all METRO sites.

i) Can additional FXS and FXO ports be placed *anywhere* on the METRO network by means of a distributed processor or gateway appliance? Please include all needed components and licensing in Schedule A for each site at the METRO to provide PSTN redundancy for the site and the METRO as a whole.

### **2.5.9 Emergency 9-1-1**

a) Explain in detail how 9-1-1 calls will be routed to the PSAP showing the physical address of the facility from which the 9-1-1 call is placed.

b) Explain optional E-9-1-1 solutions, and their cost, that can transmit the actual physical location from which the E-9-1-1 call is placed. For example, the area of the campus, building, room number or other detailed location other than simply the “address” of the facility or how your proposed solution can accomplish this functionality.

c) What configuration can be done on the proposed system to alert a person at the METRO when a 911 call has been made on the system?

### **2.5.10 Call Routing**

#### **System Dialing Plan / Automatic Route Selection (ARS)**

a) The system shall be capable of supporting the North American Numbering Plan and any plan revisions through 2012, without additional cost when such is required.

b) For local calls, dial “9” + the appropriate 7-digit telephone number (with the telephone systems software automatically determining the actual call routing based upon predetermined routing patterns and user COS (class of service) criteria.

c) For long distance calls, dial “9” + “1” + the appropriate 10-digit telephone number with the system’s software automatically determining the actual call routing based upon predetermined routing patterns and user COS criteria.

d) When an outbound 7-digit telephone number is dialed and it is a METRO telephone number then the call shall be routed over the private METRO network. If the call cannot be placed on the private METRO network it shall then be routed to the PSTN with no User intervention.

e) The phoneset will display the status of the call and whether it is “on-net” or dialing thru PSTN.

f) Describe how digit translation, insertion and suppression are capable of performing the necessary number translations to meet the required operational needs functions with the proposed system.

g) System shall offer Class-of-service (COS) restriction-level control of:

1) Trunk group access

- 2) Dialing privileges variable by time of day (by access code, Class of Service permissions, etc.)
- 3) Feature access codes for feature access control

- h) System shall support access codes for “Hot Seating” or “Hotelling”
- i) System shall support restriction override codes.
- j) Main numbers of various departments will be centralized to the NOC on PRI trunk, but the ParaCruz site will retain an analog dial-in capability on their main number (4-ports) locally as well as having incoming calls routed from the NOC.

### **2.5.11 Message Platform**

- a) The desired messaging platform will support voicemail and unified messaging for voice mail and other features.
- b) The messaging platform should be fully secure on the network. Explain your patch, anti-virus and firewall solution to assure this application will remain secured.
- c) The messaging platform will support IMAP4 and POP3 standards and have the ability to integrate with both email clients and Microsoft Exchange (latest). This integration is NOT in the Scope of Work.
- d) Does your proposed messaging platform support FAX services? Explain.
- e) Please include information about the capabilities of the proposed messaging system.
- f) Is the proposed system a conference bridge? How many on a conference?
- g) How much time is included for voice mail messages and how many voice mail ports are included? What can it scale to?
- h) Describe how a MWI (mail waiting indicator) is able to have multiple voice mail boxes on one phoneset? Is there a light on the phoneset for multiple voice mail boxes? How many MWIs on each type phone proposed?
- i) Is the messaging platform’s operating system current or will it be revised soon? Is there any further development on this version of the operating system? If to be revised in the next three major revisions of the proposed voice solution what will be the upgrade path for METRO?

### **2.5.12 Automated Attendant**

- a) A required *Automated Attendant* can be configured to answer inbound calls after regular business hours and whenever METRO is closed.
- b) Auto Attendants will be configured by the Proposer on the system for each Department (location) in METRO up to two (2) departments, and will answer to “main numbers” for each physical site.
- c) Auto Attendants will have the ability to use multiple layers (> 19 layers deep) accessible by DTMF tones.
- d) System capacity shall be at least ninety nine (99) Auto Attendants configurable by User, trunk line, extension, hunt-group, ACD group
- e) The system will have the ability to pre-configure pre-scheduled holiday greetings.
- f) The Receptionist will have the ability to turn on or turn off an Auto Attendant from their phoneset by hitting a pre-configured button with BLF, and from the system GUI interface when properly credentialed by the administrator.
- g) The Auto Attendant will have an *Easy-to-Navigate User Directory* available to callers by DTMF tone and multiple prompts with after-hours, week-end and holiday scheduling featureset.

### **2.5.13 Remote User Ease-of-Use**

- a) Is additional hardware, software or licensing needed to connect a *Remote User* to the system?
- b) A Remote User may need the administrator to create a VPN to connect. Explain the process for *Remote Users* to connect a hard or soft phone to the system off the METRO network.
- c) Are changes to the firewall needed for a *Remote User* to connect to the system? Explain how your solution is configured.
- d) Provide all hardware, software and licensing for 5 concurrent remote User connections (option).

#### **2.5.14 Conferencing**

- a) Conferencing from a phoneset is required to support 5 users plus the internal caller.
- b) A requirement for 10 *concurrent* conferences to be made from the system all with up to six (6) inside and outside calls on each conference.  
Please elaborate on your systems conferencing features and limitations.
- c) What hardware, software, and licensing makes up the conferencing solution in your proposal?
- d) Dial in conferencing is not required.
- e) Can a user drop a conference attendee during a conference call without disrupting the rest of the conference?

#### **2.5.15 Extension Plan**

- a) Each site will have an identifiable extension prefix (first two numbers of extension to identify physical site)
- b) Least cost routing is required to be configured for all METRO phones to route calls on the Metro network.
- c) PSTN failover is required for METRO calls that cannot connect over WAN circuits. The failover must be seamless and not require input from the User.
- d) DID integration in is to be included in extension planning and integration.
- e) Main numbers will not be used for outbound calls and should be constantly available to answer new incoming calls.
  - f) Currently Main numbers are physically paired to analog trunks at each physical location. Explain how you tentatively propose to centralize trunks to a PRI circuit, retain main numbers, and assure caller ID (with caller name, not just number).

#### **2.5.16 Unified Messaging (UM)**

- a) No User configuration for Unified Messaging is included in this Scope of Work.
- b) The Metro administrator shall be trained in the process of configuring an email client so that he can “roll-out” UM to Users when ready.
- c) Written instructions for Users to help configure their own email client will be provided by the Proposer.
- d) Windows and Web-Based Faxing from Metro PCs and primarily the thin-client terminals is required in this RFP. A secure, web-based or client software based (must run on effectively on Citrix), faxing utility must be proposed and itemized in your Proposal and be fully licensed for 110 Users.
- e) Fax Reporting - a variety of information about the fax transactions is to be kept in log files. A report that is convenient, user-friendly tool should generate the fax transaction log information in a variety of report formats (i.e. fax history, sender, time sent, destination address, bill-back codes, etc). The reports shall provide comprehensive analysis of the fax processing transactions, and shall be easily exported to spreadsheets, databases, and other report generators. Fax transmission tracking. Support for Crystal Reports is very desirable.
- f) The FAX solution should support and integrate with Microsoft Active Directory to a high degree, but no integration with MS AD in this Scope of Work.
- g) Drop Directory: Production Faxing - The Proposed FAX solution shall support easy deployment of automated, production faxing.
- h) Third-party applications shall have the ability to access the “Drop Directory” to send outgoing faxes and retrieve incoming faxes. The “Drop Directory” shall support fax jobs submitted in any native document format, and also supports priority fax job settings controlled by the third party application Drop directories can be defined in any sharable folders on the network accessible to the FAX solution.
- i) System Backup and Restore - The Proposed FAX solution should come with a backup and restore function designed to protect user files and data in case of any unexpected system failure. The Proposed FAX solution shall have the ability to back-up system files, user information, and fax job data to a sharable network folder.
- j) Error Correction - Phone line noise during fax transmission can sometimes cause errors in the received image, usually causing one or more scan lines to be dropped from the image. As long as there aren't too many errors, the page is accepted and confirmed because it is still readable. If too many errors occur,

however, the fax will be rejected. The default Error Correction Mode (ECM) guarantees faxes will be sent and received with no errors, as long as the sending or receiving machine also supports ECM. Propose a solution that supports ECM.

k) Microsoft Word-Based Cover Pages - It is a requirement that cover pages can be created in Microsoft Word or WordPad, allowing all of Word's familiar formatting and editing power to be used in customizing cover pages. The solution must support Microsoft Word 2000 and forward.

l) International Character Support - With fax cover pages created in Microsoft Word and WordPad, in addition to supporting English, must also support the use of international characters on your fax cover pages.

m) An Embedded Fax Archive, to keep a FAX database and content store that eliminates the need to keep copies of faxed documents is very desirable.

n) Priority User and Fax Job Priority Support is desirable.

o) Internal Document Routing – Send faxes to internal users in addition to remote fax recipients is a requirement.

p) Group Users Support

q) Faxing straight from Microsoft and other third party applications is a requirement

r) Customizable Notification Features, allowing users to monitor document delivery status is required.

s) Incoming and outgoing fax queue sorting, according to sender, status, destination, etc is very desirable.

t) The ability to fax messages to both email and fax recipients simultaneously is required.

u) Immediate or scheduled batch faxing; scheduling faxes for off-peak hours which can reduce document delivery costs is required.

v) Least-cost fax routing via the Metro Intranet and world-wide Internet Faxing to minimize telephone charges is required.

w) Can the proposed FAX solution integrate with the proposed IPPBX system so that trunks (PSTN) are shared and given appropriate priority? Explain the interface environment on the hardware layer between FAX solution and IPPBX.

#### **2.5.17 Music on Hold (MOH)**

a) MOH must be available to caller when on Hold.

b) MOH must be available to caller when a call is transferred.

c) Can your proposed solution provide separate MOH services for each physical METRO location?

d) Can your proposed solution provide separate MOH services for different departments, groups and Users regardless of physical location?

e) The various MOH files should be in WAV file format and be easily importable and manageable.

#### **2.5.18 Voice Mail Ports (how many)**

a) This Scope of Work requires a minimum of 18 Voice Mail Ports (VMP)

b) It is assumed that a VMP is "in-use" when a User is receiving a Voice Mail, retrieving a voice mail, and if the Auto-Attendant is engaged with a call.

c) State if any other functions use a VMP and how many VMPs are include in your proposal.

#### **2.5.19 Phoneset Ease of Use**

a) It is required that the phonesets be easy to use. This does not negate a desire for feature richness, but asks for simplified operations that 'feel' like legacy phones Users are accustomed to.

b) Phonesets must receive IP addresses via *DHCP* which is required in your proposal for all locations on the METRO network; this is to be done without user intervention.

c) All future upgrades to phoneset firmware is to be done without User intervention.

d) Adding a new phoneset to the environment must be Plug-and-Play for Users.

#### **2.5.20 Multiple Language Support**

a) Explain briefly your proposed solution's support for multiple languages. This Scope of work includes only configuration for US English at this time.

b) Can the proposed system prompts be set to support multiple languages by DTMF tone or another method?

### **2.5.21 Call Accounting**

- a) A centralized Call Accounting system will be required in your proposal.
- b) The call accounting system must provide a robust complement of feature/reporting capabilities.
- c) The CDR (Call Detail Reporting) record output by the telephone system shall, at a minimum, provide the following outbound call detail data immediately upon completion of the call transaction:
  - 1) Date and time call originated
  - 2) Duration of call
  - 3) Number called (digits dialed)
  - 4) Originating agent
  - 5) Trunk route and member used
  - 6) Account code(s) to identify call resolution
  - 7) Number of calls received
  - 8) Number of calls answered
  - 9) Number of calls abandoned
  - 10) Average time to answer a call
  - 11) Average time to abandon a call
  - 12) Longest call waiting
  - 13) Percentage of calls over a defined service level goal
  - 14) Average duration of a call
  - 15) Total number of agents
  - 16) Total number of agents logged in
  - 17) Time an agent is logged in
  - 18) Time an agent is unavailable
  - 19) The CDR record shall, at a minimum, provide the following inbound call detail data immediately upon completion of the call transaction or in real time: a) date and time call received; b) duration of call; c) terminating station; and d) trunk route and member used.
  - 20) The proposed *Call Accounting System* should have the ability to interface with telephones within METRO's network and monitor for call abuse, and analyze call records.
  - 21) The package must also have the capability to allocate phone costs by identifying usage, to different departments, locations, and individuals.
  - 22) All hardware, software and licensing required for a fully operational system must be provided as well as detailed system hardware, software and functional descriptions.
  - 23) Also desirable is automatic report generation and the automatic email report distribution capabilities.
  - 24) Must integrate with Crystal Reports.

### **2.6 VOICE/MESSAGING SYSTEM ADMINISTRATION**

- a) Telephone system voice processing, phonesets and messaging administration shall be performed on a local and/or centralized basis through METRO's *thin-client terminals* and a few PCs.
- b) If proposed GUI (graphical user interface) is web-based the application **MUST** operate correctly on METRO's **Citrix application servers** and thin-client terminals. Explain how you will prove this concept prior to contracting for this RFP.
- c) If GUI proposed (graphical user interface) is software -based the application **MUST** operate correctly on METRO's **Citrix application servers** and thin-client terminals. Explain how you will prove this concept prior to contracting for this RFP.
- d) Does your proposed system *administration interface* get upgraded as the other system components go to new versions?
- e) How many different GUI interfaces are there for your complete system solution?
- f) What training classes and certifications are available for the administration of the proposed solution?

- g) Explain any administrator functions that are not supported in a centralized administration environment.
- h) Authorized personnel shall be able to control and administer the entire System through the System Administration Utility (SAU).
- i) The system administration utility shall allow the telephone administrator to view and print traffic information from the System. Such information shall be available on demand or on a programmable periodic basis.
- j) The system administration utility shall allow the telephone administrator to make changes to system and station feature operating parameters in all nodes of all systems real-time both locally and remotely.
- k) Can add/delete/change of System and station user features and capabilities (e.g., extension assignment, feature button assignment, COS, call forwarding, hunt pattern and membership, call pick up group assignment, can be made easily by METRO in-house IT staff after training?
- l) Call routing patterns for routing internal METRO calls over the network is required to be configured
- m) Emergency 911 calls to the PSAP are be configured to reflect location-based ANI of the physical address where each emergency call originates from.
- n) System administration utility(s) shall have the capability to program phoneset COS (class of service) and support pre-programmed; for subsequent (by time and date) execution.
- o) The system shall provide access control (entry level security) for the system administration utility (SUA)
- p) The system shall permit the assignment of multiple categories of access privileges such that different restrictions can be applied to different administrative and operational staff.
- q) The System shall keep an audit trail of all significant events, changes and alarms for administrator review.
- r) It is required of every proposed solution to assist in tracking down potential problems or abuse, authorized personnel shall be able to invoke exceptional and detailed logging of all or specific event(s) by specific station(s), trunk(s), access code(s), etc. in the System. Explain.

## **2.7 BACKUP**

Describe the media in which system database(s) can be “backed up”. Briefly describe manual and automatic and scheduled backup procedures. Using METRO’s LAN/WAN, can system backup take place on central servers, NAS or SAN?

## **2.8 DIAGNOSTICS AND TROUBLE-SHOOTING**

- a) The Proposed Diagnostics and Troubleshooting solution for this RFP should be simple in design and use, but feature rich.
- b) Please explain how troubleshooting can be handled by in-house IT personnel and what management utilities are included in your proposal.

## **2.9 REMOTE DIAGNOSTIC AND CORRECTIVE CAPABILITIES**

- a) Explain how the system can be maintained, diagnosed and corrected when needed remotely over the internet.

## **2.10 ERROR AND ALARM LOGGING AND NOTIFICATION CAPABILITIES**

- a) Describe the system’s error logging capabilities.
- b) Can the system send alarm indications to one or more administrative terminals, phones and PDAs?

## **2.11 SYSTEM ACCESS AND SECURITY**

- a) Describe the proposed system’s access and security controls, including the types of access permitted and



the layers/hierarchies allowed for system administration.

## **2.12 PHONESET**

### **2.12.1 Phoneset Formfactor-Cordless**

- a) A cordless phoneset formfactor with system *Programmable Feature Keys*, license(s) and that is headset ready are required components of the desired system.
- b) What type cordless phones work with the proposed solution?
- c) Can cordless phonesets in your proposal be placed anywhere on the METRO network within a three hundred foot range?
- d) Is any other hardware required to connect a cordless phone to the system at any network port (like an ATA- Analog Terminal Adapter)? Are licenses required?
- e) The cordless phoneset must have the ability to transfer a call and put a call on hold without the need of a feature code.
- f) The cordless phoneset is desired have a LCD display with caller ID and other call status information.
- g) Cordless phonesets should have a belt buckle latch or other means of fastening to a User's clothing for mobility within the office.
- h) Cordless phoneset should have 4-hours minimum TALK battery life and recharge quickly when placed in a "Charging Base-Station".
- i) Cordless phoneset should have 24-hours minimum IDLE battery life and recharge quickly when placed in a "Charging Base-Station".
- j) Cordless phoneset should have volume controls and a mute button.

### **2.12.2 Phoneset Formfactor-Executive and Business Class**

- a) Phoneset must be IP-based with a switched 10/100 Mb Ethernet pass-through port.
- b) Phoneset must be supported entirely by *Power over Ethernet* (POE) (IEEE 802.3af c3).
- c) Phonesets should have an easily readable LCD display with caller ID name, time of day and indication of how many voice mail messages the User has visible on display as well as directory of METRO Users, logs of missed calls, dialed calls, and other information.
- d) Phonesets must have full-duplex speaker-phone and have good performance and sound quality.
- e) It is desired that ALL phonesets have multiple BLFs (Busy Lamp Field) and that programmable buttons be configurable for many functions.
- f) A phoneset must have a mute button for handset speaker phone and headset.
- g) Phoneset to display number of messages waiting.
- h) Phoneset must be capable of acting as a *Paging System* through the speakerphone speaker of the phoneset when *paging* with proper credentials through the proposed system.
- i) The headset amp shall be built into the phoneset so no external "amplifier" is needed.
- j) The executive formfactor should have *wide-band audio* performance and excellent conference sound ability.

### **2.12.3 Reception Stations**

- a) A full-featured *Hardware Reception Console* is to be included at four (4) physical sites and is also to include an integrated software based reception station at four (4) physical sites.
- b) Both hardware and software Reception Stations are to show if a User is on a call by displaying a BLF in hardware and another indication in the software GUI.
- c) The Hardware reception console should have greater than 40 programmable buttons with BLFs.
- d) Both the hardware and software Reception Consoles will have the ability to allow the receptionist to know the state (busy, forward, out for holiday/vacation, etc.) the extension is in prior to transferring a call.

### **2.12.4 Wi-Fi Enabled Phonesets**

- a) Not in this Scope of Work, but may be desirable in the future. Does your proposed solution support this functionality?

- b) Does the proposed system OEM offer a Wi-Fi phoneset?

### **2.13 SUPPORT FOR “OPEN STANDARDS”**

- a) Open Standards; especially **SIP** for inter-operability with third party *applications, end-stations* and *trunks* shall be included in cost of proposal.

#### **2.13.1 System Inter-Operability**

- a) The proposed system(s) must be inter-operable with the METRO’s current operating systems, server platforms, application servers, applications, thin-client terminals and Citrix as well as network distribution and active components.
- b) The proposed telephone system should be inter-operable with IP-based paging and intercom systems based on industry standards. What systems are available for IP-based paging and intercom systems?
- c) Describe the level of *integration potential* for CTI (computer telephony Integration) enabled applications with you proposed solution (none to be configured in this Scope of Work).

### **2.14 CONTACT CENTER FEATURE (ACD)**

- a) Real-Time Reports and “Supervisor” for Contact Center and CDR (Call Detail Reporting)
- b) Call Logging and Call Recording for inbound and outbound calls.
- c) Archiving is required for all agents in contact center.
- d) Include all hardware software and licensing in proposal.
- e) Call routing to “agents” is currently “Most Idle Agent” rather than “all phones ring”.
- f) Agent should be able to view real-time “queue status” on the display of the phone and/or a PC based GUI (must support Citrix thin-client environment).
- g) Agent should be able to view statistics including number of calls waiting, time of longest call waiting.
- h) “Agents” shall have the ability to log in and log out of the “agent” group by use of a button on the phoneset that shall give an indication on the menu or with a light (BLF) that the “agent” is logged in.
- f) Does your proposed ACD reporting solution support the following (Answer YES or NO):
  - 1) Average call duration
  - 2) Average talk time
  - 3) Average time to abandon
  - 4) Wait time (average and total)
  - 5) Total number of received calls
  - 6) Total number of answered calls
  - 7) Total number of abandoned calls
  - 8) Reports that are configurable in various time brackets
  - 9) Interval reports showing Queue and agent statistics for 15 minute periods
  - 10) Delay before answering
  - 11) Agent activity and productivity reports
  - 12) Group/skill activity and utilization reports
  - 13) Peak time reporting (daily, weekly and monthly) with historical trend analysis
  - 14) Crystal Reports integration
  - 15) Real-time supervisor visibility of “Agent Status”
  - 16) Real-time visibility as to next Agent in line to receive a call
  - 17) The ability of an Agent to enter an “Activity Code” after a call to categorize the nature of the call in the ACD logs by pressing a pre programmed button or with a DTMF tone.
- g) Can callers navigate automated attendant prompts to receive information while still waiting in a queue?
- h) ACD reporting application should provide standard and customizable reports without having to use an external report writer.
- i) ACD reporting application should provide flexible reporting tools.
- j) ACD reporting application should have a Windows or web based interface that provides real-time and historical data.
- k) ACD reporting application should be available to designated METRO staff in any department.

- l) ACD reporting application should allow ODBC (Open Data Base Connectivity) access to the reporting database so that the METRO can use Crystal Reports to create reports that combine Call Center data with CRM (Customer Relationship Management) or financial data.
- m) When silently monitoring a call, can a supervisor speak to the agent to provide clarification or coaching without the outside caller hearing the supervisor with your proposed solution?
- n) ACD Supervisors should be able to dynamically monitor (through a GUI window on their PC or Citrix client terminal) all their assigned groups and agents.
- o) A Supervisor should be able to log-in/out, and make available/unavailable an agent from the supervisor application.
- p) The system shall announce the expected wait time based on a dynamic calculation of the number of calls waiting, the number of agents logged on and the Average Speed to Answer?
- q) Can the proposed solution create a report that will allow supervisors to compare call statistics between different time periods (last month versus the same period 1 year ago)?
- r) Four (4) seats of ACD reporting application licenses are required.
- s) Three (3) ACD "Supervisors" seats or licenses are required.
- t) Ten (16) ACD Agent licenses are required.
- u) A "*Real-Time Supervisors Dashboard*" with customizable fields is required and must run on Citrix with thin-client terminals or PCs. This tool must be available on the Metro network so *Supervisors* can look at data from any physical site with proper credentials and determine Agent status and history. It is required that the "Real-Time Supervisors Dashboard" can clearly show the next Agent to receive a call in an ACD or call center group.
- v) Activity Codes must be able to identify the type of call after an Agent has ended the call. The Agent shall be able to press a programmable button on the phoneset or use a DTMF tone to categorize the type of call in system logs.

## **2.15 CONTACT CENTER RECORDING**

- a) Recording of all contact center voice interaction for later review and evaluation is required.
- b) Record an agent through a series of calls without Supervisor intervention.
- c) Describe your proposed ACD recording application including hardware, software, voice-quality codec, agent and supervisor interface, indexing system for finding archived recordings, recording medium, redundancy and other items included in your proposal.
- d) Call Recording for sixteen (16) "Contact Center Agents" is required in this RFP. The proposed recording solution is to meet all State and local laws as well as national laws that may be applicable for recording voice and notification.
- e) The Agents" may be physically "distributed" on the METRO network with ten (10) Agents at the ParaCruz physical site and six (6) Agents at the Pacific Metro physical site.
- f) Explain where your contact center application platform will physically reside and how it will send data over the network.
- g) What compression and codec(s) are included with your call recording solution?
- h) Is the proposed call recording application SIP based?

## **3. CABLING REQUIREMENTS**

### **3.1 EXISTING CABLE-PLANT**

- a) Existing cable-plant is not in this Scope of Work. Additions to, or repairs of the wire or fiber cable plant is not required.
- b) All existing connections from switches to desktops are CAT 5 or better quality for the purpose of this RFP.
- c) System components should interconnect to the METRO switched network with CAT 6 interconnect patch cables direct to switch at either 100MB or 1GB (IEEE 802.3).
- d) Phonesets will connect at 100MB Ethernet (802.3af) and no other connection shall be allowed. It is assumed for the purposes of this RFP this port will be provided by METRO.

## **4.0 SPACE & ENVIRONMENTAL REQUIREMENTS**

### **4.1 UPS**

Battery backup and AC power surge protection will be provided by METRO.

- a) Specify as option for the UPS to be able to supply one (1) hour capacity for the “*core system*” components and “end-stations” of your proposal.
- b) Propose surge protectors for **all** trunk lines to protect system ports as required (Towermax or similar).

## **5.0 IMPLEMENTATION - MIGRATION PLAN**

### **5.1 OPTIONS FOR INSTALLATION**

- a) A *Turnkey Installation* of ALL system components and all required “services” contents of this RFP is to be proposed.
- b) A *limited Installation*, configuration and extensive administrator training to facilitate a METRO- assisted installation. This option would take the form of the proposer doing the main system installation and primary configuration and METRO installing phones and filling in user data to reduce cost due to limited budgets.
- c) Contractor will work with METRO personnel to minimize disruption of METRO operations.
- d) Briefly describe your proposed installation plan to minimize disruption of METRO operations.

### **5.2 IDENTIFY PROPOSER ACCOUNT TEAM**

- a) Provide the name and credentials of the proposed *Project Manager*. Please include OEM Vendor certifications and, or resume.
- b) Provide the name and credentials of the proposed *lead-engineer*. Please include OEM Vendor certifications and, or resume.

### **5.3 IDENTIFY DESIGN OF PROPOSED SOLUTION**

The Proposer must include diagrams and other notes to describe the technology environment and call flow features of the proposed solution. Discuss how the proposed solution will suit METRO’s needs.

### **5.4 TRAINING PLAN**

Training will be a key element in the successful implementation of the new voice / messaging system. METRO seeks to be self-sufficient to the greatest degree possible after the new system is implemented.

- a) Comprehensive training will be required for all Users of all new systems and applications to be provided by the successful Contractor. A TRAIN-THE-TRAINER APPROACH may be acceptable, but describe clearly what deliverables are included in your proposal for this section.
- b) Proposer’s overall training plan must be detailed, address all requirements described herein, and 1) include the number of users planned for each training session, 2) number of sessions planned, 3) number of phones/terminals provided for training, 4) qualifications of trainers to be used, 5) outline of training session content (for agents, attendant console operators, supervisors and administrators), and 6) training schedule.
- c) Provide METRO an “on-going” *professional services* pay-rate for system training, *as needed* (time and materials), from a qualified professional certified on the system solution proposed.  
\$ \_\_\_\_\_ Per hour, w/ 4-hour minimum.
- d) What printed materials are to be presented to Users? METRO shall be given the right to reproduce Proposer training materials, manuals, feature reference cards, and other documentation.
- e) Training sessions will be conducted at METRO’s facilities and shall include hands-on training utilizing fully functioning telephone sets and thin-client terminals as appropriate), with trainers describing and demonstrating functions, activation and application of *all relevant features*, services and applications of the proposed system.

f) The proposed system shall have extensive *Context Sensitive Help* with end-user guides to facilitate Users resolving their own issues without the intervention of METRO's IT Department.

## **5.5 ADMINISTRATOR TRAINING**

a) **The METRO will have up to four staff members that are to be trained concurrently to perform simple/common telephone and voice mail changes, additions and moves to the system.**

b) **Proposer must offer a minimum of eight 8 hours of training METRO Administrators for moves, Adds and changes to the system. Basic system administration – telephone and voice mail**

- Feature use
- Basic Reporting
- Automated attendant menus and recordings
- Re-setting voice mail box passwords
- And other administration functions to be determined

c) Proposers are to include the METRO IT Administrators (4 persons) into ALL User training sessions and provide them with all documentation related to training.

- 1) Are Vendor qualified classes and certifications available for the proposed system and applications?
- 2) Is web-base training available for the proposed systems and applications?

## **5.6 FIRST DAY/WEEK IN SERVICE**

a) Unless otherwise proposed specifically the main system components are to be installed, configured first and operating and then the end-points will be deployed.

b) The current METRO telecom environment should remain in place and functioning past the time of the installation of the new systems so that a *zero-down-time cutover* can be achieved.

c) The Proposer will provide on-site technical support and will with due diligence assure a "*pain-less*" cutover to carrier circuits, and will remain involved until all issues are resolved or in the process of being resolved.

## **5.7 INSPECTIONS, TESTING, CUT-OVER, ACCEPTANCE**

### **5.7.1 Inspections**

a) METRO shall have the right to inspect the work at any time. In the event of questionable work, METRO's reasonable decisions with respect to necessary corrective action shall be final and by the terms and conditions herein this RFP.

b) An inspection shall be made of the systems by authorized representatives of METRO and Proposer before the Cutover(s) and prior to performing acceptance tests on any System transition phase. The inspection shall be of such character and extent as to disclose any unsatisfactory condition of hardware, software or the configuration of either.

c) Where any of the following conditions are observed during inspections or testing of the System, sufficiently detailed examinations shall be made to disclose the full extent of their existence:

- Failure to comply with the quantity of equipment specified for installation;
- Failure to comply with design specifications;
- Failure to comply with applicable laws, ordinances, regulations or building codes;
- Apparatus or equipment functionally or cosmetically damaged;
- Other adverse conditions resulting from failure to meet generally accepted standards of good workmanship.

d) Upon discovery and validation of the existence of any unacceptable conditions, Proposer shall act to rectify such conditions as quickly as possible so as not to negatively impact the project implementation schedule.

e) METRO shall be notified of the correction of all unacceptable conditions as soon as they are completed. METRO reserves the right to re-inspect corrected work.

### **5.7.2 Testing Plan**

- a) All standard and optional systems shall be tested for proper operation. The proposer shall submit the manufacturers suggested installation checklist / planning guide filled in and confirming system functionality.
- b) METRO shall review the checklist and may include other checklist items.
- c) A representative of METRO shall be present during the checklist process and approve all procedures.
- d) The vendor shall schedule the checklist verification dates/times one- week in advance with METRO.

### **5.7.3 General Testing**

- a) The vendor shall submit a checklist for systems testing including the System Planning Guide. This is a test for system operations; telephone set testing, auto attendant testing and contact center and recording testing.
- b) Further, METRO shall have the ability to add application-testing procedures to the checklist.
- c) Tests to include all functions and features of all Proposer-provided station sets and terminals to ensure proper operation.
- d) Tests to include voice processing and call processing functions.
- e) Tests of all emergency power and bypass equipment.
- f) Tests to confirm that all trunking, tie-line, data circuits and equipment have been installed, are functioning properly and reliably, and are properly balanced to provide optimal operation and performance with the System
- g) Tests to confirm that all inter-system connectivity and functionality have been installed and are operating correctly and reliably.
- h) Testing including 911 to show proper *physical site address* to PSAP.
- i) If METRO deems the proposed testing plan inadequate, METRO shall provide reasonable detail of such deficiencies and Proposer shall revise its plan to incorporate reasonable additional METRO testing requirements.
- j) Proposer shall furnish all necessary test equipment and perform all work required to determine or modify the performance of the System to meet the specified functions in an optimal manner.
- k) At such time as all tests have been completed to Proposer's satisfaction, Proposer shall give METRO written notice thereof, provide to METRO written documentation of test results within ten (10) days after conclusion of each test, and set (or confirm as applicable) the date of each System Cutover phase. If METRO notifies Proposer in writing of deficiencies in the results of such tests, Proposer shall not proceed to any Cutover until such material deficiencies have been corrected to METRO's reasonable satisfaction.
- l) Failure to meet the requirements of any portion of the test plan shall be deemed a failure of the test, which shall be rescheduled after appropriate corrections have been made.

### **5.7.4 Cutover**

- a) "Cutover" shall mean the date at which the system is fully functional and capable of supporting ALL end-user stations and trunks, and the concurrently the new system receives network connectivity to the PSTN. Main number(s) continuity is required on day one (METRO main department numbers will be available constantly during METRO business hours).
- b) Proposer shall develop a comprehensive Cutover Plan. This plan shall include specific detail of each cutover phase and step, scheduled to facilitate METRO, Carrier, and Implementer co-ordination.
- c) The Cutover Plan shall detail the steps, methodology and schedule that will be used in implementing the new systems with the minimum inconvenience to METRO staff.
- d) A goal of "zero-down-time" for both network and voice during business hours is to be adhered to except for circumstances beyond the control of the Proposer.
- e) The cutover Plan shall clearly define the responsibilities of both the Proposer and METRO in the cutover process.
- f) The Cutover Plan shall describe the number of technical, training and general support personnel committed to be on-site immediately following Cutover (i.e., how many personnel with what skills/credentials on-site for how long following Cutover?).

- g) The Cutover Plan shall be designed to show the cutover date for the system, as agreed to by METRO, the Proposer and applicable common carrier(s).
- h) The Cutover Plan shall be submitted for approval no less than fifteen (15) days prior to Cutover.

### **5.7.5 System Final Acceptance**

- a) The term “*System Final Acceptance*” shall be defined as METRO’s acknowledgment to Proposer that contracted work has been successfully completed and the System has substantially performed to the specifications and requirements of the Agreement, without the occurrence of a material system component failure for a period of thirty (30) consecutive calendar days following *System Cutover*. During this thirty-day period, there shall be no substantial or user-affected problems.
- b) METRO shall notify Proposer of any occurrence or condition that could delay or prevent Project Acceptance, immediately upon its discovery. Upon notification of any occurrence or condition that METRO reasonably deems unacceptable, Proposer shall use its best efforts to correct the failure as soon as possible.
- c) If the unacceptable condition constitutes, in METRO’s reasonable opinion, a material System component failure, the Project Acceptance Period shall be halted and only upon Proposer notification to METRO, in writing, of correction of the failure, shall the thirty-calendar-day Acceptance Period begin again where it left off.
- d) The date of Project Acceptance shall be the later of the end of the initial Post-Cutover thirty-calendar-day Acceptance Period or any extension thereof as described herein.
- e) Project Acceptance shall not be unreasonably withheld.
- f) In the event METRO does not notify Proposer within thirty (30) calendar days after Cutover of any particulars in which METRO deems the System unacceptable and no material System failures have occurred during this period, Proposer shall notify METRO in writing that the System has been deemed Accepted as of the last day of the Acceptance Period.
- g) If the System does not meet Acceptance criteria within ninety (90) calendar days after Cutover, METRO shall have the option to: (h) request replacement hardware and/or software, as appropriate, be installed (up to and including the entire System if necessary to bring System into operational compliance); (i) delete the defective portion of the System from this Agreement in accordance with default provisions; (j) extend the Acceptance Period; or (k) terminate this Agreement in accordance with default provisions.
- h) METRO’s options shall remain in force until such time as the System meets all Project Acceptance test criteria as stated in this RFP and Proposer response document and is accepted or 180 calendar days after Cutover, whichever occurs first.

### **5.8 ESCALATION PLAN**

- a) Within ten (10) calendar days after contract execution, successful Proposer shall provide METRO with an escalation plan and procedure, including names, telephone numbers (office, home and pager) for all key project personnel, including Proposer project manager, project engineer and other relevant technical resources, appropriate local sales and management personnel, and corporate executive management, up to and including the President and CEO of the Proposer’s organization. This escalation plan shall detail the process, timing, and circumstances under which escalation shall be instituted by either Proposer field personnel or METRO.
- b) At *Cutover(s)* Proposer’s president and regional vice-president/general manager shall be available by phone or pager. Such contact numbers shall be made available to METRO no later than three days prior to cutover(s).

### **5.9 SYSTEM DOCUMENTATION**

- a) Within ten (10) days after *System Cutover* to PSTN, Proposer shall provide METRO with reproducible plans and other documentation accurately reflecting switching system and peripheral application system “*as-builts*.” Complete information concerning the System features and location/configuration/class-of-service, VLANs, IP subnets, User extensions, User location, User position, User button mappings, ACD groups, METRO main numbers and other relevant details will be presented to the METRO in hardcopy form (binder).

- b) Documentation must be presented in such a manner that METRO can, without physically auditing the telephone, ACD application, voice mail, stations, servers, gateways and other components of the system be able to determine the location and configuration of all System elements.
- c) Minimum documentation includes but is not limited to:
  - 1) Single-line/schematic drawing showing connectivity of all systems, peripherals, etc.
  - 2) Database print for all databases and configurations for all Proposer-provided systems.
  - 3) Spreadsheet of all User IDs and respective system termination port or address.
  - 4) User assignment spreadsheet with the following minimum information (Excel): Name, physical location, extension, type of phoneset, phoneset serial number, IDF cross-connect, class-of-service, group assignments, voice mailbox assignment, etc.

## **6.0 EQUIPMENT ITEMIZATION**

- a) Associated with this section, Proposer **MUST** provide a detailed, system equipment, installation labor, license and software breakdown for each system configuration proposed in the Schedule A section of this RFP.
- b) This line-item breakdown **MUST** include quantities, item designations, item description, unit cost and extended costs.
- c) The line-item equipment breakdown **MUST** include, by category, all switching system components, telephone station sets, auxiliary/peripheral equipment, software, voice processing, voice mail, fax and unified messaging, call accounting, ACD, call center, conferencing, battery back-up,, gateway, interconnect cables, and other cost related items included in your proposal.
- d) Minor, incidental materials such as mounting hardware, backboards and other misc. need not be itemized.
- e) When detailing ‘groups’ that include multiple items, provide a detailed itemization breakdown.
- f) The Proposer is responsible for providing all equipment, software, licenses and labor to support all applications described in this document.
- g) Schedule A information will be critical to validate inclusion of all necessary system components, compare system proposals and provide a basis for inventory of tangible deliverables.

## **7.0 PRICING**

Refer to attached spreadsheets in *Schedule A – COST ITEMIZATION*

### **7.1 PRICING BREAKOUT-OPTIONS**

- a) Provide options for *various levels* of professional services and/OR *Product Only* options for METRO’s consideration.
- b) The Metro is not interested in financing this project. Please do not offer lease options.

## **8.0 WARRANTY AND MAINTENANCE**

- a) Proposer warrants that the System, including all hardware, software, equipment, parts, materials and labor referenced herein shall, under normal use and service, be free from defects and faulty workmanship for a minimum of one (1) year from the date of Cutover (“*OEM Warranty Period*”).
- b) Proposer warrants and represents to METRO that the System shall function in accordance with all requirements of this RFP and the Proposer responses stipulating performance criteria and standards, and current specifications and descriptions published or disseminated by the System manufacturer as performance and/or operational “*practices*” with respect to each respective System as a whole as well as all individual components and/or applications of each System.
- c) Proposer (or the OEM Vendor) shall maintain an inventory, within 4 hours delivery time to METRO, for all components that are reasonably necessary to perform optimal service on the System for the duration of the Warranty Period and subsequent maintenance agreement periods.
- d) Prescribed inventory levels shall not be diminished. Removed parts shall be restocked within a contractually agreed time.



- e) Proposer shall maintain fully trained technical staff competent on all System hardware and software within fifty (50) miles of METRO for the life of the Warranty Period.
- f) The number of such fully trained and competent staff available from the specified locale shall be sufficient to provide the level of Service responsiveness and support committed to by Proposer herein.
- g) METRO shall be entitled to have its employees or agents make software additions, moves and changes to the database for the System and moves and changes to the System hardware provided herein (“Alterations”), and the successful Proposer shall be deemed to have given its consent thereto as long as all such Alterations are performed in accordance with the applicable portions of the System manufacturer’s and the successful Proposer’s practices, copies of which shall be provided to METRO by the successful Proposer prior to System Acceptance.
- h) Alterations to the system performed by METRO shall have no negative effect on the System Warranty or subsequent maintenance agreements, other than the successful Proposer’s ability to charge METRO a maintenance fee for any additions made that increase the successful Proposer’s requirement to service such additions. The maintenance fee charged for such additions shall be consistent with the fees charged for the same (or similar) equipment as described in the maintenance schedule included with the response to this RFP and shall be pro-rated as necessary to make charges co-terminus with existing Warranty or maintenance period. If no maintenance fee for similar equipment exists, METRO and the Successful Proposer shall mutually determine a fair and reasonable fee.
- i) If equipment additions are outside the realm of the successful Proposer’s expertise, inventorying, restocking, or servicing abilities, the successful Proposer shall have the option of not maintaining such equipment.
- j) Therefore, if these requirements require additional cost to METRO, then state these additional costs in your response. Merely replying “we do not provide this level of support, we offer depot service, there is a time & material cost to METRO, etc. is not permitted.
- k) Can the Proposer’s company support all “networking” equipment – hardware, software and professional services; to the extent that it is an integral part of the overall telephone system application?
- l) Does the OEM vendor offer system support if the successful Proposer is found to be “in-adequate”?

## **8.1 RESPONSE TO SYSTEM PROBLEMS**

Warranty service shall include Proposer and /or OEM response to System problems. Please itemize options for maintenance in Schedule A

### **8.1.1 Proposer Response to Maintenance Issues**

- a) Warranty service shall include Proposer and /or OEM response to System problems in the following manner:
- b) Service shall include all parts and labor, and be available twenty-four (24) hours per day, seven (7) days per week and with a four (4)-hour technical response for critical System components.
- c) Itemize one (1) year of 24X7X4 hour service to include on-site engineering for all critical system components including advanced hardware replacement (4 hour).
- d) Itemize one (1) year NBD (next business day) X 5 day a week hardware replacement for phonesets in this proposal as an option.
- e) State cost for additional years for up to the next five (5) years.

### **8.1.2 Service Response**

- a) Response to *Emergency Maintenance* calls shall not exceed four (4) hours response time and this is to include the time for hardware replacement (4-hour) and on-site technical assistance if needed (4-hour).
- b) “Response” shall mean METRO will indicate the problem device or issue and a service ticket will be started.
- c) Emergency maintenance shall be defined as follows:
  - 1) An entire physical location is down without dial tone.
  - 2) A main reception position is inoperative.
  - 3) A majority of trunks in a specific trunk group is inoperative including a main number.
  - 4) The entire system is inoperative.

- 5) The messaging system is inoperative.
  - 6) The voice processing system is inoperative.
  - 7) There are two or more system re-boots in a twenty-four hour period.
  - 8) Disruption in service to a single user of material nature. Material nature shall mean METRO's operations are critically affected.
- d) When a request for Emergency Service is received from METRO, Proposer agrees to dispatch qualified maintenance personnel, as required, to arrive at the affected METRO facility within two (4) hours of said request if not resolved by remote connection or telephone support.
  - e) If a declared Emergency condition is successfully corrected by Proposer within the 4-hour response period via remote diagnostic routines and no Proposer on-site presence is required to restore the System to proper performance levels, the 4-hour on-site response requirement shall be waived.
  - f) A "Request for Service" when an Emergency does not exist shall be deemed to be a request for "Routine Service."
  - g) When a request for *Routine Service* is received from METRO, Proposer agrees to cause qualified maintenance personnel, as required, to arrive at the affected METRO facility within the "next business day" of said request, 8:00 A.M. to 5:00 P.M. local time, Monday through Friday, excluding weekends and METRO holidays. If a routine service condition is successfully corrected by Proposer/OEM within the required response period via remote diagnostic routines and no Proposer on-site presence is required to restore the System to proper performance levels, the "next business day" on-site response requirement shall be waived.
  - h) In the event of a System Emergency, the Successful Proposer shall: (i) prioritize METRO's Emergency; (ii) escalate within the successful Proposer's technical and management organizations as necessary to resolve the Emergency; (iii) use its best efforts to correct the Emergency within four (4) hours from receipt of notice of such Emergency; and, (iv) maintain continuous effort until the Emergency is corrected to METRO's reasonable satisfaction.
  - i) In the event that any Emergency is not corrected by the Successful Proposer within twelve (12) hours from receipt of notice with respect thereto, the successful Proposer shall replace that portion of the System causing such Emergency with new items of equipment or software (meeting the requirements hereof) within twenty-four (24) hours from receipt of the notice with respect to such Emergency.
  - j) Proposer will provide a service escalation call list.
  - k) In the event that the successful Proposer elects to perform field repair on defective equipment and such repaired equipment continues to experience repeated failures adversely affecting the System, the successful Proposer shall, upon METRO's written request, replace such defective equipment rather than continuing to perform field repairs thereon.
  - l) If a problem reported to Proposer is determined by Proposer to be a common carrier or private carrier related problem, Proposer shall: (i) immediately notify appropriate METRO personnel and assist in the notification of the problem to the appropriate carrier; (ii) assist and work with METRO personnel to coordinate with carriers determined to be involved in the problem, including, if necessary, participation in on- and off-site system and circuit testing and meetings as may be required to resolve the problem in a timely manner; (iii) use its best efforts to assist METRO personnel in achieving timely resolution of the problem, including, if necessary, escalation within Proposer's and/or common carrier's or private carrier's technical and management organizations; and, (iv) be responsible, on a per-incident basis, for charges assessed METRO by a "carrier" due to Proposer's erroneous involvement of carrier personnel in a problem that is ultimately determined to be a System related problem. (v) Should the condition require that Proposer "re-boot" the system or performs any action that could lead to a system "re-boot" or any other adverse condition, Proposer shall first notify METRO's management and obtain permission before proceeding. This condition pertains to both "remote" and "on-site" conditions.

## **8.2 POST-WARRANTY MAINTENANCE**

### **8.2.1 Desired Maintenance Options**

- a) METRO understands that Proposers may offer different levels of post-warranty maintenance at different costs. Proposers are encouraged to submit pricing formulas for all available options, including fixed-cost multi-year programs.
- b) METRO is specifically interested in the post-Warranty maintenance options described below.

- 1) 24-hour per day X 7-days per week X 4-Hour maintenance for critical system components w/ hardware replacement and on-site engineering services (4-hour).
- 2) 8 hours per day X 7 -days per week X NBD (next business day) response time for non-critical components such as phonesets.

### **8.2.2 Maintenance Process**

Confirm that the Proposer will provide itemized maintenance invoices for the global environment.

- a) Describe the process for reporting and clearing a service call.
- b) Describe Proposer technicians' escalation procedure for unresolved problems.
- c) Describe your firm's "Service-Level Measur-ables," the qualitative and quantitative service criteria and performance standards by which METRO satisfaction is measured.

### **8.2.3 Parts**

Can the Proposer assure that authorized service and replacement parts for all system elements will be available from the manufacturer and, or Proposer for a period of at least ten (10) years following initial System Cutover?

### **8.2.4 Disaster Recovery**

Describe your disaster-recovery methodologies and options should there be a "catastrophic event" at a METRO site regarding the overall network communication systems.

### **8.2.5 Software Updates and Patches**

- 1) METRO shall be notified of any improved or updated software releases when issued by the manufacturers of any products/equipment provided by Proposer. METRO shall be offered these updates in a timely manner and at a cost not to exceed that charged to other METRO's with similar size and type systems.
- 2) What is the process for installing Microsoft patches when they are released? Explain how your organization promptly gets patches approved for installation and how is the METRO notified of new patches.
- 3) Software "*Patches and Fixes*" required to correct any operational problems prohibiting the system from functioning as designed and/or as described in this RFP, the proposal and/or any subsequent contractual agreement (whichever function is more advantageous to METRO) shall be provided to METRO in a timely manner, at no cost to METRO for up to 5 years. "*Timely manner*" in this context shall be defined as that time frame, the specific nature of which shall be dependent on system impact and shall be negotiated with Proposer, but under no circumstances shall be longer than thirty (30) calendar days from date of METRO's notification to Proposer of a problem that qualifies under this provision.

## **8.3 LONG-TERM SUPPORT**

Since this project is a part of the METRO's "Modernization" program that continues through 2010, the METRO is seeking proposers who can demonstrate they have the capacity and viability to provide both project and long-term support.

### **8.3.1 PROPOSER'S BASE CUSTOMER**

Describe the Proposers typical customer base.

### **8.3.2 Repair Facilities**

- a) Do you have a maintenance/repair "laboratory" with the system makes/models that you support, where technicians can attempt to "duplicate" a customer problem on your laboratory system?
- b) Provide information about your headquarters and local facilities.

c) Where is the local Proposer's technical location and how many full-time staff are associated with this site?

**8.3.3 Service Authorization**

Are all proposed system(s) manufactured by the Proposer? What service authorizations does the Proposer have from the manufacturer of the proposed solution?

**8.3.4 OEM Partnership**

Define the level of partnership between the Proposer and the OEM manufacturer(s).

**8.3.5 Level of Support**

Describe the level-of-support and ability to provide a complete system, including the number of Proposer's technicians are certified to technically support the system(s) under a maintenance agreement.

**8.3.6 Local Presence**

- 1) Do you plan to install and support this RFP project using your company resources, or subcontract for any or all of the installation and support? If any other unlisted outsource/partner arrangement, please explain in detail.
- 2) How many years have you supported the greater Santa Cruz area as a reseller of this technology?

**9.0 REFERENCES**

Provide three (3) customer references with a minimum project size of over 100 IP telephones in a multi-location configuration, with the same or approximate configuration of that of the desired system herein. Proposer may contact each reference prior to ensure she/he is available for reference verification purposes and the telephone number is correct.

**Reference Number 1**

Customer Name, Contact and Phone Number	
Contact E-mail address	
Date System Installed	
System Model, line size and Software Release	
Voice Messaging and Software Release. Number of Ports	
Data Network Equipment	
Number and Type Phone Station	
Number of ACD Agents	

**Reference Number 2**

Customer Name, Contact and Phone Number	
Contact E-mail address	
Date System Installed	
System Model, line size and Software Release	
Voice Messaging and Software Release. Number of Ports	
Data Network Equipment	

Number and Type Phone Station	
Number of ACD Agents	

**Reference Number 3**

Customer Name, Contact and Phone Number	
Contact E-mail address	
Date System Installed	
System Model, line size and Software Release	
Voice Messaging and Software Release. Number of Ports	
Data Network Equipment	
Number and Type Phone Station	
Number of ACD Agents	

## **PART IV**

### **GENERAL CONDITIONS TO THE CONTRACT**

#### **1. GENERAL PROVISIONS**

##### **1.01 Governing Law & Compliance with All Laws**

This Contract is governed by and construed in accordance with the laws of California. Each party will perform its obligations hereunder in accordance with all applicable laws, rules, and regulations now or hereafter in effect. Contractor shall ensure throughout the terms of this Agreement that all federal, state and local laws and requirements are met including any requirements METRO is obligated to perform because of receipt of grant funding. Contractor shall also be required to fulfill its obligation as a federal and/or state and/or local sub-recipient of grant funding.

##### **1.02 Right to Modify Contract**

METRO may extend the term of this Contract, expand the Scope of Work, or otherwise amend the Contract. Any such extension, expansion or amendment shall be effective only upon written agreement of the parties in accordance with Section 13.14.

#### **2. TERMINATION**

##### **2.01 Termination for Convenience**

2.01.01 The performance of Work under this Contract may be terminated by METRO upon fifteen (15) days' notice at any time without cause for any reason in whole or in part, whenever METRO determines that such termination is in METRO's best interest.

2.01.02 Upon receipt of a notice of termination, and except as otherwise directed by METRO, the Contractor shall: (1) stop work under the Contract on the date and to the extent specified in the notice of termination; (2) place no further orders or subcontracts for materials, services, or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated; (3) terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the notice of termination; (4) assign to METRO in the manner, at the time, and to the extent directed by METRO all of the rights, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case METRO shall have the right, at its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts; (5) settle all outstanding liabilities and claims arising out of such termination or orders and subcontracts, with the approval or ratification of METRO, to the extent METRO may require, which approval or ratification shall be final for all the purposes of this clause; (6) transfer title to METRO and deliver in the manner, at the time, and to the extent, if any, directed by METRO the fabricated or unfabricated parts, work in progress, completed work, supplies and other material produced as a part of, or acquired in connection with the performance of, the work terminated and the completed or partially completed plans, drawings, information and other property which, if the Contract had been completed, would have been required to be furnished to METRO; (7) use its best efforts to sell, in the manner, at the time, to the extent, and at the price(s) directed or authorized by METRO, any property of the types referred to above provided, however, that the Contract shall not be required to extend credit to any purchaser, and may acquire any such property under the conditions prescribed by and at a price(s) approved by METRO, and provided further, that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made to METRO to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work covered by this Contract or paid in such other manner as METRO may direct; (8) complete performance of such part of the Work as

shall not have been terminated by the notice of termination; and (9) take such action as may be necessary, or as METRO may direct, for the protection or preservation of the property related to this Contract which is in the possession of the Contractor and in which METRO has or may acquire an interest.

## 2.02 Termination for Default

2.02.01 METRO may, upon written notice of default to the Contractor, terminate the whole or any part of this Contract if the Contractor: (1) fails to complete the Scope of Work within time period stated in the Specifications section of the IFB; (2) fails to perform any of the other provisions of the Contract; or (3) fails to make progress as to endanger performance of this Contract in accordance with its provisions.

2.02.02 If the Contract is terminated in whole or in part for default, METRO may procure, upon such terms and in such manner as METRO may deem appropriate, supplies or services similar to those so terminated. Without limitation to any other remedy available to METRO, the Contractor shall be liable to METRO for any excess costs for such similar supplies or services, and shall continue the performance of this Contract to the extent not terminated under the provisions of this clause.

2.02.03 If, after notice of termination of this Contract under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the default was excusable under the provisions of this clause, the rights and obligations of Contractor and METRO shall be considered to have been terminated pursuant to termination for convenience of METRO pursuant to Article 2.01 from the date of Notification of Default.

## 2.03 No Limitation

The rights and remedies of METRO provided in this Article 2 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

## 3. FORCE MAJEURE

### 3.01 General

Neither party hereto shall be deemed to be in default of any provision of this Contract, or for any failure in performance, resulting from acts or events beyond the reasonable control of such party. For purposes of this Contract, such acts shall include, but not be limited to, acts of God, civil or military authority, civil disturbance, war, strikes, fires, other catastrophes, or other "force majeure" events beyond the parties' reasonable control; provided, however, that the provisions of this Section 3 shall not preclude METRO from canceling or terminating this Contract (or any order for any product included herein), as otherwise permitted hereunder, regardless of any force majeure event occurring to Contractor.

### 3.02 Notification by Contractor

Contractor shall notify METRO in writing as soon as Contractor knows, or should reasonably know, that a force majeure event (as defined in Section 3.01) has occurred that will delay completion of the Scope of Work. Said notification shall include reasonable proofs required by METRO to evaluate any Contractor request for relief under this Article 3. METRO shall examine Contractor's notification and determine if the Contractor is entitled to relief. METRO shall notify the Contractor of its decision in writing. METRO's decision regarding whether or not the Contractor is entitled to force majeure relief shall be final and binding on the parties.

### 3.03 Losses

Contractor is not entitled to damages, compensation, or reimbursement from METRO for losses resulting from any "force majeure" event.

#### 4. PROFESSIONAL STANDARDS

Contractor shall at all times during the term of this Contract possess the technical ability, experience, financial ability, overall expertise, and all other skills, licenses, and resources necessary to perform and complete the scope of work in a timely, professional manner so as to meet or exceed the provisions of this Contract.

#### 5. PROFESSIONAL RELATIONS

##### 5.01 Independent Contractor

No relationship of employer and employee is created by this Contract. In the performance of its work and duties, Contractor is at all times acting and performing as an independent contractor in the practice of its profession. METRO shall neither have nor exercise control or direction over the methods by which Contractor performs services pursuant to this Contract (including, without limitation, its officers, shareholders, and employees); provided, however, that Contractor agrees that all work performed pursuant to this Contract shall be in strict accordance with currently approved methods and practices in its profession, and in accordance with this Contract. The sole interest of METRO is to ensure that such services are performed and rendered in a competent and cost effective manner.

##### 5.02 Benefits

Contractor (including, without limitation, its officers, shareholders, subcontractors and employees) has no claim under this Contract or otherwise against METRO for social security benefits, workers' compensation benefits, disability benefits, unemployment benefits, vacation pay, sick leave, or any other employee benefit of any kind.

#### 6. INDEMNIFICATION FOR DAMAGES, TAXES AND CONTRIBUTIONS

##### 6.01 Scope

Contractor shall exonerate, indemnify, defend, and hold harmless METRO (which for the purpose of Articles 6 and 7 shall include, without limitation, its officers, agents, employees and volunteers) from and against:

6.01.01 Any and all claims, demands, losses, damages, defense costs, or liability of any kind or nature which METRO may sustain or incur or which may be imposed upon it for injury to or death of persons, or damage to property as a result of, or arising out of, or in any manner connected with the Contractor's negligence, recklessness or willful misconduct under the provisions of this Contract. Such indemnification includes any damage to the person(s) or property (ies) of Contractor and third persons.

6.01.02 Any and all Federal, state and local taxes, charges, fees, or contributions required to be paid with respect to Contractor, Contractor's officers, employees and agents engaged in the performance of this Contract (including, without limitation, unemployment insurance, social security, and payroll tax withholding).

#### 7. INSURANCE

##### 7.01 General

Contractor, at its sole cost and expense, for the full term of this Contract (and any extensions thereof), shall obtain and maintain at minimum all of the following insurance coverage. Such insurance coverage shall be primary coverage as respects METRO and any insurance or self-insurance maintained by METRO shall be excess of Contractor's insurance coverage and shall not contribute to it.



## 7.02 Types of Insurance and Minimum Limits

Contractor shall obtain and maintain during the term of this Contract:

- (1) Worker's Compensation and Employer's Liability Insurance in conformance with the laws of the State of California (not required for Contractor's subcontractors having no employees).
- (2) Contractor's vehicles used in the performance of this Contract, including owned, non-owned (e.g. owned by Contractor's employees), leased or hired vehicles, shall each be covered with Automobile Liability Insurance in the minimum amount of \$1,000,000.00 combined single limit per accident for bodily injury and property damage.
- (3) Contractor shall obtain and maintain Comprehensive General Liability Insurance coverage in the minimum amount of \$1,000,000.00 combined single limit, including bodily injury, personal injury, and property damage. Such insurance coverage shall include, without limitation:
  - (a) Contractual liability coverage adequate to meet the Contractor's indemnification obligations under this contract.
  - (a) Full Personal Injury coverage.
  - (a) Broad form Property Damage coverage.
  - (a) A cross-liability clause in favor of METRO.
- (4) Contractor shall obtain and maintain Professional Liability Insurance coverage in the minimum amount of \$1,000,000.00.

## 7.03 Other Insurance Provisions

- (1) As to all insurance coverage required herein, any deductible or self-insured retention exceeding \$5,000.00 shall be disclosed to and be subject to written approval by METRO.
- (2) If any insurance coverage required hereunder is provided on a "claims made" rather than "occurrence" form, Contractor shall maintain such insurance coverage for three (3) years after expiration of the term (and any extensions) of this Contract.
- (3) All required Automobile Liability Insurance and Comprehensive or Commercial General Liability Insurance shall contain the following endorsement as a part of each policy: "The Santa Cruz Metropolitan Transit District is hereby added as an additional insured as respects the operations of the named insured."
- (4) All the insurance required herein shall contain the following clause: "It is agreed that this insurance shall not be canceled until thirty (30) days after METRO shall have been given written notice of such cancellation or reduction."
- (5) Contractor shall notify METRO in writing at least thirty (30) days in advance of any reduction in any insurance policy required under this Contract.
- (6) Contractor agrees to provide METRO at or before the effective date of this Contract with a certificate of insurance of the coverage required.
- (6) All insurance shall be obtained from brokers or carriers authorized to transact business in California and are satisfactory to METRO.

## 8. SINGLE PROPOSAL

If only one proposal is received in response to the RFP, Offeror may be required to submit to METRO within five (5) days of METRO demand, a detailed cost proposal. METRO may conduct a cost or price analysis of the cost proposal to determine if the proposal price(s) are fair and reasonable. Offeror shall cooperate with METRO in compiling and submitting detailed information for the cost and price analysis.

## 9. NO DISCRIMINATION

The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or, sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as recipient deems appropriate.

## 10. DISADVANTAGED BUSINESS ENTERPRISES

The Board of Directors of the Santa Cruz Metropolitan Transit District has adopted a Disadvantaged Business Enterprise Policy to promote the participation of disadvantaged business enterprises (DBE's) in all areas of METRO contracting to the maximum extent practicable. Consistent with the DBE Policy, the Contractor shall take all necessary and reasonable steps to ensure that DBE firms have the maximum practicable opportunity to participate in the performance of this project and any subcontracting opportunities thereof.

### I. PROMPT PAYMENT

#### 11.01 Prompt Progress Payment to Subcontractors

The prime contractor or subcontractor shall pay to any subcontractor not later than 10-days of receipt of each progress payment, in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The 10-days is applicable unless a longer period is agreed to in writing. Any delay or postponement of payment over 30-days may take place only for good cause and with METRO's prior written approval. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanctions, and other remedies of that Section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance, and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

#### A. Prompt Payment of Withheld Funds to Subcontractors

METRO shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by METRO of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by METRO. Any delay or postponement of payment may take place only for good cause and with METRO's prior written approval. Any violation of these provisions shall subject the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of: a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance; and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

Prime subcontractors must include the prompt payment language of paragraph 1 in all subcontracts, regardless of subcontractor's DBE status. Failure of a prime contractor to uphold prompt payment requirements for subcontractors will result in METRO withholding reimbursement for completed work.

## 12. RESERVED

## 13. MISCELLANEOUS PROVISIONS

### 13.01 Successors and Assigns

The Contract shall inure to the benefit of, and be binding upon, the respective successors and assigns, if any, of the parties hereto, except that nothing contained in this Article shall be construed to permit any attempted assignment which would be unauthorized or void pursuant to any other provision of this Contract.

### 13.02 Survival of Rights and Obligations

In the event of termination, the rights and obligations of the parties which by their nature survive termination of the services covered by this Contract shall remain in full force and effect after termination. Compensation and revenues due from one party to the other under this Contract shall be paid; loaned equipment and material shall be returned to their respective owners; the duty to maintain and allow inspection of books, accounts, records and data shall be extended as provided in Section 13.15; and the hold harmless agreement contained in Article 6 shall survive.

### 13.03 Limitation on METRO Liability

METRO's liability is, in the aggregate, limited to the total amount payable under this Contract.

### 13.04 Drug and Alcohol Policy

Contractor shall not use, possess, manufacture, or distribute alcohol or illegal drugs during the performance of the Contract or while on METRO premises or distribute same to METRO employees.

### 13.05 Publicity

Contractor agrees to submit to METRO all advertising, sales promotion, and other public matter relating to any service furnished by Contractor wherein METRO's name is mentioned or language used from which the connection of METRO's name therewith may, within reason, be inferred or implied. Contractor further agrees not to publish or use any such advertising, sales promotion or publicity matter without the prior written consent of METRO.

### 13.06 Consent to Breach Not Waiver

No provision hereof shall be deemed waived and no breach excused, unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented. Any consent by any party to, or waiver of, a breach by the other, whether express or implied, shall not constitute a consent to, waiver of, or excuse for any other different or subsequent breach.

### 13.07 Attorneys' Fees

In the event that suit is brought to enforce or interpret any part of this Contract, the prevailing party shall be entitled to recover as an element of its costs of suit, and not as damages, a reasonable attorney's fee to be fixed by the court. The "prevailing party" shall be the party who is entitled to recover its costs of suit, whether or not the suit proceeds to final judgment. A party not entitled to recover its costs shall not recover attorney's fees. No sum for attorney's fees shall be counted in calculating the amount of a judgment for purposes of determining whether a party is entitled to recover its costs or attorney's fees.

### 13.08 No Conflict of Interest

Contractor represents that it currently has no interest, and shall not have any interest, direct or indirect, that would conflict in any manner with the performance of services required under this Contract.

13.09 Prohibition of Discrimination against Qualified Handicapped Persons

Contractor shall comply with the provisions of Section 504 of the Rehabilitation Act of 1973, as amended, pertaining to the prohibition of discrimination against qualified handicapped persons in federally-assisted programs.

13.10 Cal OSHA/Hazardous Substances

13.10.01 Contractor shall comply with California Administrative Code Title 8, Section 5194, and shall directly (1) inform its employees of the hazardous substances they may be exposed to while performing their work on METRO property, (2) ensure that its employees take appropriate protective measures, and (3) provide METRO's Manager of Facility Maintenance with a Material Safety Data Sheet (MSDS) for all hazardous substances to be used on METRO property.

13.10.02 Contractor shall comply with Cal OSHA regulations and the Hazardous Substance Training and Information Act. Further, said parties shall indemnify METRO against any and all damage, loss, and injury resulting from non-compliance with this Article.

13.10.03 Contractor will comply with the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) California Health and Safety Code Section 25249.5 - 25249.13. Contractor will ensure that clear and reasonable warnings are made to persons exposed to those chemicals listed by the State of California as being known to cause cancer or reproductive toxicity.

13.10.04 Contractor shall be solely responsible for any hazardous material, substance or chemical released or threatened release caused or contributed to by Contractor. Contractor shall be solely responsible for all clean-up efforts and costs.

13.11 Non-Assignment of Contract

The Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of the Contract or Contractor's right, title or interest in or to the same or any part thereof without previous written consent by METRO; and any such action by Contractor without METRO's previous written consent shall be void.

13.12 No Subcontract

Contractor shall not subcontract or permit anyone other than Contractor or its authorized staff and subcontractors to perform any of the scope of work, services or other performance required of Contractor under this Contract without the prior written consent of METRO. Any such action by Contractor without METRO's previous consent shall be void.

13.13 Severability

If any provision of this Contract is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall continue in full force and effect, and shall in no way be affected, impaired or invalidated.

13.14 All Amendments in Writing

No amendment to this Contract shall be effective unless it is in writing and signed by duly authorized representatives of both parties.

13.15 Audit

This Contract is subject to audit by Federal, State, or METRO personnel or their representatives at no cost for a period of four (4) years after the date of expiration or termination of the Contract. Requests for audits shall be made in writing, and Contractor shall respond with all information requested within ten (10) calendar days of the date of the request. During the four-year period that the Contract is subject to audit, Contractor shall maintain detailed records substantiating all costs and expenses billed against the Contract.

13.16 Smoking Prohibited

Contractor, its employees and agents shall not smoke in any enclosed area on METRO premises or in a METRO vehicle.

13.17 Responsibility for Equipment

13.17.01 METRO shall not be responsible nor held liable for any damage to person or property consequent upon the use, or misuse, or failure of any equipment used by Contractor, or any of its employees, even though such equipment be furnished, rented or loaned to Contractor by METRO.

13.17.02 Contractor is responsible to return to METRO in good condition any equipment, including keys, issued to it by METRO pursuant to this Agreement. If the contractor fails or refuses to return METRO-issued equipment within five days of the conclusion of the contract work METRO shall deduct the actual costs to repair or replace the equipment not returned from the final payment owed to contractor or take other appropriate legal action at the discretion of METRO.

13.18 Grant Contracts

13.18.01 Contractor shall ensure throughout the terms of this Agreement that all federal, state and local laws and requirements are met including any requirements METRO is obligated to perform because of receipt of grant funding. Contractor shall also be required to fulfill its obligation as a federal and/or state and/or local sub-recipient of grant funding.

13.19 Time of the Essence

13.19.01 Time is of the essence in this Contract

## PART V

### CONTRACT FOR VOIP TELEPHONE SYSTEM (09-07)

THIS CONTRACT is made effective on \_\_\_\_\_, 2009 between the SANTA CRUZ METROPOLITAN TRANSIT DISTRICT, a political subdivision of the State of California ("METRO"), and \_\_\_\_\_ ("Contractor").

#### 1. RECITALS

##### 1.01 METRO's Primary Objective

METRO is a public entity whose primary objective is providing public transportation and has its principal office at 370 Encinal Street, Suite 100, Santa Cruz, California 95060.

##### 1.02 METRO's Need for VOIP Telephone System

METRO has the need for VOIP Telephone System. In order to obtain these services, METRO issued a Request for Proposals, dated December 24, 2008, setting forth specifications for such services. The Request for Proposals is attached hereto and incorporated herein by reference as Exhibit "A".

##### 1.03 Contractor's Proposal

Contractor is a firm/individual qualified to provide VOIP Telephone System and whose principal place of business is \_\_\_\_\_. Pursuant to the Request for Proposals by METRO, Contractor submitted a proposal for VOIP Telephone System, which is attached hereto and incorporated herein by reference as Exhibit "B."

##### 1.04 Selection of Contractor and Intent of Contract

On \_\_\_\_\_, METRO selected Contractor as the offeror whose proposal was most advantageous to METRO, to provide the VOIP Telephone System described herein. This Contract is intended to fix the provisions of these services.

METRO and Contractor agree as follows:

#### 2. INCORPORATED DOCUMENTS AND APPLICABLE LAW

##### 2.01 Documents Incorporated in this Contract

The documents below are attached to this Contract and by reference made a part hereof. This is an integrated Contract. This writing constitutes the final expression of the parties' contract, and it is a complete and exclusive statement of the provisions of that Contract, except for written amendments, if any, made after the date of this Contract in accordance with Section 13.14.

##### A. Exhibit "A"

Santa Cruz Metropolitan Transit District's "Request for Proposals" dated December 24, 2008

##### B. Exhibit "B" (Contractor's Proposal)

Contractor's Proposal to METRO for VOIP Telephone System, signed by Contractor and dated January 28, 2009.

2.02 Conflicts

Where in conflict, the provisions of this writing supersede those of the above-referenced documents, Exhibits "A" and "B". Where in conflict, the provisions of Exhibit "A" supercede Exhibit "B".

2.03 Recitals

The Recitals set forth in Article 1 are part of this Contract.

3. DEFINITIONS

3.01 General

The terms below (or pronouns in place of them) have the following meaning in the contract:

3.01.01 CONTRACT - The Contract consists of this document, the attachments incorporated herein in accordance with Article 2, and any written amendments made in accordance with Section 13.14.

3.01.02 CONTRACTOR - The Contractor selected by METRO for this project in accordance with the Request for Proposals issued December 24, 2008.

3.01.03 CONTRACTOR'S STAFF - Employees of Contractor.

3.01.04 DAYS - Calendar days.

3.01.05 OFFEROR - Contractor whose proposal was accepted under the terms and conditions of the Request for Proposals issued December 24, 2008.

3.01.06 PROVISION - Any term, agreement, covenant, condition, clause, qualification, restriction, reservation, or other stipulation in the contract that defines or otherwise controls, establishes, or limits the performance required or permitted by either party.

3.01.07 SCOPE OF WORK (OR "WORK") - The entire obligation under the Contract, including, without limitation, all labor, equipment, materials, supplies, transportation, services, and other work products and expenses, express or implied, in the Contract.

4. TIME OF PERFORMANCE

4.01 Term

The term of this Contract will be for a period not to exceed one (1) year and shall commence upon the issuance of the contract by METRO.

At the option of METRO, this contract agreement may be renewed for four (4) additional one (1) year terms upon mutual written consent.

5. COMPENSATION

5.01 Terms of Payment

METRO shall compensate Contractor in an amount not to exceed the amounts/rates agreed upon by METRO. METRO shall reasonably determine whether work has been successfully performed for purposes of payment. Compensation shall be made within thirty (30) days of METRO written approval of

Contractor's written invoice for said work. Contractor understands and agrees that if he/she exceeds the \$\_\_\_\_\_ maximum amount payable under this contract, that it does so at its own risk.

5.02 Invoices

Contractor shall submit invoices with a purchase order number provided by METRO on a monthly basis. Contractor's invoices shall include detailed records showing actual time devoted, work accomplished, date work accomplished, personnel used, and amount billed per hour. Expenses shall only be billed if allowed under the Contract. Telephone call expenses shall show the nature of the call and identify location and individual called. Said invoice records shall be kept up-to-date at all times and shall be available for inspection by METRO (or any grantor of METRO, including, without limitation, any State or Federal agency providing project funding or reimbursement) at any time for any reason upon demand for not less than four (4) years after the date of expiration or termination of the Contract. Under penalty of law, Contractor represents that all amounts billed to METRO are (1) actually incurred; (2) reasonable in amount; (3) related to this Contract; and (4) necessary for performance of the project.

6. NOTICES

All notices under this Contract shall be deemed duly given upon delivery, if delivered by hand; or three (3) days after posting, if sent by registered mail, receipt requested; to a party hereto at the address hereinunder set forth or to such other address as a party may designate by notice pursuant hereto.

METRO

Santa Cruz Metropolitan Transit District  
370 Encinal Street  
Suite 100  
Santa Cruz, CA 95060  
Attention: General Manager

CONTRACTOR

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attention: \_\_\_\_\_



7. AUTHORITY

Each party has full power and authority to enter into and perform this Contract and the person signing this Contract on behalf of each has been properly authorized and empowered to enter into this Contract. Each party further acknowledges that it has read this Contract, understands it, and agrees to be bound by it.

Signed on \_\_\_\_\_

METRO - SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

\_\_\_\_\_  
Leslie R. White  
General Manager

CONTRACTOR -

By \_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
Margaret Rose Gallagher  
District Counsel

## **PART VI**

### **FEDERAL TRANSIT ADMINISTRATION REQUIREMENTS FOR NON-CONSTRUCTION CONTRACTS**

#### **1.0 GENERAL**

This Contract is subject to the terms of a financial assistance contract between the Santa Cruz Metropolitan Transit District and the Federal Transit Administration (FTA) of the United States Department of Transportation.

#### **2.0 INTEREST TO MEMBERS OF OR DELEGATES TO CONGRESS**

In accordance with 18 U.S.C. 431, no member of, nor delegates to, the Congress of the United States shall be admitted to a share or part of this Contract or to any benefit arising therefrom.

#### **3.0 INELIGIBLE CONTRACTORS**

Neither Contractor, subcontractor, nor any officer or controlling interest holder of Contractor or subcontractor, is currently, or has been previously, on any debarred bidders list maintained by the United States Government.

#### **4.0 EQUAL EMPLOYMENT OPPORTUNITY (Not applicable to contracts for standard commercial supplies and raw materials)**

In connection with the execution of this Contract, the Contractor shall not discriminate against any employee or application for employment because of race, religion, color, sex, age (40 or over), national origin, pregnancy, ancestry, marital status, medical condition, physical handicap, sexual orientation, or citizenship status. The Contractor shall take affirmative action to insure that applicants employed and that employees are treated during their employment, without regard to their race, religion, color, sex national origin, etc. Such actions shall include, but not be limited to the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and, selection for training including apprenticeship. Contractor further agrees to insert a similar provision in all subcontracts, except subcontracts for standard commercial supplies or raw materials.

#### **5.0 TITLE VI CIVIL RIGHTS ACT OF 1964**

During the performance of this Contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor"), agrees as follows:

##### **5.1 Compliance with Regulations**

The Contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this Contract.

##### **5.2 Nondiscrimination**

The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, religion, color, sex, age or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited in Section 21.5 of the Regulations, including employment practices when the Contract covers a program set forth in Appendix B of the regulations.

### 5.3 Solicitations for Subcontracts, Including Procurements of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, religion, color, sex, age or national origin.

### 5.4 Information and Reports

The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by METRO or the Federal Transit Administration (FTA) to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information is required or a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to METRO, or the Federal Transit Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.

### 5.5 Sanctions for Noncompliance

In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, METRO shall impose such contract sanctions as it or the Federal Transit Administration may determine to be appropriate, including, but not limited to:

- (a) Withholding of payments to the Contractor under the Contract until the Contractor complies; and/or,
- (b) Cancellation, termination or suspension of the Contract, in whole or in part.

### 5.6 Incorporation of Provisions

The Contractor shall include the provisions of Paragraphs (1) through (6) of this section in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as METRO or the Federal Transit Administration may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may require METRO to enter into such litigation to protect the interests of METRO, and, in addition, the Contractor may request the services of the Attorney General in such litigation to protect the interests of the United States.

## 6.0 CLEAN AIR AND FEDERAL WATER POLLUTION CONTROL ACTS (Applicable only to contracts in excess of \$100,000)

Contractor shall comply with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 USC 1857[h]), Section 508 of the Clean Water Act (33 USC 1368), Executive Order 11738, and Environmental Protection Agency Regulations (40 CFR, Part 15), which prohibit the use under non-exempt Federal contracts, grants or loans of facilities included on the EPA List of Violating Facilities. Contractor shall report all violations to FTA and to the USEPA Assistant Administrator for Enforcement (EN0329).

## 7.0 CONSERVATION

Contractor shall recognize mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 USC Section 6321, et seq.).

## 8.0 AUDIT AND INSPECTION OF RECORDS (Applicable only to sole source or negotiated contracts in excess of \$10,000)

Contractor agrees that METRO, the Comptroller General of the United States, or any of their duly authorized representatives shall, for the purpose of audit and examination, be permitted to inspect all work, materials, payrolls and other data and records with regard to the project, and to audit the books, records and accounts with regard to the project. Further, Contractor agrees to maintain all required records for at least three years after METRO makes final payments and all other pending matters are closed.

## 9.0 LABOR PROVISIONS (Applicable only to contracts of \$2,500.00 or more that involve the employment of mechanics or laborers)

### 9.1 Overtime Requirements

No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any work week in which he or she is employed on such work to work in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half (1 1/2) times the basic rate of pay for all hours worked in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in such work week, whichever is greater.

### 9.2 Violation; Liability for Unpaid Wages; Liquidated Damages

In the event of any violation of the clause set forth in subparagraph (b)(1) of 29 CFR Section 5.5, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for METRO of Columbia or a territory, to such district or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (b)(1) of which such individual was required or permitted to work in excess of eight (8) hours in excess of the standard work week of forty (40) hours without payment of the overtime wages required by the clause set forth in subparagraph (b)(1) of 29 CFR Section 5.5.

### 9.3 Withholding for Unpaid Wages and Liquidated Damages

DOT or METRO shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b)(2) of 29 CFR Section 5.5.

### 9.4 Nonconstruction Grants

The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three (3) years from the completion of

the Contract for all laborers and mechanics, including guards and watchmen, working on the Contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made and actual wages paid. Further, METRO shall require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the Contractor or subcontractor for inspection, copying or transcription by authorized representatives of DOT and the Department of Labor, and the Contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

#### 9.5 Subcontracts

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (5) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (5) of this paragraph.

#### 10.0 CARGO PREFERENCE (Applicable only to Contracts under which equipment, materials or commodities may be transported by ocean vehicle in carrying out the project)

The Contractor agrees:

- 10.1 To utilize privately owned United States-flag commercial vessels to ship at least fifty percent (50%) of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners and tankers) involved, whenever shipping any equipment, materials or commodities pursuant to this section, to the extent such vessels are available at fair and reasonable rates for United States- flag commercial vessels.
- 10.2 To furnish within 30 days following the date of loading for shipments originating within the United States, or within thirty (30) working days following the date of loading for shipment originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) above, to METRO (through the prime Contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, 400 Seventh Street, S.W., Washington D. C. 20590, marked with appropriate identification of the project.
- 10.3 To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this Contract.

#### 11.0 BUY AMERICA PROVISION

This procurement is subject to the Federal Transportation Administration Buy America Requirements in 49 CFR 661. A Buy America Certificate, if required format (see Form of Proposal or Bid Form) must be completed and submitted with the proposal. A proposal that does not include the certificate shall be considered non-responsive. A waiver from the Buy America Provision may be sought by METRO if grounds for the waiver exist. Section 165a of the Surface Transportation Act of 1982 permits FTA participation on this Contract only if steel and manufactured products used in the Contract are produced in the United States. In order for rolling stock to qualify as a domestic end product, the cost of components produced in the United States must exceed sixty percent (60%) of the cost of all components, and final assembly must take place in the United States.

## 12.0 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

### 12.1 Policy

It is the policy of the U.S. Department of Transportation that Disadvantaged Business Enterprises as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this Agreement. Consequently, the DBE requirements of 49 CFR Part 26 apply to this Agreement.

### 12.2 DBE Obligation

METRO and Contractor agree to insure that Disadvantaged Business Enterprises as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts and subcontracts under this Agreement. In this regard, METRO and Contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to insure that Disadvantaged Business Enterprises have the maximum opportunity to compete for and perform Contracts. METRO and Contractor shall not discriminate on the basis of race, creed, color, national origin, age or sex in the award and performance of DOT-assisted Contracts.

### 12.3 Transit Vehicle Manufacturers

Transit vehicle manufacturers must certify compliance with DBE regulations.

## 13.0 CONFLICT OF INTEREST

No employee, officer or agent of METRO shall participate in selection, or in the award or administration of a contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when (1) the employee, officer or agent; (2) any member of his or her immediate family; (3) his or her partner; or (4) an organization that employs, or is about to employ, has a financial or other interest in the firm selected for award. METRO's officers, employees or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractors, potential Contractors or parties of sub agreements.

## 14.0 MOTOR VEHICLE EMISSION REQUIREMENTS (Applicable only to Contracts involving the purchase of new motor vehicles)

The Contractor must provide a certification that:

- (a) The horsepower of the vehicle is adequate for the speed, range, and terrain in which it will be required and also to meet the demands of all auxiliary equipment.
- (b) All gases and vapors emanating from the crankcase of a spark-ignition engine are controlled to minimize their escape into the atmosphere.
- (c) Visible emission from the exhaust will not exceed No. 1 on the Ringlemann Scale when measured six inches (6") from the tail pipe with the vehicle in steady operation.
- (d) When the vehicle has been idled for three (3) minutes and then accelerated to eighty percent (80%) of rated speed under load, the opacity of the exhaust will not exceed No. 2 on the Ringlemann Scale for more than five (5) seconds, and not more than No. 1 on the Ringlemann Scale thereafter.

## 15.0 MOTOR VEHICLE SAFETY STANDARDS (Applicable only to contracts involving the purchase of new motor vehicles)

The Contractor will assure that the motor vehicles purchased under this contract will comply with the Motor Vehicle Safety Standards as established by the Department of Transportation at 49 CFR Parts 390 and 571.

## 16.0 DEBARRED BIDDERS

The Contractor, including any of its officers or holders of a controlling interest, is obligated to inform METRO whether or not it is or has been on any debarred bidders' list maintained by the United States Government. Should the Contractor be included on such a list during the performance of this project, Contractor shall so inform METRO.

## 17.0 PRIVACY (Applicable only to Contracts involving the administration of any system of records as defined by the Privacy Act of 1974, on behalf of the Federal Government)

### 17.1 General

METRO and Contractor agree:

- (a) To comply with the Privacy Act of 1974, 5 U.S.C. 552a (the Act) and the rules and regulations issued pursuant to the Act when performance under the Contract involves the design, development or operation of any system of records on individuals to be operated by METRO, its contractors or employees to accomplish a Government function.
- (b) To notify the Government when METRO or Contractor anticipates operating a system of records on behalf of the Government in order to accomplish the requirements of this Agreement, if such system contains information about individuals which information will be retrieved by the individual's name or other identifier assigned to the individual. A system of records subject to the Act may not be employed in the performance of this Agreement until the necessary approval and publication requirements applicable to the system have been carried out. METRO or Contractor, as appropriate, agrees to correct, maintain, disseminate, and use such records in accordance with the requirements of the Act, and to comply with all applicable requirements of the Act.
- (c) To include the Privacy Act Notification contained in this Agreement in every subcontract solicitation and in every subcontract when the performance of Work under the proposed subcontract may involve the design, development or operation of a system of records on individuals that is to be operated under the Contract to accomplish a Government function; and
- (d) To include this clause, including this paragraph in all in subcontracts under which Work for this Agreement is performed or which is awarded pursuant to this Agreement or which may involve the design, development, or operation of such a system of records on behalf of the Government.

### 17.2 Applicability

For purposes of the Privacy Act, when the Agreement involves the operation of a system of records on individuals to accomplish a Government function, METRO, third party contractors and any of their employees are considered to be employees of the Government with respect to the Government function and the requirements of the Act, including the civil and criminal penalties for violations of the Act, are applicable except that the criminal penalties shall not apply with regard to contracts effective prior to September 27, 1975. In addition, failure to comply with the provisions of the Act or of this clause will make this Agreement subject to termination.

### 17.3 Definitions

The terms used in this clause have the following meanings:

- (a) "Operation of a system of records" means performance of any of the activities associated with maintaining the system of records on behalf of the Government including the collection, use and dissemination of records.

- (b) "Records" means any item, collection or grouping of information about an individual that is maintained by METRO or Contractor on behalf of the Government, including, but not limited to, his education, financial transactions, medical history, and criminal or employment history and that contains his name, or the identifying number, symbol or other identifying particular assigned to the individual, such as a finger or voice print or a photograph.
- (c) "System of records" on individuals means a group of any records under the control of METRO or Contractor on behalf of the Government from which information is retrieved by the name of the individual or by some identifying number, symbol or other identifying particular assigned to the individual.

#### 18.0 PATENT RIGHTS (Applicable only to research and development contracts)

If any invention, improvement or discovery of METRO or contractors or subcontractors is conceived or first actually reduced to practice in the course of or under this project which invention, improvement, or discovery may be patentable under the Patent Laws of the United States of America or any foreign country, METRO (with appropriate assistance of any contractor or subcontractor involved) shall immediately notify the Government (FTA) and provide a detailed report. The rights and responsibilities of METRO, third party contractors and subcontractors and the Government with respect to such invention will be determined in accordance with applicable Federal laws, regulations, policies and any waivers thereof.

#### 19.0 RIGHTS IN DATA (Applicable only to research and development contracts)

The term "subject data" as used herein means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under this Contract. The term includes graphic or pictorial delineation in media such as drawings or photographs; text in specifications or related performance or design-type documents, machine forms such as punched cards, magnetic tape or computer memory printouts; and information retained in computer memory. Examples include, but are not limited to, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications and related information. The term does not include financial reports, cost analyses and similar information incidental to contract administration.

All "subject data" first produced in the performance of this Agreement shall be the sole property of the Government. METRO and Contractor agree not to assert any rights at common law or equity and not to establish any claim to statutory copyright in such data. Except for its own internal use, METRO and Contractor shall not publish or reproduce such data in whole or in part, or in any manner or form, nor authorize others to do so, without the written consent of the Government until such time as the Government may have released such data to the public. This restriction, however, does not apply to Agreements with academic institutions.

METRO and Contractor agree to grant and do hereby grant to the Government and to its officers, agents, and employees acting within the scope of their official duties, a royalty-free, non-exclusive and irrevocable license throughout the world:

- (a) To publish, translate, reproduce, deliver, perform, use and dispose of, in any manner, any and all data not first produced or composed in the performance of this Contract but which is incorporated in the work furnished under this Contract; and
- (b) To authorize others so to do.

METRO and Contractor shall indemnify and save and hold harmless the Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by METRO and Contractor of proprietary rights, copyrights or rights of privacy, arising out of the publication, translation, reproduction, delivery, performance, use, or disposition of any data furnished under this Contract.



Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

The third and fourth paragraphs under Section 19.0 above are not applicable to material furnished to METRO or Contractor by the Government and incorporated in the work furnished under the Contract, provided that such incorporated material is identified by METRO or Contractor at the time of delivery of such work.

In the event that the project, which is the subject of this Agreement, is not completed, for any reason whatsoever, all data generated under that project shall become subject data as defined in the Rights in Data clause in this Contract and shall be delivered as the Government may direct. This clause shall be included in all subcontracts under this Contract.

## 20.0 NEW RESTRICTIONS ON LOBBYING

### 20.1 Prohibition

- (a) Section 1352 of Title 31, U.S. Code, provides in part that no appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (b) The prohibition does not apply as follows:
  - (i) Agency and legislative liaison by Own Employees.
  - (ii) Professional and technical services by Own Employees.
  - (iii) Reporting for Own Employees.
  - (iv) Professional and technical services by Other than Own Employees.

### 20.2 Disclosure

- (a) Each person who requests or receives from an agency a Federal contract shall file with that agency a certification, included in Form of Proposal or Bid Forms, that the person has not made, and will not make, any payment prohibited by Section 20.1 of this clause.
- (b) Each person who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, Standard Form-LLL, "Disclosure of Lobbying Activities," if such person has made or has agreed to make any payment using non- appropriated funds (to include profits from any covered Federal action), which would be prohibited under Section 20.1 of this clause if paid for with appropriated funds.
- (c) Each person shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under paragraph (c)(2) of this section. An event that materially affects the accuracy of the information reported includes:
  - (i) a cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

- (ii) a change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or
- (iii) a change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.
- (d) Any person who requests or receives from a person referred to in paragraph (c)(i) of this section a subcontract exceeding \$100,000 at any tier under a Federal contract shall file a certification, and a disclosure form, if required, to the next tier above.
- (e) All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the person referred to in paragraph (c)(i) of this section. That person shall forward all disclosure forms to the agency.

### 20.3 Agreement

In accepting any contract resulting from this solicitation, the person submitting the offer agrees not to make any payment prohibited by this clause.

### 20.4 Penalties.

- (a) Any person who makes an expenditure prohibited under Section 20.1 of this clause shall be subject to a civil penalty of not less than \$10,000 for each such expenditure.
- (b) Any person who fails to file or amend the disclosure form to be filed or amended if required by this clause, shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
- (c) Contractors may rely without liability on the representations made by their sub- contractors in the certification and disclosure form.

### 20.5 Cost allowability

Nothing in this clause is to be interpreted to make allowable or reasonable any costs which would be unallowable or unreasonable in accordance with Part 31 of the Federal Acquisition Regulation. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any of the provisions of Part 31 of the Federal Acquisition Regulation.

## PART VII

### SANTA CRUZ METROPOLITAN TRANSIT DISTRICT PROTEST PROCEDURES

#### PROCUREMENT PROTESTS

All protests shall be filed, handled and resolved in a manner consistent with the requirements of Federal Transit Administration (FTA) Circular 4220.1E Third Party Contracting Guidelines dated June 19, 2003 and the Santa Cruz Metropolitan Transit District's (METRO) Protest Procedures which are on file and available upon request.

Current FTA Policy states that: "Reviews of protests by FTA will be limited to:

- (1) a grantee's failure to have or follow its protest procedures, or its failure to review a complaint or protest; or
- (2) violation of Federal law or regulation.

An appeal to FTA must be received by the cognizant FTA regional or Headquarters Office within five (5) working days of the date the protester learned or should have learned of an adverse decision by the grantee or other basis of appeal to FTA" (FTA Circular 4220.1E, Section 7, paragraph 1., Written Protest Procedures)

Protests relating to the content of this Request for Proposal (RFP) package must be filed within ten (10) calendar days after the date the RFP is first advertised. Protests relating to a recommendation for award solicited by this RFP must be filed by an interested party within five (5) calendar days after the staff's written recommendation and notice of intent to award is issued to the offerors. The date of filing shall be the date of receipt of protests or appeals by METRO.

All Protests shall be filed in writing with the Finance Manager, Santa Cruz Metropolitan Transit District, 370 Encinal Street, Suite 100, Santa Cruz, CA 95060. **No other location shall be acceptable.** METRO will respond in detail to each substantive issue raised in the protest. The Finance Manager shall make a determination on the protest normally within ten (10) working days from receipt of protest. Any decision rendered by the Finance Manager may be appealed to the Board of Directors. The Protester has the right within five (5) working days of receipt of determination to file an appeal restating the basis of the protest and the grounds of the appeal. In the appeal, the Protester shall only be permitted to raise factual information previously provided in the protest or discovered subsequent to the Finance Manager's decision and directly related to the grounds of the protest. The Board of Directors has the authority to make a final determination and the Board of Director's decision shall constitute METRO's final administrative remedy.

In the event the protestor is not satisfied with METRO's final administrative determination, they may proceed within 90 days of the final decision to State Court for judicial relief. The Superior Court of the State of California for the County of Santa Cruz is the appropriate judicial authority having jurisdiction over Proposal Protest(s) and Appeal(s). Bid includes the term "offer" or "proposal" as used in the context of negotiated procurements.

The Offeror may withdraw its protest or appeal at any time before METRO issues a final decision.

Should METRO postpone the date of proposal submission owing to a protest or appeal of the solicitation specifications, addenda, dates or any other issue relating to this procurement, METRO shall notify, via addendum, all parties who are on record as having obtained a copy of the solicitation documents that an appeal/protest had been filed, and the due date for proposal submission shall be postponed until METRO has issued its final decision.

A letter of protest must set forth the grounds for protest and shall be fully supported with technical data, test results, or other pertinent information related to the subject being protested. The Protestor is responsible for adhering to METRO's protest procedures.

An Offeror may seek FTA review of METRO's decision. A protest appeal to the FTA must be filed in accordance with the provisions of FTA circular 4220.1E. Any appeal to the FTA shall be made not later than five (5) working days after a final decision is rendered under METRO's protest procedure. Protest appeals should be filed with:

Federal Transit Administration  
Regional Administrator Region IX  
201 Mission Street, Suite 2210  
San Francisco, CA 94105-1839

**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

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**Request for Proposals (RFP)**

**For VOIP Telephone System**

**METRO RFP No. 09-07**

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**ATTACHMENT A**

**GLOSSARY**

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## Glossary of RFP Terms

**Administrator** - The Metro IT staff that will manage and administer the voice/messaging and contact center applications that make up the proposed system.

**ACD - Automatic Call Distribution**- A “featureset” that facilitates the flow of calls to “Agents” for the purpose of managing customer calls. ACD is a partial featureset of a full contact center and provides call queuing and extensive logging and real-time reports.

**Agent** – For the purposes of this RFP an Agent is a User that is a member of an ACD or contact center group.

“**Assumed for the purposes of this RFP**” means that the Proposer may assume it to be so; whatever is being referred to therein.

For the purposes of this RFP the following terms will have priority in descending order when describing a feature or function:

- 1) **Must** - The feature or function is *required* to be included.
- 2) **Shall** - The feature or function is *expected* to be included.
- 3) **Should** - The feature or function is *desired*.
- 4) **May** – The feature or function is an *option*.

**BLF** – Busy Lamp Field – A lighted button on a phoneset that allows for a variety of features to be interactive with the phoneset User.

**CDR** – Call Detail Reporting – An application that allows system administrators to pull detailed logs and reports regarding PBX usage.

**Contractor**- For the purposes of this RFP Contractor is the same as Proposer.

**COS** - Class of Service as related to the RFP is used to define the permissions an extension will have on a PBX. Certain groups of users may have a need for extended voice mail message retention while another group may need the ability to forward calls to a cell phone, and still others have no need to make calls outside the office. Permissions for a group of extensions can be changed by modifying a COS variable applied to the entire group.

**DID**- Direct Inward Dialing is a feature offered by telephone companies for use with their customers' PBX systems, whereby the telephone company (telco) allocates a range of numbers all connected to their customer's PBX. As calls are presented to the PBX, the number that the caller dialed is also given, so the PBX can route the call to the desired person or department within the organization.

**End-Point** – The IP-based phonesets, or other devices (such as a paging or intercom end-points) to be installed in the Metro network environment.

**FXO** - An FXO is any device that, from the point of view of a telephone exchange, seems to be a regular telephone. As such, it should be able to accept ringing signals, go on-hook and off-hook,

and send and receive voice frequency signals. As with other lines, it may be loop start or ground start. FXO channel units were invented and named in the middle 20th century for service at the "Office" end of an FX line via carrier system

**FSX** - In telephony, a Foreign eXchange Station, or FXS, is a telephone interface which supplies battery power, provides dialtone, and generates ringing voltage. A device that connects to such an interface contains a Foreign Exchange Office (FXO) interface and could be a standard analog telephone or a private branch exchange (PBX) to receive telephone service. Any telephone exchange is an example of an FXS, as is the telephone jack on the wall. An FXS interface utilizes an FXO protocol to detect when the terminating device (telephone) goes on-hook or off-hook, and can send and receive voice signals. An FXS interface provides service at the "station" end of a foreign exchange line.

**IP**- The *Internet Protocol* is a protocol used for communicating data across a packet-switched internetwork using the Internet Protocol Suite (TCP/IP).

**IT**- *Information Technology*

**LAN**- Local Area Network- The network infrastructure that is present at each Metro physical location. This includes network wiring and active switch components as well as interconnect cables.

**Metro - Santa Cruz Metro Transit District** is the "Owner" for this RFP.

**MTBF** - Mean time between failures is the mean (average) time between failures of a system, and is often considered the "useful life" of the device not including 'end of life' if the device is not repairable.

**OEM** – For the purposes of the RFP an OEM is the system solution *manufacturer* and vendor of the product line (brand).

**IPPBX** - An IP (Internet Protocol) PBX (Private Branch Exchange) is a business telephone system designed to deliver voice over a data network and interoperate with the normal Public Switched Telephone Network (PSTN). VoIP (Voice over Internet Protocol) gateways can be combined with traditional PBX functionality enabling businesses to use their managed intranet to help reduce expenses, enjoy the benefits of a single network for voice and data and advanced features or be used on a pure IP system which in most cases give greater cost savings, greater mobility, and increased redundancy. An IP-PBX can exist as a hardware object, or virtually, as a software system.

**PBX** – A *Private Branch Exchange* is a telephone exchange that serves a particular business or office, as opposed to one that a common carrier or telephone company operates for many businesses or for the general public.

**Management Utility** – A software tool that allows for simplified system management and alarms, visibility of network devices, and real-time applications troubleshooting.

**Optional** – For the purposes of this RFP items with an "optional" (o) designation are not included with your proposal, but are available at additional cost.

**Life-Cycle Costs** – Cost of maintaining a technology solution over a period of time; the anticipated life of the solution.

**NOC** - Network Operations Center – This is the main data facility for the Metro where core servers and network components physically reside. This is also the home of Metro IT department personnel.

**Phonesets** – The hardware ip-based phone that is to be installed in the Metro network environment and that will serve the Metro Users telephone needs.

**Proposer**- For the purposes of the RFP the Proposer is the *Prime Contractor* for the project. May also be referred to as a “Contractor” or “Reseller.”

**PSAP** is an acronym for *Public Safety Answering Point*, an agency in the United States, typically county or city controlled, responsible for answering 9-1-1 calls for emergency assistance from police, fire, and ambulance services.

**PSTN- Public Switched Telephone Network (PSTN)** is the network of the world's public circuit-switched telephone networks, in much the same way that the Internet is the network of the world's public IP-based packet-switched networks. Originally a network of fixed-line analog telephone systems, the PSTN is now also digital and lines can be delivered to the physical location as an analog, digital or IP based interface “trunk” line.

**QoS** - In the field of computer networking and other packet-switched telecommunication networks, the traffic engineering term **quality of service** refers to resource reservation control mechanisms rather than the achieved service quality. Quality of service is the ability to provide different priority to different applications, users, or data flows, or to guarantee a certain level of performance to a data flow. For example, a required bit rate, delay, jitter, packet dropping probability and/or bit error rate may be guaranteed. Quality of service guarantees are important if the network capacity is insufficient, especially for real-time streaming multimedia applications such as voice over IP, online games and IP-TV, since these often require fixed bit rate and are delay sensitive, and in networks where the capacity is a limited resource, for example in cellular data communication. For the purposes of this RFP QoS is the configuration of IEEE 802.3p/q and TOSS or DIFFSERVE tags on all local network devices.

**Reseller** – For the purposes of this RFP a Reseller is the same as the Proposer. The term “Reseller” is indicative of the Proposer’s relationship to the OEM vendor.

**Router** - A *router* is a networking device whose software and hardware are usually tailored to the tasks of routing and forwarding information on different networks. Routers connect two or more logical IP-subnets, which do not necessarily map one-to-one to the physical interfaces of the router. The term “layer-3 switch” often is used interchangeably with router, but switch is a general term without a rigorous technical definition optimized for Ethernet LAN interfaces and may not have other physical interface types, like for example T1s or may lack key routing protocols.

**SAN** – *Storage Area Network* for bulk data storage.



The ‘**solution**’ – referred to in the RFP and for the purposes thereof “**the solution**” or “**the proposed solution**” is the Proposer’s proposed complete “**system**” and is synonymous with “**system**”.

The ‘**system**’ – referred to in the RFP and for the purposes thereof “**the system**” or “**this system**” is the Proposer’s proposed complete **solution** and is synonymous with “**solution**”.

**SIP** - The *Session Initiation Protocol* is a signaling protocol, widely used for setting up and tearing down multimedia communication sessions such as voice and video calls over IP. Other feasible application examples include video conferencing, streaming multimedia distribution, instant messaging and presence information. The protocol can be used for creating, modifying and terminating two-party (unicast) or multiparty (multicast) sessions consisting of one or several media streams. The modification can involve changing addresses or ports, inviting more participants, adding or deleting media streams, etc. The latest version of the specification is RFC 3261 from the IETF SIP Working Group.

In November 2000, SIP was accepted as a 3GPP signaling protocol and permanent element of the IMS architecture for IP-based streaming multimedia services. The SIP protocol is situated at the session layer in the OSI model, and at the application layer in the TCP/IP model. SIP is designed to be independent of the underlying transport layer; it can run on TCP, UDP, or SCTP.

**System Planning Guide** – A document from the OEM vendor of a system solution that organizes the planning and implantation of the voice/messaging system by providing a checklist.

**TIA/EIA-568-A/B** is a set of three telecommunications standards from the Telecommunications Industry Association, a 1988 offshoot of the EIA. The standards address commercial building cabling for telecom products and services. The three standards are formally titled ANSI/TIA/EIA-568-B.1-2001, -B.2-2001, and -B.3-2001. The TIA/EIA-568-B standards were first published in 2001. They supersede the TIA/EIA-568-A standards set, which are now obsolete.

**Telco** - A Telephone Company which provides telecommunications services such as telephony and data communications.

**Telecommunications** - A **telecommunications network** is a network of telecommunications links and nodes arranged so that messages may be passed from one part of the network to another over multiple links and through various nodes.

**Tier 1**- For the purposes of the RFP “Tier 1” refers to a “major” manufacturer of telecommunications solutions (systems) with a long history of support and an expectation of financial stability.

**Trunk** – An individual line from the PSTN.

**Trunking** - The ability to connect to an individual line from the PSTN.

**UM** – Unified Messaging is the integration of different streams of communication (e-mail, Fax, voice, etc.) into a single unified message store, accessible from a variety of different devices. While traditional communications systems delivered messages into several different types of stores—voicemail systems, e-mail servers, and stand-alone fax machines—with Unified

Messaging all types of messages are stored in one system. Voicemail messages, for example, are delivered directly into your email inbox. You see them right beside your e-mail when you open up Outlook. For example, you can forward a voicemail or fax. You can even take notes in your voicemail message or search for old voicemail messages. Today, UM solutions are increasingly accepted in the corporate environment. The aim of deploying UM solutions generally is to enhance and improve business processes as well as services.

**Users** – Metro employee that uses a telephone and has an extension.

**VLAN** - A private VLAN contains switch ports that cannot communicate with each other but can access another network. These ports are called private VLAN ports. Each private VLAN contains one or more private ports, and a single uplink port or uplink aggregation group. Ports can be isolated from each other while belonging to the same subnet. The network device forwards all traffic received on a private port out the associated VLAN's uplink port, regardless of VLAN ID or MAC destination address. Packets received on an uplink port are forwarded in the normal way (i.e. as for non-private VLANs) for all types of packets. Note that while private VLANs provide isolation at layer 2 and layer 3.

**VMP** - *Voice Mail Ports* are the virtual port interface that *limits a system* to the number of voice mails that can be deposited and retrieved at the same time. Many systems use a VMP for auto attendant and ACD queue.

**White Box** – A computer or server that has been put together from various parts and is **not** offered or supported by a top rated company (i.e. IBM, HP, Dell, Etc.).

**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

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**Request for Proposals (RFP)**

**For VOIP Telephone System**

**METRO RFP No. 09-07**

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**Schedule A 1.1**

**HARDWARE SOFTWARE**

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Schedule A 1.1

Hardware Software and Licensing

QTY	MFR PART#	OEM	DESCRIPTION	UNIT PRICE	TOTAL PRICE
			Below: (Examples; replace with proposed solution)		
1			Call Possessor / Call Manager	\$ -	\$ -
1			Redundant Call Possessor	\$ -	\$ -
110			Processor License Per User	\$ -	\$ -
1			Massaging Application	\$ -	\$ -
1			Messaging Platform	\$ -	\$ -
1			Redundant Messaging Platform	\$ -	\$ -
110			Messaging Licenese Per User	\$ -	\$ -
18			Voice mail License Per Port (>18)	\$ -	\$ -
110			Unified Messaging (UM) License Per User	\$ -	\$ -
13			Executive Phoneset as Described in RFP	\$ -	\$ -
13			Phoneset License	\$ -	\$ -
89			Business Phoneset as Described in RFP	\$ -	\$ -
89			Phoneset License	\$ -	\$ -
8			Wireless Phoneset as Described In RFP	\$ -	\$ -
8			Phoneset License	\$ -	\$ -
2			PRI Gateway or Interface - 2-Port	\$ -	\$ -
1			PRI Trunk License	\$ -	\$ -
2			Analog Trunk Gateway - 8-Port	\$ -	\$ -
3			Analog Trunk Gateway - 4-Port	\$ -	\$ -
2			Analog Trunk Gateway - 2-Port	\$ -	\$ -
			Analog Trunk License	\$ -	\$ -
1			SIP Trunk Gateway Hardware	\$ -	\$ -
1			SIP Trunk Gateway Software	\$ -	\$ -
40			SIP Trunk Gateway License	\$ -	\$ -
1			IP-Based Conference Bridge	\$ -	\$ -
1			Conference Bridge Platform	\$ -	\$ -
15			Conference Port License	\$ -	\$ -
1			FAX Platform	\$ -	\$ -
1			FAX Software	\$ -	\$ -
110			FAX License-Per User	\$ -	\$ -
			Router Upgrade	\$ -	\$ -
			Router Module	\$ -	\$ -
			Router Version Upgrade	\$ -	\$ -

Schedule A 1.1

Hardware Software and Licensing

QTY	MFR PART#	OEM	DESCRIPTION	UNIT PRICE	TOTAL PRICE
			Switch Upgrade	\$ -	\$ -
			Interface Module	\$ -	\$ -
			Interconnect Patch Cables (System)	\$ -	\$ -
			Remote User Interface Platform	\$ -	\$ -
			Remote User Interface Software	\$ -	\$ -
			Remote User Interface License	\$ -	\$ -
			Trunk Port Surge Protectors	\$ -	\$ -

**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

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**Request for Proposals (RFP)**

**For VOIP Telephone System**

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**Schedule A 1.2**

**PROFESSIONAL SERVICES – ALL USERS INSTALLED**

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# Schedule A 1.2

## Professional Services - ALL Users Installed

Option (Y-N)	Hourly	# Hours	Service Description	Est. Cost
			Below: Examples > replace with proposed service	
	\$ -		Configuration and Testing - Call Processor / Call Manager	\$ -
	\$ -		Configuration and Testing - Redundant Call Processor	\$ -
	\$ -		Configuration and Testing - Messaging Platform Setup and OS	\$ -
	\$ -		Configuration and Testing - Messaging Application Setup	\$ -
	\$ -		Configuration and Testing - Redundant Messaging Application Platform	\$ -
	\$ -		Configuration and Training - Unified Messaging (1 client installed)	\$ -
	\$ -		Physical Installation - Executive Phoneset (13 units)	\$ -
	\$ -		Physical Installation- Business Phoneset (89 units)	\$ -
	\$ -		Physical Installation -Wireless Phoneset (8 units)	\$ -
	\$ -		Configuration and Testing - Hardware Attendant Console (4)	\$ -
	\$ -		Configuration and Testing - Software Attendant Console (4 )	\$ -
	\$ -		PRI Gateway or Router	\$ -
	\$ -		PRI - Interface (CSU/DSU)	\$ -
	\$ -		Configuration and Testing - Analog Trunk Gateway - 8-Port	\$ -
	\$ -		Configuration and Testing - Analog Trunk Gateway - 4-Port	\$ -
	\$ -		Configuration and Testing - Analog Trunk Gateway - 2-Port	\$ -
	\$ -		Configuration and Testing - Analog Trunk Gateways - 911 Failover	\$ -
	\$ -		Configuration and Testing - Analog Trunk Gateways - PSTN Failover-System	\$ -
	\$ -		Configuration - Analog Trunk License	\$ -
	\$ -		Configuration and Testing -SIP Trunk Gateway Hardware	\$ -
	\$ -		Configuration and Testing - SIP Trunk Gateway Software	\$ -
	\$ -		Configuration and Testing - SIP Trunk Gateway License	\$ -
	\$ -		Configuration and Testing - IP-Based Conference Bridge	\$ -
	\$ -		Configuration and Testing - Conference Bridge Platform	\$ -
	\$ -		Configuration - Conference Port License	\$ -
	\$ -		Configuration and Testing - IP - Based FAX Platform	\$ -
	\$ -		Configuration and Testing - IP-Based FAX Software	\$ -
	\$ -		Configuration - IP-Based FAX License-Per User	\$ -
	\$ -		Configuration and Testing - Router Upgrade	\$ -
	\$ -		Configuration and Testing -Router Module	\$ -
	\$ -		Configuration and Testing -Router Version Upgrade	\$ -
	\$ -		Configuration and Testing - Switch Upgrade	\$ -
	\$ -		Configuration and Testing - Interface Module	\$ -







**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

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**Request for Proposals (RFP)**

**For VOIP Telephone System**

**METRO RFP No. 09-07**

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**Schedule A 1.3**

**HARDWARE AND SOFTWARE MAINTENANCE**

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Schedule A 1.3

Hardware and Software Maintenance

QTY	MFR PART#	OEM	DESCRIPTION	UNIT PRICE	TOTAL PRICE
			Below: (Examples: replace with proposed solution)		
			Call Possessor / Call Manager	\$ -	\$ -
			Redundant Call Possessor	\$ -	\$ -
			Processor License Per User	\$ -	\$ -
			Massaging Application	\$ -	\$ -
			Redundant Massaging Application	\$ -	\$ -
			Messaging Platform	\$ -	\$ -
			Messaging Licenese Per User	\$ -	\$ -
			Executive Phoneset as Described in RFP	\$ -	\$ -
			Business Phoneset as Described in RFP	\$ -	\$ -
			Wireless Phoneset as Described In RFP	\$ -	\$ -
			PRI Gateway or Interface - 2-Port	\$ -	\$ -
			Analog Trunk Gateway - 8-Port	\$ -	\$ -
			Analog Trunk Gateway - 4-Port	\$ -	\$ -
			Analog Trunk Gateway - 2-Port	\$ -	\$ -
			SIP Trunk Gateway Hardware	\$ -	\$ -
			SIP Trunk Gateway Software	\$ -	\$ -
			IP-Based Conference Bridge	\$ -	\$ -
			Conference Bridge Hardware	\$ -	\$ -
			Conference Bridge Software	\$ -	\$ -
			FAX Platform	\$ -	\$ -
			FAX Software	\$ -	\$ -
			New Routers	\$ -	\$ -
			Router Modules	\$ -	\$ -
			Network Switches	\$ -	\$ -
			Switch Interface Modules	\$ -	\$ -
			Remote User Interface Platform	\$ -	\$ -
			Remote User Interface Software	\$ -	\$ -
			UPS Backup Systems (Edge)	\$ -	\$ -
			UPS Backup Systems (Core)	\$ -	\$ -

**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

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**Request for Proposals (RFP)**

**For VOIP Telephone System**

**METRO RFP No. 09-07**

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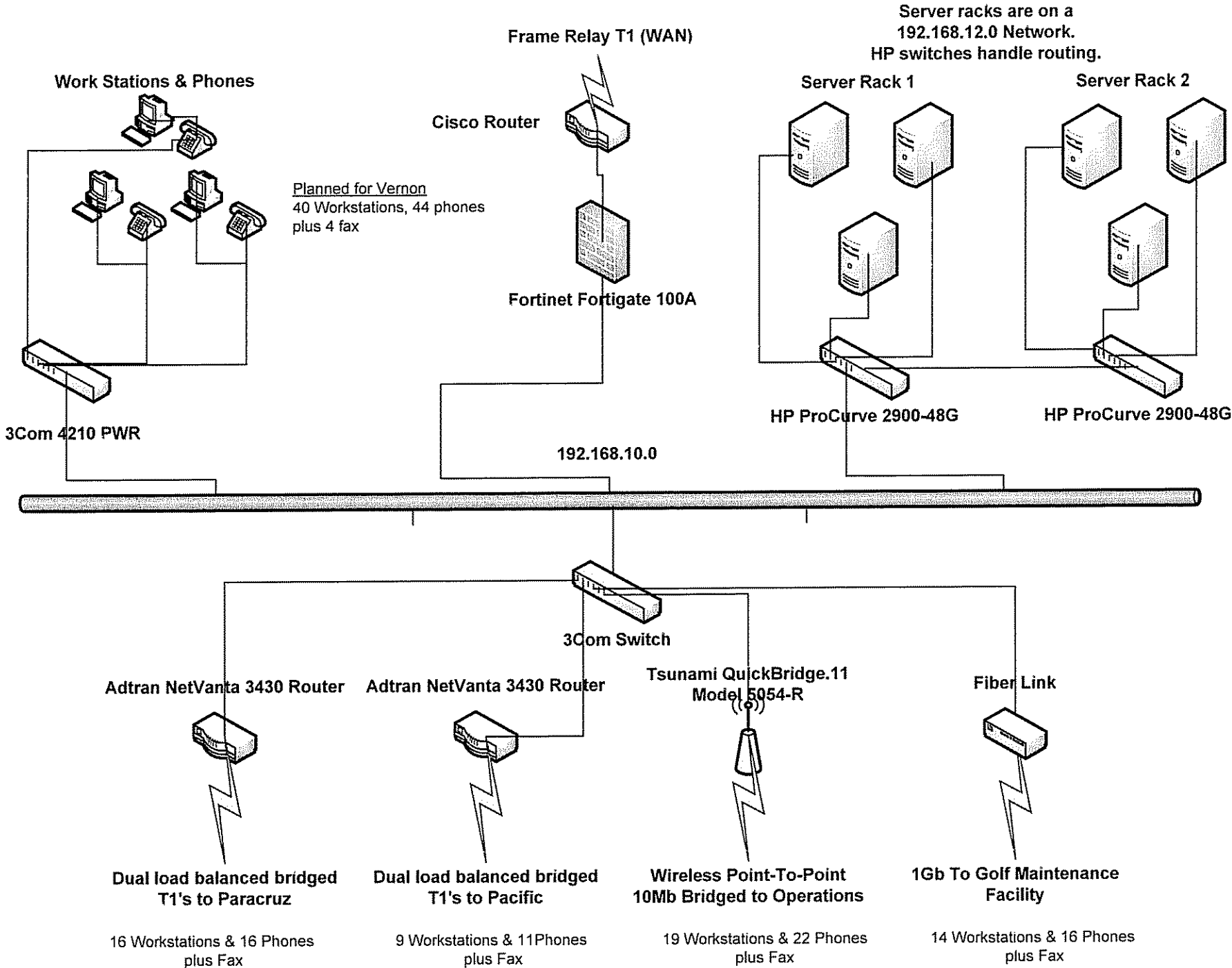
**APPENDIX A**

**METRO 110 VERNON VOIP LAYOUT**

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# Appendix A: Metro 110 Vernon VOIP Layout



**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

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**Request for Proposals (RFP)**

**For VOIP Telephone System**

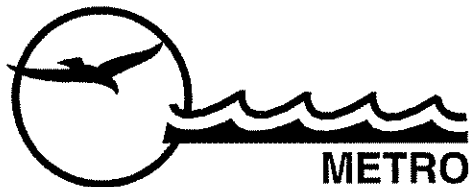
**METRO RFP No. 09-07**

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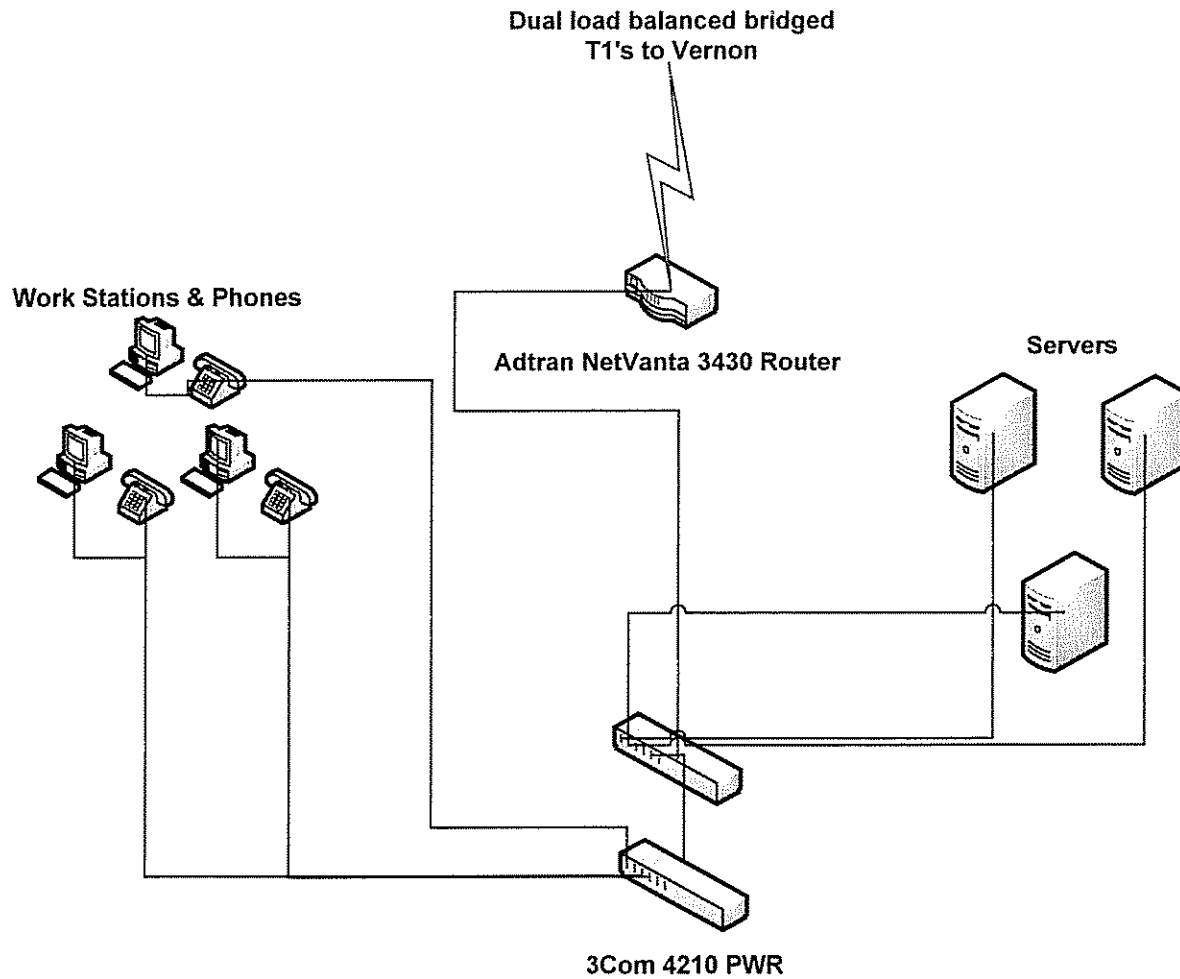
**APPENDIX B**

**METRO PACIFIC AND PARACRUZ VOIP LAYOUT**

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# Appendix B: Metro Pacific and Paracruz VOIP Layout



# **EXHIBIT - B**

VOIP Telephone System METRO RFP No. 09-07

response by:

SJB GlobalNET, inc.

2455 El Camino Real, Suite B

Palo Alto, CA 94306

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# **SANTA CRUZ METROPOLITAN TRANSIT DISTRICT**

## **Request for Proposals (RFP) For VOIP Telephone System METRO RFP No. 09-07**

**Date Issued: December 24, 2008**

**Proposal Deadline: 5:00 P.M., January 28, 2009**

### **Contents of this RFP**

Part I.	Instructions to Offerors
Part II.	General Information Form
Part III.	Specifications
Part IV.	General Conditions
Part V.	Contract/Agreement
Part VI.	FTA Requirements for Non-Construction Contracts
Part VII.	Protest Procedures
Attachment A	Glossary
Schedule A 1.1	Hardware Software and Licensing
Schedule A 1.2	Professional Services – All Users Installed
Schedule A 1.3	Hardware and Software Maintenance
Appendix A	METRO 110 Vernon VOIP Layout
Appendix B	METRO Pacific and ParaCruz VOIP Layout

**PART I**  
**INSTRUCTIONS TO OFFERORS**

- 1     **GENERAL:** These instructions form a part of the contract documents and shall have the same force as any other portion of the contract. Failure to comply may subject the proposal to immediate rejection – Acknowledged and in agreement, SJB GlobalNET, inc
  
- 2     **OFFEROR RESPONSIBILITY:** METRO has made every attempt to provide all information needed by offerors for a thorough understanding of project terms, conditions, and requirements. It is expressly understood that it is the responsibility of offerors to examine and evaluate the work required under this RFP and the terms and conditions under which the work is performed. By submitting a proposal, Offeror represents that it has investigated and agrees to all terms and conditions of this RFP – Acknowledged and in agreement, SJB GlobalNET, inc
  
- 3     **DELIVERY OF PROPOSALS TO METRO:** Proposals (1 original and 4 copies) must be delivered to METRO Purchasing Office, 110 Vernon Street, Suite B, Santa Cruz, California, 95060 on or before the deadline noted in the RFP. Any contract or purchase order entered into as a result of this RFP shall incorporate the RFP and the proposal submitted by successful offeror. In the event of conflict between the proposal and any other contract document, the other contract document shall prevail unless specified otherwise by METRO. Telephone or electronic proposals will not be accepted. – Acknowledged and in agreement, SJB GlobalNET, inc
  
- 4     **LATE PROPOSALS:** Proposals received after the date and time indicated herein shall not be accepted and shall be returned to the Offeror unopened. Requests for extensions of the proposal closing date or time will not be granted. Offerors mailing proposals should allow sufficient mail time to ensure timely receipt of their proposals before the deadline, as it is the offerors responsibility to ensure that proposals arrive before the closing time – Acknowledged and in agreement, SJB GlobalNET, inc.
  
- 5     **MULTIPLE PROPOSALS:** An offeror may submit more than one proposal. At least one of the proposals shall be complete and comply with all requirements of this RFP. However, additional proposals may be in abbreviated form, using the same format, but providing only the information that differs in any way from the information contained in the master proposal. Master proposals and alternate proposals should be clearly labeled – Acknowledged and in agreement, SJB GlobalNET, inc.
  
- 6     **PARTIAL PROPOSALS:** No partial proposals shall be accepted – Acknowledged and in agreement, SJB GlobalNET, inc
  
- 7     **WITHDRAWAL OR MODIFICATION OF PROPOSALS:** Proposals may not be modified after the time and date proposals are opened. Proposals may be withdrawn by Offeror before proposal opening upon written request of the official who is authorized to act on behalf of the Offeror. – Acknowledged and in agreement. SJB GlobalNET, inc
  
- 8     **CHANGES TO THE RFP RECOMMENDED BY OFFERORS:** All requests for clarification or modification of the RFP shall be made in writing. Offerors are required to provide the value of each proposed modification and a brief explanation as to why the change is requested. Value shall be defined as the cost or savings to METRO and the advantage to METRO of the proposed change. – Acknowledged and in agreement. SJB GlobalNET, inc
  
- 9     **ADDENDA:** Modifications to this RFP shall be made only by written addenda issued to all RFP holders of record. Verbal instructions, interpretations, and changes shall not serve as official expressions of METRO, and shall not be binding. All cost adjustments or other changes resulting from said addenda shall be taken into consideration by offerors and included in their proposals – Acknowledged and in agreement, SJB GlobalNET, inc

- 10 OFFEROR'S PROPOSAL TO METRO: Offerors are expected to thoroughly examine the scope of work and terms and conditions of the RFP. Offerors' terms, conditions, and prices shall constitute a firm offer to METRO that cannot be withdrawn by the Offeror for ninety (90) calendar days after the closing date for proposals, unless a longer time period is specified by METRO in the RFP. Offerors shall identify all proprietary information in their proposals. Information identified as proprietary shall not be made available to the public or other offerors – Acknowledged and in agreement, SJB GlobalNET, inc
- 11 SINGLE OFFEROR RESPONSIBILITY: Single Offeror responsibility is required under this RFP. Each Offeror responding to this RFP must respond to all professional services and provide all materials, equipment, supplies, transportation, freight, special services, and other work described or otherwise required herein – Acknowledged and in agreement, SJB GlobalNET, inc
- 12 EXPERIENCE AND QUALIFICATIONS: Offeror may be required upon request of METRO to substantiate that Offeror and its proposed subcontractors have the skill, experience, licenses, necessary facilities, and financial resources to perform the contract in a satisfactory manner and within the required time – Acknowledged and in agreement, SJB GlobalNET, inc
13. SUBCONTRACTING: The requirement for single-point responsibility does not prohibit subcontracts or joint ventures provided that the single successful Offeror assumes the following responsibilities: (1) serves as the sole general contractor with METRO; (2) assumes full responsibility for the performance of all its subcontractors, joint venturers, and other agents; (3) provides the sole point of contact for all activities through a single individual designated as project manager; (4) submits information with its proposal documenting the financial standing and business history of each subcontractor or joint venturer; and, (5) submits copies of all subcontracts and other agreements proposed to document such arrangement. – Acknowledged and in agreement, SJB GlobalNET, inc.

Without limiting the foregoing, any such legal documents submitted under item "5" above must (a) make METRO a third-party beneficiary thereunder; (b) grant to METRO the right to receive notice of and cure any default by the successful offeror under the document; and (c) pass through to METRO any and all warranties and indemnities provided or offered by the subcontractor or similar party. – Acknowledged and in agreement, SJB GlobalNET, inc

- 14 EVALUATION CRITERIA AND AWARD OF CONTRACT: The award of the contract will be made to the responsible Offeror whose proposal is most advantageous to METRO. Specific evaluation criteria are identified in the Specifications section of the RFP. – Acknowledged and in agreement, SJB GlobalNET, inc
- 15 METRO'S PREROGATIVE: METRO reserves the right to contract with any single firm or joint venture responding to this RFP (without performing interviews), based solely upon its evaluation and judgment of the firm or joint venture in accordance with the evaluation criteria. This RFP does not commit METRO to negotiate a contract, nor does it obligate METRO to pay for any costs incurred in preparation and submission of proposals or in submission of a contract – Acknowledged and in agreement, SJB GlobalNET, inc.

METRO reserves and holds at its discretion the following rights and options in addition to any others provided by the Public Utility Code, Section 98000 and the Public Contract Code: (1) to reject any or all of the proposals; (2) to issue subsequent requests for proposals; (3) to elect to cancel the entire request for proposals; (4) to waive minor informalities and irregularities in proposals received; (5) to enter into a contract with any combination of one or more prime contractors, subcontractors, or service providers; (6) to approve or disapprove the use of proposed subcontractors and substitute subcontractors; (7) to negotiate with any, all, or none of the respondents to the RFP – Acknowledged and in agreement. SJB GlobalNET, inc

16. EXECUTION OF CONTRACT: The final contract shall be executed by the successful offeror and returned to METRO Administrative Office no later than ten (10) calendar days after the date of notification of award by METRO. All required bonds and insurance certificates shall also be submitted by this deadline. In the event successful offeror does not submit any or all of the aforementioned documents on or before the required deadline, METRO may award the contract to another offeror; in such event, METRO shall have no liability and said party shall have no remedy of any kind against METRO – Acknowledged and in agreement, SJB GlobalNET, inc
17. DISADVANTAGED AND WOMEN'S BUSINESS ENTERPRISES: The Board of Directors of the Santa Cruz Metropolitan Transit METRO has adopted a Disadvantaged Business Enterprise Policy to promote the participation of disadvantaged business enterprises (DBE) in all areas of METRO contracting to the maximum extent practicable. Consistent with the DBE Policy, the successful offeror selected for this project shall take all necessary and reasonable steps to ensure that DBE firms have the maximum practicable opportunity to participate in the performance of this project and any subcontracting opportunities thereof – Acknowledged and in agreement, SJB GlobalNET, inc
18. NONDISCRIMINATION: The Santa Cruz Metropolitan Transit District will not discriminate with regard to race, color, creed, ancestry, national origin, religion, sex, sexual preference, marital status, age, medical condition or disability in the consideration for award of contract – Acknowledged and in agreement, SJB GlobalNET, inc

***ADDITIONAL INSTRUCTIONS TO OFFERORS ARE SET FORTH IN  
OTHER SECTIONS OF THIS REQUEST FOR PROPOSALS***

**PART II**  
**GENERAL INFORMATION FORM**

**VOIP TELEPHONE SYSTEM - RFP No. 09-07**  
(To be completed by the offeror and placed at the front of your proposal)


Legal Name of Firm Date: SJB GlobalNET, inc

Firm's Address: 2455 El Camino Real, Suite B, Palo Alto, CA 94306

Telephone Number FAX Number: (888) 483-0938

Type of Organization (Partnership, Corporation, etc ) Tax ID Number: 20-4960458

Offeror understands and agrees that, by his/her signature, if awarded the contract for the project, he/she is entering into a contract with METRO that incorporates the terms and conditions of the entire Request for Proposals package, including the General Conditions section of the Request for Proposals. Offeror understands that this proposal constitutes a firm offer to METRO that cannot be withdrawn for ninety (90) calendar days from the date of the deadline for receipt of proposals. If awarded the contract, offeror agrees to deliver to METRO the required insurance certificates within ten (10) calendar days of the Notice of Award.

 \_\_\_\_\_, President  
Signature of Authorized Principal

Sean Brender, President  
Name of Principal-in-Charge and Title

Roxanne Harbor, Project Manager  
Name of Project Manager and Title

Sean Brender, Voice Network Consultant, sean@sjbglobal.net, 408-472-0031  
Name, Title, Email Address and Phone Number of Person To Whom Correspondence Should be Directed

2455 El Camino Real, Suite B, Palo Alto, CA 94306  
Addresses Where Correspondence Should Be Sent

Design, install, train and provide ongoing technical assistance with the 3Com Converged Network.  
Areas of Responsibility of Prime Contractor

### **SUB CONSULTANTS**

Listing of major sub consultants proposed (if applicable), their phone numbers, and areas of responsibility.  
Indicate which firms are DBE's:

- (1) Roxanne Harbor, 831.454.8380, [Roxanne@sjbglobal.net](mailto:Roxanne@sjbglobal.net), Project Management
- (2) KMS Systems Inc., (650) 369-9700, C-7 cabling work, if required
- (3) Livewire Information Systems, 831-643-9473, [info@livewireis.com](mailto:info@livewireis.com), C-7 cabling work, if required
- (4) 3Com Corporation, Professional Services, (800) 638-3266 opt 7, Equipment Configuration, if required

**CERTIFICATION OF PROPOSED CONTRACTOR REGARDING  
DEBARMENT, SUSPENSION AND OTHER INELIGIBILITY AND  
VOLUNTARY EXCLUSION**

(Contractor) SJB GlobalNET, inc. certifies to the best of its knowledge and belief, that it and its principals:

Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

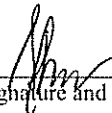
Have not within a three year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;

Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and

Have not within a three year period preceding this bid had one or more public transactions (Federal, State or local) terminated for cause or default

If the Proposed Subcontractor is unable to certify to any of the statements in this certification, it shall attach an explanation to this certification.

(Contractor) SJB GlobalNET, inc., CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET. SEQ. ARE APPLICABLE THERETO

  
\_\_\_\_\_, President  
Signature and Title of Authorized Official

**LOBBYING CERTIFICATION**  
(Only for Contracts above \$100,000)

**Lobbying Certification for Contracts Grants, Loans and Cooperative Agreements (Pursuant to 49 CFR Part 20, Appendix A)**

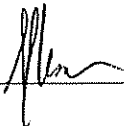
The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--L L L, "Disclosure Form to Report Lobbying," in accordance with its instructions and as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed Reg 1413 (1/19/96)
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and Contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Bidder/Offeror certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Bidder/Offeror understands and agrees that the provisions of 31 U.S.C. A 3801, et. seq. apply to this certification and disclosure, if any.

Firm Name: SJB GlobalNET, inc.

Signature of Authorized Official  \_\_\_\_\_, President

Name and Title of Authorized Official: President

Date: January, 28 2009



**BUY AMERICA PROVISION**  
**(Only for Contracts above \$100,000)**

This procurement is subject to the Federal Transit Administration Buy America Requirements in 49 CFR part 661

A Buy American Certificate, as per attached format, must be completed and submitted with the bid. A bid which does not include the certificate will be considered non-responsive

A false certification is a criminal act in violation of 18 U S C. 1001. Should this procurement be investigated, the successful bidder/proposer has the burden of proof to establish that it is in compliance.

A waiver from the Buy America Provision may be sought by SCMTD if grounds for the waiver exist

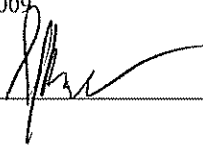
Section 165(a) of the Surface Transportation Act of 1982 permits FTA participation on this contract only if steel and manufactured products used in the contract are produced in the United States.

**BUY AMERICA CERTIFICATE**

The bidder hereby certifies that it will comply with the requirements of Section 165(a) or (b) (3) of the Surface Transportation Assistance Act of 1982, and the applicable regulations in 49 CFR Part 661.

Date: January 28, 2009

Signature: \_\_\_\_\_



Company Name: SJB GlobalNET, inc

Title: President

OR

The bidder hereby certifies that it cannot comply with the requirements of Section 165(a) or (b) (3) of the Surface Transportation Act of 1982, but may qualify for an exception to the requirement pursuant to Section 165(b)(2) or (b)(4) of the Surface Transportation Assistance Act of 1982, as amended, and regulations in 49 CFR 661.7

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Company Name: \_\_\_\_\_

Title: \_\_\_\_\_

## CONTRACTOR DBE INFORMATION

NOTE: SJB GlobalNET is not yet a DBE.

CONTRACTOR'S NAME:  
CONTRACTOR'S ADDRESS:  
DBE GOAL FROM CONTRACT \_\_\_\_\_%      FED NO.  
COUNTY      PROPOSAL AMOUNT \$  
AGENCY      PROPOSAL OPENING DATE  
CONTRACT NO.      DATE OF DBE CERTIFICATION  
SOURCE \*\*

This information must be submitted during the initial negotiations with METRO. By submitting a proposal, offeror certifies that he/she is in compliance with METRO's policy. Failure to submit the required DBE information by the time specified will be grounds for finding the proposal non-responsive.

CONTRACT  
ITEM NO.

ITEM OF WORK AND DESCRIPTION OF  
WORK OR SERVICES TO BE SUBCONTRACTED  
OR MATERIALS TO BE PROVIDED \*

CERTIFICATION

FILE NUMBER

NAME OF DBE

DOLLAR

AMOUNT

DBE \*\*\*

PERCENT

DBE

TOTAL CLAIMED DBE

PARTICIPATION

\$

%

SIGNATURE OF CONTRACTOR DATE

AREA CODE/TELEPHONE (Detach from proposal if DBE information is not submitted with proposal)

\* If 100% of item is not to be performed or furnished by DBE, describe exact portion, including plan location of work to be performed, of item to be performed or furnished by

DBE.

\*\* DBE's must be certified on the date proposals are opened.

\*\*\* Credit for a DBE supplier who is not a manufacturer is limited to 60% of the amount paid to the supplier

NOTE: Disadvantaged business must renew their certification annually by submitting certification questionnaires in advance of expiration of current certification. Those not on a current list cannot be considered as certified.

## PART III SPECIFICATIONS FOR VOIP TELEPHONE SYSTEM

### 1. INTRODUCTION

The Santa Cruz Metropolitan Transit District (METRO) is requesting proposals from qualified firms to undertake the following activities related to provide and install a VOIP Telephone System. The specifications described below set forth the minimum requirements for the quantity and quality of work to be provided hereunder. The VOIP Telephone System shall meet or exceed the specifications attached hereto. As used herein, the term "work" refers to the articles, equipment, materials, supplies and labor as specified, designated or otherwise required by the Request for Proposals (RFP). Additional terms, conditions and requirements pertaining to the methods and manner of performing the work are described elsewhere in the RFP – *Acknowledged and in agreement, SJB GlobalNET, inc*

Except where specified to the contrary herein, all work shall be new and shall be supplied with the equipment and accessories indicated as standard equipment in manufacturer's published descriptions, owner's manuals, and other literature for said work. No advantage shall be taken by the Contractor in omitting any unspecified minor article that goes into making the unit complete. Brand Names described below are used to indicate levels of quality. Approved equals requests must be made fourteen (14) days in advance of the bid date – *Acknowledged and in agreement, SJB GlobalNET, inc*

#### 1.1 OVERVIEW

a) METRO is requesting proposals for a new communications system based on IP (Internet Protocol) telephony technology to support and satisfy current and future operational requirements necessary to the daily workings of its organization – *The proposed solution is the 3Com VCX Voice over Internet Protocol (VoIP) Telephony System. This platform operates using a Local Area Network (LAN) and Wide Area Network (WAN) to communicate via Internet Protocol (IP) and Session Initiation Protocol (SIP) to communicate between devices. SJB GlobalNET, inc*

*ADVANTAGES TO METRO: SIP is an open standard which will allow METRO to purchase telephone devices from any manufacturer that builds their equipment to communicate via this "open" protocol, thereby providing METRO with more purchasing options than proprietary based VoIP telephony systems. SJB GlobalNET, inc*

b) The new system is expected to enable METRO employees to more effectively communicate and leverage information technology resources. – *The VCX platform will provide METRO with the ability to effectively communicate and leverage technology resources by providing a uniform dial-plan to all uses along with global directory as well as voicemail that can be shared across sites. Options exist within the VCX platform to integrate other key business tools such as chat and presents capabilities. SJB GlobalNET, inc*

c) The Proposer's (Proposer is the qualified reseller or manufacturer that is the *Prime Contractor* for this project) objective for this RFP is to provide METRO with a fully modern and forward-looking, functional and feature-rich voice, dial-tone, messaging and contact center system(s) to replace outdated telecommunications hardware. – *The VCX platform will provide all of the abovementioned requirements and more. SJB GlobalNET, inc*

d) This complete IP-based PBX communications solution sought by this RFP shall have the ability to integrate with the current data network and the applications used by METRO today, and looking forward for a likely minimum of ten (10) years software upgrade capability, and a useful life of greater than twenty (20) years. – *Most of METRO's existing LAN is made up of 3Com equipment. All 3Com LAN and WAN equipment are built with the 3Com NBX and VCX platforms in mind. This allows the LAN equipment to automatically recognize voice traffic from other 3Com devices and prioritize it without any configuration changes.*

*3Com was the first to market with regard VoIP technology introducing the NBX platform in 1998. Since then the NBX platform has undergone several feature enhancements and is still sold and supported by 3Com. The VCX is a platform developed at the same time by 3Com for the carrier-class networks like ATT and MCI. Since then and with over a billion minutes of usage, the VCX was scaled down to be introduced to the Enterprise sized customer. With the proven track record of both of these platforms there is no other company on this planet that can claim that they have been commercially offering the same VoIP product platform or VoIP for that matter for over 10 years. SJB GlobalNET, inc*

*ADVANTAGES TO METRO By deciding to purchase a VCX platform, METRO is receiving a proven product longevity, absolute interoperability with the majority of your LAN's, one toll-free number to call for support for both LAN and VoIP troubles and one maintenance contract to cover all 3Com equipment. SJB GlobalNET, inc*

### **1.1.1 General RFP Goals**

- a) Provide *feature-rich, cost-effective and highly-available* voice and messaging system functionality for all METRO Users at METRO facilities using VOIP and IPPBX technology and leveraging the METRO data network for telecom services – *The VCX platform can provide you all of these assets. SJB GlobalNET, inc*
- b) Provide the METRO with an *IP-network converged* voice communications solution that is well suited to simplify future moves, the consolidation of facilities and movement of Users. – *The VCX platform can provide you this. SJB GlobalNET, inc*
- c) Provide systems “*Ease-of-Use*” for Administrators and Users of the telecom system allowing in-house moves, adds and changes. – *The VCX platform can provide you this. SJB GlobalNET, inc*
- d) Provide an “*Open*” systems platform with *3rd Party Inter-Operability* using *Industry-Standards* support for IP-based Trunks, End-Points and Applications. – *The VCX platform communicates exclusively using SIP, an “open” standard used for VoIP communication. This will allow SIP enabled devices to connect and communicate with other 3Com and non-3Com SIP enabled devices. SJB GlobalNET, inc*
- e) Provide a solution with a wide-range of quality system *End-Points* (IP-based phonesets) in various “*Form Factors*”. – *3Com provides over ten models to choose from. SJB GlobalNET, inc*
- f) Provide a *Fully-Upgradable* Hardware and Software based solution that is “*Future-Proof*” to the greatest extent possible. – *3Com has the oldest commercially available VoIP platform on the market. Introduced in 1998, the NBX platform is still sold and supported by 3Com. This platform's life speaks loudly to 3Com's commitment to product longevity. SJB GlobalNET, inc*
- g) Provide a solution that is *Manageable* by the METRO Information Technology Department (IT), and *Secure* from likely network hacks and exploits. – *The VCX platform is managed via IP address(s) and is secure using password authentication. SJB GlobalNET, inc*
- h) Provide competent *Certified Professional Services* for Planning, Installation, Configuration, Applications Integration, Testing, Documentation, Training, and Maintenance – *3Com is listed as a subcontractor to provide the highest level of expertise to the project, if needed. SJB GlobalNET, inc*

### **1.1.2 Current Telecommunications Systems**

- a) The current antiquated telecom systems are to be abandoned as new systems cutover and replace them. – *Acknowledged and in agreement, SJB GlobalNET, inc*

- b) Old PBX systems may be left in place as well as old phoneset hardware and wiring all of which is to be abandoned – *Acknowledged and in agreement. SJB GlobalNET. inc*
- c) The currently PBX and ACD system at the ParaCruz/Research Park site has a relatively modern Nortel BCM IP PBX that currently handles phones and messaging and basic contact center in a standalone configuration METRO plans to bring this site into a converged and centrally managed part of the global IP phone system. – *Acknowledged and in agreement. SJB GlobalNET. inc*

**1.2 INSTRUCTIONS AND GENERAL INFORMATION**

- a) Proposer is expected to read this RFP from start to finish determining whether they are qualified for this project before responding to this RFP – *Acknowledged and in agreement. SJB GlobalNET. inc*

**1.2.1 Locations of Work**

**Encinal/Administration/NOC**  
 370 Encinal Street, Suite 100  
 Santa Cruz, CA 95060

**Golf Club/Minor Maintenance**  
 138 Golf Club Drive  
 Santa Cruz, CA 95060

**Vernon**  
 110 Vernon Street  
 Santa Cruz, CA 95060

**Pacific Station/Customer Service**  
 902 Pacific Avenue  
 Santa Cruz, CA 95060

**River/Operations**  
 1200 River Street  
 Santa Cruz, CA 95060

**Research Park /ParaCruz**  
 2880 Research Park Drive, Suite 160  
 Soquel, CA



NOTE: Appendix A only references 5 locations for the purposes of this Proposal since METRO is planning to relocate Administration, IT and Facilities from Encinal to the METRO owned facility at Vernon mid 2009. Initial installation of the core VOIP system is expected to be installed at the current Encinal building before this move. Any cost or labor associated with the move of this equipment will be born by METRO – *Acknowledged and in agreement. SJB GlobalNET. inc*

**1.2.2 Acknowledgment of RFP**

- a) Proposer (a person or entity that submits a proposal) by submitting an RFP (request for proposal) response acknowledges this RFP as a pre-contract guide and specification for a complete contracted solution. – *Acknowledged and in agreement. SJB GlobalNET. inc*
- b) The proposer will respond to each section of this RFP with at the least the word “Acknowledged” after the relevant section. – *Acknowledged and in agreement. SJB GlobalNET. inc*

**1.2.3 Reservations and Assumptions**

a) This document is a part of the Scope of Work in that, by setting requirements herein and asking relevant questions, METRO is able to determine the best "solution" for upgrading telecom services. Upon award of contract, this document and any METRO addendum processed and the Proposer's proposal will serve as the Scope of Work as contracted. – *Acknowledged and in agreement. SJB GlobalNET. inc*

b) This RFP is not an offer by METRO to contract, but is an invitation to Proposers to make an offer which the METRO may accept or reject and which shall be conclusively presumed not to create any legal or equitable obligations or other duties against or upon METRO – *Acknowledged and in agreement. SJB GlobalNET. inc*

c) Any costs incurred by the Proposer as a result of this Request for Proposal shall be the Proposer's sole responsibility. – *Acknowledged and in agreement. SJB GlobalNET. inc*

d) Any statement or conduct on the part of METRO that a Proposer is the successful Proposer is not an award of the contract for the RFP and absolutely no liability shall accrue against METRO prior to METRO actually so executing the Agreement forming a part of the Scope-of-Work by an individual duly empowered and authorized in writing to sign said Agreement on behalf of METRO – *Acknowledged and in agreement. SJB GlobalNET. inc*

e) The submission of a Proposal by any Proposer shall constitute the agreement of the Proposer to the above and all other matters contained in the Scope-of-Work. Any notification by METRO that a Proposer is the successful Proposer shall be conclusively presumed to be an expression that METRO holds an option to enter into a contract with the successful Proposer, executable by METRO in its sole and absolute discretion, within ninety (90) calendar days after the Proposals receipt date. – *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.2.4 Proposer's Qualifications**

a) To be considered as eligible to submit a proposal, Proposer should currently be approved as a California State Contractor with C-7 (low-voltage electrical) license (or state who is the C-7 licensed sub-contractor) and MUST be authorized to install and configure the proposed systems by the OEM (original equipment manufacturer) of the solution proposed, or the Proposer may be the OEM vendor of the solution if the OEM has professional services available for this type of project. – *SJB GlobalNET. inc is in the process of receiving its C-7 license. However should we not have furnished our C-7 license by the time work is to proceed, we have also listed two additional C-7 sub-contractors that we will use should low-voltage cable work be required either within our outside of the scope of this project. SJB GlobalNET. inc has also included 3Com Professional Services as a sub-contractor should certification outside our current support structure be needed either within our outside of the scope of this project. SJB GlobalNET. inc*

b) Proposer please state what *vendor* and *professional certifications* your company holds related to this proposal, and especially for the engineer or technician that will be doing the installation for this proposal. – *SJB GlobalNET. inc is certified on both 3Com voice and data. LAN, WAN and Wireless components. SJB GlobalNET. inc*

c) Proposer must demonstrate it has the skills and qualified personnel to install the system, provide training and cutover support at six (6) physical locations. – *The key in providing a successful installation is the proper planning. Our engineers have been designing and installing VoIP systems within large operations for over eight years. With over 300 installations under their belts they have been able to develop a smooth project operation. SJB GlobalNET. inc*

d) Proposer shall include in their response a minimum of three (3) references from similar type projects, of similar size, or greater, and in a similar civil campus environment. The proposal is to include contact information on all references –

1) San Benito County Office of Education has three sites linked by single point-to-point T1 lines and one "satellites" location connected via virtual private network connection. There are over one hundred telephone devices installed with three call processors linked by universal dial-plan. Contact Ron Wheelahan, CBO (831) 630-9499

2) North County Joint Unified School District has two sites linked by fiber optic connection. There are over fifty telephone devices installed on one call processor linked by universal dial-plan. Contact Anthony Barone, IT Manager (831) 207-9498

3) SunPower Corporation has twenty sites globally linked by MPLS network. There are over two thousand phones and one hundred call center agents installed on twenty call processors. Contact Richard Austin, Telephony Manager (408) 858-0034 SJB GlobalNET, inc

e) If proposer is using a subcontractor(s) list all subcontractors on the Part II General Information Form – *Acknowledged and in agreement. SJB GlobalNET, inc*

### **1.2.5 Documentation**

All Proposers shall do all of the following prior to submitting a Proposal to METRO:

a) Each Proposer shall carefully examine this RFP. It is the responsibility of the Proposer to submit written questions in the allotted time period to clarify any detail needed to make a fully-qualified proposal. Each Proposer shall thoroughly familiarize himself/herself (and shall be conclusively presumed to have done so) with all applicable laws, ordinances, rules and regulations of governmental bodies and laws of the State of California – *Acknowledged and in agreement. SJB GlobalNET, inc*

### **1.2.6 RFP Questions**

a) Questions shall be asked in writing by email or faxed to (831) 426-2918 to the following person only: Lloyd Longnecker, Purchasing Agent, email address: llongnecker@scmtd.com – *Acknowledged and in agreement. SJB GlobalNET, inc*

b) All questions will be answered in a written addendum – *Acknowledged and in agreement. SJB GlobalNET, inc*

c) **NO TELEPHONE CALLS** or any verbal communication will be allowed for questions during this RFP process – *Acknowledged and in agreement. SJB GlobalNET, inc*

d) It is anticipated that no one Proposer will know all the answers and that no solution will satisfy all the requirements. Just try to answer all the questions accurately with YES and NO unless they need more description and please be brief and concise with responses – *Acknowledged and in agreement. SJB GlobalNET, inc*

### **1.2.7 Addenda**

a) Any Addenda will be sent by email, postal mail and posted on METRO's web site during the proposal process – *Acknowledged. SJB GlobalNET, inc*

### **1.2.8 Preparation of Proposal**

a) Completed documents shall be without interlineations, alteration or erasure to these original documents – *Acknowledged and in agreement. SJB GlobalNET, inc*

b) Respond to and acknowledge each request for information of this RFP. Be aware that unless otherwise stated all RFP sections are mandatory to accurately respond. If you don't know an answer then respond: "Don't Know" – *Acknowledged and in agreement. SJB GlobalNET, inc*

- c) Proposer's legal name, Company name and address of nearest location and headquarters shall be fully stated with contact information for those involved on this RFP response (see Part II General Information Form) – *Acknowledged and in agreement. SJB GlobalNET. inc*
- d) Proposals shall be signed, in ink, by an individual duly empowered and authorized in writing to execute contracts for their firm – *Acknowledged and in agreement. SJB GlobalNET. inc*
- e) Proposals by partnerships shall indicate the full names of all Partners and shall be signed in the partnership name by one of the partners, or by a duly authorized representative, followed by the designation of the capacity of the person signing – *Acknowledged and in agreement. SJB GlobalNET. inc*
- f) Proposals by corporations shall be signed by legal name of the corporation, followed by the name of the State of incorporation and by the signature and designation of the corporate office authorized to bind the corporation – *Acknowledged and in agreement. SJB GlobalNET. inc*
- g) When requested by METRO, satisfactory evidence of power and authority to execute shall be immediately furnished. All Proposers shall state in the Proposal the State in which it exists as a legal entity, the State of its principal offices and the street address thereof, and its regular office, or the office that will primarily service METRO. – *SJB GlobalNET. inc is a California Corporation with principal office location at 2455 El Camino Real, Suite B, Palo Alto, CA 94306 SJB GlobalNET. inc*
- h) If sub-contractors are to be used for this project, list them in Part II General Information Form and describe their capabilities in detail – *Acknowledged and in agreement. SJB GlobalNET. inc*
- i) The envelope containing the Proposal shall be sealed and shall be conspicuously labeled "Telephone System Project RFP No 09-07" The outside of the envelope shall show the name and address of the Proposer, and the name of the Project – *Acknowledged and in agreement. SJB GlobalNET. inc*
- j) In the event the Proposer chooses to submit multiple proposals, the base proposal shall be labeled "Telephone System Project RFP No 09-07 Base Proposal" and alternate proposals shall be labeled "Telephone System Project RFP No. 09-07 Alternate Proposal No 09-07. Alternate proposals must meet the requirements of this RFP – *Acknowledged and in agreement. SJB GlobalNET. inc*
- k) The Proposer, by making its Proposal, is indicating that its firm possesses the capabilities, hardware, software, facilities and personnel to provide an efficient, successful installation and operation of the services described in the RFP. – *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.2.9 Costs for Proposal Response Preparation**

- a) Any costs associated with the preparation of the response to this RFP shall be borne by the responding Proposer. METRO will not accept any charges for response preparation, regardless of whether or not a Proposer is selected to provide the described systems and products, including any cost in the pre-contract phase of presentation and demonstration, or "proof-of-concept". – *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.2.10 Right to Use Ideas**

- a) All proposals and other material submitted become the property of METRO – *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.2.11 Confidentiality**



a) No news release, public announcement, or any other reference to this RFP or any phase of any program or project described herein shall be made public without the prior written consent of METRO. – *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.2.12 Proprietary Data**

a) All proprietary data contained in Proposer's RFP response must be clearly identified as proprietary and marked with copy write and/or trademark, and or be patented as the METRO will make public this RFP and Proposer's proposal. – *Acknowledged and in agreement, SJB GlobalNET. inc*

#### **1.2.13 Effect and Format of Proposal Response**

a) Proposals must be in the same format as this RFP with respect to the paragraph headings and numbers. In the event that there is no Proposer response to a requested paragraph it can be deemed to be "Non- Responsive". – *Acknowledged and in agreement. SJB GlobalNET, inc*

b) If one RFP response addresses several questions then that response must be provided following each pertinent question; briefly, accurately and concisely. – *Acknowledged and in agreement. SJB GlobalNET. inc*

c) Responses referencing other sections are not permissible – *Acknowledged and in agreement. SJB GlobalNET. inc*

d) Responses are expected to be customized to METRO's requirements. Generic responses are discouraged. – *This RFP response has been written exclusively with METRO's requirements in mind SJB GlobalNET. inc*

e) Add paragraph-heading numbers and content into the areas where you are proposing "advantages to METRO" not specifically requested herein. These additional items should be separate and entitled "ADVANTAGES TO METRO." – *Acknowledged and in agreement. SJB GlobalNET. inc*

f) METRO, at its option, may incorporate any or all parts of the Proposer's proposal in the final contract with reasonable METRO remedies to provide the Proposer incentive to perform in the manner represented in the Proposer's proposal. These "changes" to the Proposer's proposal are to be negotiated between the Proposer and METRO prior to contracting. – *Acknowledged and in agreement. SJB GlobalNET. inc*

g) Any comments, exhibits, etc., beyond what is asked for in the questions herein this RFP are encouraged, but will not substitute for item-by-item compliance and answering the questionnaire format. – *Acknowledged and in agreement, SJB GlobalNET. inc*

h) If there are any questions regarding the intent of a given question, we strongly recommend that you request clarification. – Inaccurate responses may be grounds for rejection of proposals. – *Acknowledged and in agreement. SJB GlobalNET. inc*

i) Proposers are advised to be extremely careful to follow all rules and directives set forth herein this RFP document. Failure to do so shall be grounds for disqualification of the proposal and/or Proposer. – *Acknowledged and in agreement. SJB GlobalNET, inc*

j) RFP response document section numbers (and letters) shall remain the same for easy comparison to the original RFP document. – *Acknowledged and in agreement. Some of the sections had duplicate labels, they have been corrected in this response. SJB GlobalNET, inc*

- k) In the event of any alteration of the RFP, the original document shall take precedent – *Acknowledged and in agreement. SJB GlobalNET. inc*
- l) An original and four (4) **copies** of the completed RFP response document shall be submitted. – *Acknowledged and in agreement. SJB GlobalNET. inc*
- m) Printing may be two-sided in accordance with METRO's commitment to environmental conservation. – *Acknowledged and in agreement. SJB GlobalNET. inc*
- n) Keep answers as brief as possible to accurately acknowledge questions and requirements. **Y (YES), N (NO) or O (Optional)** is suitable for many answers. – *Acknowledged and in agreement. SJB GlobalNET. inc*
- o) Provide specification data-sheets for all proposed hardware and software – *Acknowledged and in agreement. SJB GlobalNET. inc*

**1.2.14 Contract Documents and Documents Referenced in Proposal**

- a) All proposals shall include completed forms with requisite signatures Failure to provide all forms filled out and completed is grounds for dismissal of proposal. – *Acknowledged and in agreement. SJB GlobalNET. inc*

**1.2.15 Schedule Of Events**

<b>EVENT</b>	<b>DATE</b>
RFP Release Date	December 24, 2008
Proposer Questions Submittal Deadline	January 12, 2009
Responses To Proposer Questions	January 16, 2009
Proposal Due Date	January 28, 2009, 5:00 P M
Review Of Proposals	January 29 <sup>th</sup> through February 5 <sup>th</sup> , 2009
Proposer Presentations By Invitation	February 9 – 12, 2009
Pre-Selection Negotiation	February 13, 2009
Board Approval of Contract Award	February 27, 2009
Notice to Proceed Approximately	March 1, 2009

– *Acknowledged and in agreement. SJB GlobalNET. inc*

**1.2.16 Review of Project Scope**

- a) Proposer shall include in any proposal all costs necessary to cover all contingencies essential to the proper installation of any system, equipment or service proposed. – *Acknowledged and in agreement. SJB GlobalNET. inc*
- b) No claims for compensation will be considered or allowed for extra work resulting from ignorance of any existing condition on the part of the Proposer – *Acknowledged and in agreement. SJB GlobalNET. inc*

**1.2.17 Inclusion of Support Materials**

- a) Include in the RFP response document brochures and manuals providing technical specifications as well as specific descriptions of the operation of hardware and software applications to be proposed – *Acknowledged and in agreement. SJB GlobalNET. inc*
- b) Include clear and accurate photographs of all phonesets, supervisory and administrative interfaces, hardware based BLF consoles and any other system equipment and applications interfaces – *Acknowledged and in agreement. SJB GlobalNET. inc*

c) Clear and accurate photographs or drawings of all system equipment, cabinets, servers, gateways, firewalls, routers, etc shall be included with proposal – *Acknowledged and in agreement. SJB GlobalNET. inc*

d) If the literature, photographs or drawings differ in any manner from the systems and equipment being proposed, such differences must be explained in detail – *Acknowledged and in agreement. SJB GlobalNET. inc*

### 1.3 GENERAL EVALUATION CRITERIA

Proposals will be evaluated based on each of the categories listed below:

<b>Evaluation Criteria</b>	<b>Points Value</b>
1 Product/Manufacturer-Status, History and Future Roadmap	25 Points
2 Proposing/Serviceing Proposer-Capabilities	25 Points
3 Implementation/Migration Plan - Level-of-Completeness/Flexibility	25 Points
4 Capital Expense and Lifecycle-Costs	25 Points
5 Disadvantaged Business Enterprise Participation	5 Points
<b>Total Points Possible</b>	<b>105 Points</b>

– *Acknowledged and in agreement, SJB GlobalNET. inc*

#### 1.3.1 Evaluation Criteria: Product/Manufacturer

Evaluation in this category will be based on:

- a How well the proposed system meets or exceeds METRO's requirements.
  - b The degree of functionality and integration of productivity applications.
  - c Compatibility between METRO's planned network environment and the proposed solution
  - d Reliability, flexibility and adaptability of systems and equipment proposed.
  - e Manufacturer(s) complete product line, market position, future roadmap, track record, financial strength and commitment to proposed product(s).
  - f Perceived overall service level proposed system configuration will provide.
  - g Ease of use and administrative "maintainability" of proposed systems and equipment.
  - h Manufacture response time for critical systems under maintenance contract
- *Acknowledged and in agreement. SJB GlobalNET. inc*

#### 1.3.2 Evaluation Criteria: Proposing/Serviceing Proposer

Evaluation in this category will be based on:

- a Design, engineering, installation and service experience, expertise and performance track record in the industry
  - b Experience and expertise with systems of similar type, size and configuration.
  - c Experience and expertise with specific systems being proposed
  - d Completeness of proposal
  - e Quantity and quality of local technical staff
  - f Ability and willingness to work closely with other resellers/integrators whose systems will integrate with and/or interface to the proposed solution.
- *Acknowledged and in agreement. SJB GlobalNET. inc*

#### 1.3.3 Evaluation Criteria: Implementation/Migration Plan

Evaluation in this category will be based on:

- a. Quality and completeness of the overall plan (including installation, telephone room layout, software database development, testing, training, and cutover process for ALL systems proposed)
- b. Proposer's commitment of technical personnel to this project.
- c. Contingency plan in the event of problems
- d. Initial and ongoing training commitments

- e Degree of disruption and confusion to both Metro Users and outside callers
  - f Degree and quality of documentation to be provided during and after implementation (associated with all systems and equipment, trunks and circuits, software, etc.)
  - g Degree to which Proposers is explicit in their proposed work schedule and implementation plan
  - h The degree that the Proposer is willing to be flexible in 'piecing' out services for various tasks involved in installation and configuration
- *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.3.4 Evaluation Criteria: Capital Expense and Lifecycle Cost**

Cost items to be included in the financial analysis for each qualified proposal shall include:

- a All system equipment, software, license purchase cost
  - b All system/equipment labor/installation/configuration costs
  - c All system training cost for Users and Administrators
  - d Annual maintenance costs for the proposed system
- *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.3.5 Post Proposal Submission Communication**

- a) METRO will communicate with Proposers if it has further any questions with respect to the Proposers response(s) and to notify the "Finalist(s)" of the date and time of an opportunity to do an oral presentation/product demonstration
- *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.3.6 Proposer Presentations & System Demonstration**

- a) Upon receipt of Proposals in response to this RFP and METRO's subsequent evaluation of such, one or more Proposers may be selected and asked to attend oral presentation session(s) to discuss their proposals and/or provide live demonstrations of the proposed system(s). – *Acknowledged and in agreement. SJB GlobalNET. inc*
- b) METRO will notify all firms submitting proposals for review on the evaluation committee's scoring results. METRO will determine a short list of the top firms to make a presentation as described above. – *Acknowledged and in agreement. SJB GlobalNET. inc*

### **1.4 PARTIAL PROPOSAL AWARD**

- a) METRO reserves the right to retain, and/or delete certain portions of a successful Proposer's proposal (i.e., work related to such elements as voice messaging system(s) and other application(s), or services from contract award – *Acknowledged and in agreement. SJB GlobalNET. inc*
- b) If METRO exercises this option, such action shall not increase successful Proposer's obligations for any remaining portion of their proposal and is subject to prior contract approval of both Parties – *Acknowledged and in agreement. SJB GlobalNET. inc*
- c) METRO shall not extract from award any portion of a proposal that, in its reasonable judgment, materially affects the Proposer's ability to perform its obligations under the remainder of the proposal or contract – *Acknowledged and in agreement. SJB GlobalNET. inc*

#### **1.4.1 Contract Negotiations**

The final contract package shall include the RFP and any Addendums, your proposal response, and any *Proposal Amendments* made after Proposal submission and prior to final contract. – *Acknowledged and in agreement, SJB GlobalNET. inc*

#### 1.4.2 Contract Approval

Contract will be approved by METRO's Board of Directors prior to submittal to Contractor for review and signature. – *Acknowledged and in agreement. SJB GlobalNET, inc*

#### 1.5 AUTHORIZED DISTRIBUTOR & SERVICE PROVIDER

a) Proposals from Proposers who cannot provide total local warranty and service capabilities for all systems and equipment being proposed in the geographic areas where the system(s) will be located may be rejected. – *SJB GlobalNET, inc. Employees and contracted with individuals in the local (within 10 miles) area. Both the Project Manager and Lead Engineer are residents in Santa Cruz and Capitola, respectively. SJB GlobalNET, inc*

b) At the time the proposal is submitted, the Proposer must be an approved Reseller by the manufacturer of all major system elements proposed or must provide in their proposal evidence from an official of each manufacturer whose equipment is being proposed stating that the Proposer is qualified and has the authority to:

1) Re-sell new equipment of the type being proposed. – *Acknowledged and in agreement. SJB GlobalNET, inc*

2) Pass the manufacturer's warranty through to METRO with all first holder benefits of the warranty. – *Acknowledged and in agreement. SJB GlobalNET, inc*

3) Perform installation to include on-site service as the manufacturer's authorized service representative – *Acknowledged and in agreement, SJB GlobalNET, inc*

#### 1.6 PRIOR EXPERIENCE

a) In order to be considered, Proposer must have a minimum of three (3) years experience in all substantive areas of work contemplated in this RFP and must be able to substantiate and demonstrate such prior experience to METRO's satisfaction through references provided herein, and any other means deemed appropriate by METRO – *SJB GlobalNET inc was established in 1996 with its founder Sean Brender, a Senior Voice Network Engineer who has the distinction of installing the largest VoIP systems of their time, breaking records previously set. Note that these record breaking installations in the San Jose area mainly for Public School districts. Please see his resume for further information on experiences. SJB GlobalNET, inc*

b) A high-level of data network expertise is required. - *SJB GlobalNET, inc has design and installed global networks and has great strength in the area of data transport. SJB GlobalNET, inc*

#### 1.7 FINANCIAL CONDITION

a) The Proposer shall demonstrate to METRO's satisfaction that the manufacturer(s) of the proposed telecommunications systems and equipment are financially sound and are likely to remain strongly committed to the telecommunications field and all geographic locations where systems may be located for the next ten (10) years. – *By looking to the past, 3Com demonstrates their dedication to their voice platforms by offering continued support for the first commercially available VoIP platform, the NBX. This platform was the VoIP system first to market in 1998 and is still sold by 3Com today. SJB GlobalNET, inc*

b) At the request of the METRO (option) Proposer must submit, with the proposal, a copy of the most recent annual report of each manufacturer whose systems/equipment is being proposed. If any manufacturer is a subsidiary of another company, this requirement shall also apply to the

parent company. – *Acknowledged and in agreement where is can be provided SJB GlobalNET. inc*

c) At the request of the METRO (option) Proposer may also submit, with the proposal, a copy of their most recent annual report. If Proposer is not a public corporation, has no annual report available, other audited, verifiable financials of a comparable nature maybe provided – *Acknowledged and in agreement. SJB GlobalNET. inc*

## **1.8 AVAILABILITY OF PROPOSED SYSTEMS AND EQUIPMENT**

a) In order to be considered, all systems and equipment proposed herein must be of current manufacture and all primary system platforms must have been available in the United States as non-beta site installations for a minimum of two (2) years. Proposer must provide written evidence to support this claim. – *This evidence is provided in the 3Com VCX brochure included in this RFP SJB GlobalNET. inc.*

b) All equipment Proposed shall be new – *Acknowledged and in agreement, SJB GlobalNET. inc*

c) METRO's existing telecom equipment may not be considered for re-use – *Acknowledged and in agreement. SJB GlobalNET. inc*

d) Proposer shall demonstrate to METRO's satisfaction that the systems and equipment being proposed are main products of their respective manufacturers and that the systems and equipment will remain as main products with continuous development and improvement over the next ten (10) years. – *By looking to the past, 3Com demonstrates their dedication to their voice platforms by offering continued support for the first commercially available VoIP platform, the NBX. This platform was the VoIP system first to market in 1998 and is still sold by 3Com today SJB GlobalNET, inc*

e) Proposer shall demonstrate to METRO's satisfaction that the systems and equipment being proposed is fully "supportable" and maintainable on the proposed system over the next ten several years. – *By looking to the past, 3Com demonstrates their dedication to their voice platforms by offering continued support for the first commercially available VoIP platform, the NBX. This platform was the VoIP system first to market in 1998 and is still sold by 3Com today. 3Com maintenance contract pricing has been included that will explain the costs associated with coverage SJB GlobalNET. inc*

f) All system hardware and software proposed shall have the licensing cost included in Proposers Proposal. – *Acknowledged and in agreement. SJB GlobalNET. inc*

## **2.0 GENERAL FUNCTIONAL REQUIREMENTS**

### **2.1 BASE REQUIREMENTS**

Statements made in this section in no way limit the responsibilities of Proposer, and where conflicts with other statements or requirements in this RFP occur, the statement or requirement resulting in the greatest benefit or value to METRO, as unilaterally determined by METRO, shall be deemed the binding one.

This section has been developed in order to provide Proposers a brief overview of the nature and magnitude of the project. Statements in this section are intended to assist Proposers to ensure that their proposals encompass all necessary aspects of the project. – *Acknowledged and in agreement, SJB GlobalNET. inc*

Acknowledge and explain how your proposal addresses each section.

## 2.2 GENERAL SYSTEM REQUIREMENTS:

Provide an option for a turn-key fully-installed and configured system solution as specified in this RFP – *Acknowledged and in agreement. SJB GlobalNET. inc*

Shall include, but not necessarily be limited to: planning designing, engineering, ordering, delivering, installing, testing, developing and inputting data, integrating proposed components, cutting-over PSTN, documenting and warranting all systems and applications proposed unless otherwise negotiated prior to contracting – *Acknowledged and in agreement. SJB GlobalNET. inc*

Ensure that all existing systems are not adversely impacted by the new systems being proposed especially on WAN links Telco (carrier) services will be coordinated by METRO and are not included in this Scope of Work – *Acknowledged and in agreement. SJB GlobalNET. inc*

It is envisioned the telephone system and voice mail system will have the “look and feel” of a single system so that in general:

- 1) Intra-METRO calls may be made using an abbreviated dialing plan – *Acknowledged and in agreement. User will have a unique dial-able extension from anywhere on the system SJB GlobalNET. inc*
- 2) Voice mail messages may be forwarded to any subscriber in METRO, regardless of subscriber’s physical location plan – *Acknowledged and in agreement. User will have a ability to forward messages to any voicemail box on the system SJB GlobalNET. inc*
- 3) Voice mail distribution lists will include subscribers at any physical location plan – *Acknowledged and in agreement. User will have the ability to send messages via lists to any voicemail box on the system SJB GlobalNET. inc*
- 4) All Users will be in a global directory accessible to all Users from a phoneset plan – *Acknowledged and in agreement. User will have a and be listed in the global directory with is accessible from the display panel on every phone SJB GlobalNET. inc*

METRO’s (WAN) is to be used for inter-METRO voice communications and access to a centralized voice mail system Proposed systems need to support voice solutions such that intra-METRO calls will traverse the data network. If unable to do so; then they dial-out via the PSTN – *The VCX system will have VoIP functionality with QoS services provided by the existing and/or new network equipment Each system can have at least four analog lines except for Vernon and ParaCruz which can have up to eight to use to dial alternative inbound routes to sites to maintain uniform dial-plan even during WAN outage SJB GlobalNET. inc*

METRO’s data network will be used to support proposed phonesets and system components. – *Existing 3Com switches are configured “out of the box” for 3Com voice platforms, prioritizing voice traffic from 3Com devices without the need for special configuration Existing non-3Com equipment will be able to support voice data traffic after QoS has been properly configured on each device SJB GlobalNET. inc*

METRO’s existing cable infrastructure will be used to support telephone sets and computer terminals (mostly thin-client) – *Acknowledged and in agreement. SJB GlobalNET. inc*

The call accounting system will capture and process all inbound, outbound and internal voice calls, log system faults, and send email to the Administrator on all alarms. – *Acknowledged and in agreement. All data will be captured by central call detail reporting (CDR) SJB GlobalNET. inc*

A call detail reporting application will log all relevant information including ACD groups – *ACD reports will be provided by 3Com eXchange Contact Center. SJB GlobalNET, inc*

Contractor is to perform all tasks necessary to Plan, develop, install and integrate all operating systems, and user databases using the OEM's "System Planning Guide" as a default guide for installation customization. – *3Com supplies a "System Planning Guide" and it has been incorporated into the implementation plan. SJB GlobalNET, inc*

Enter all system, user and application database(s) into the appropriate systems and test them comprehensively – including name and extension directories, COS and other parameters. – *Acknowledged and in agreement. SJB GlobalNET, inc*

It is contemplated that some programming "fine-tuning" will be required after the final phase of cutover. Therefore, Proposers will be required to provide reasonable changes to the database at METRO's request for thirty (30) calendar days after the final phase of cutover at no additional charge to METRO. – *Acknowledged and in agreement. SJB GlobalNET, inc*

Develop and conduct training programs specifically designed for the system(s) being proposed, including system administration, main answering points and end-user training. The extent, nature and scheduling of such training shall be described in detail. – *Acknowledged and in agreement, in addition pre and post installation training at each site/department will ensure that all users are comfortable with system features and functions. SJB GlobalNET, inc*

The system **must** be based on a technically strong, leading-edge platform and have a high-probability of accommodating evolving METRO needs and new applications as they arise and are deemed appropriate for implementation (i.e., system must be robust and from a major corporation (OEM) with minimum 3 years in telecommunications. – *The VCX platform was the first VoIP carrier class switch to run entirely on the "open" protocol SIP. The platform was scaled down to the Enterprise and then further down to fit branch offices with full survivability. The VCX is running version 8.0 and has been fully developed for over five years. SJB GlobalNET, inc*

**All Proposal submissions must include requisite hardware, operating systems, software, media and licensing. Requiring METRO to provide hardware or other systems, devices, software, etc., other than network connectivity, equipment rack space and AC power, is not permissible.** – *Acknowledged and in agreement. SJB GlobalNET, inc*

The proposed solution must be flexible and easy to move when facilities change physical location – *Acknowledged and in agreement. SJB GlobalNET, inc*

## 2.3 SYSTEM FEATURES

a) It is understood and assumed for the purposes of this RFP that IPPBX systems support hundreds or even thousands of features and functions. Most features are basic and included on most systems and it is understood that no system will have every feature, and that some systems will have additional features. The Proposer should be familiar enough with the proposed solution to answer the questions below even if the feature is called by another name by individual OEMs. – *Acknowledged and in agreement. SJB GlobalNET, inc*

b) Below is a list of generally desirable features – *Acknowledged. SJB GlobalNET, inc*

c) Please answer Y (YES) or N (No) to indicate if the feature is (or is not) included in your proposed solution. Included means that the feature will be supported by the proposed hardware, software and licensing included in your proposal without additional cost. If a feature is Optional, indicate with an O (OPTIONAL). State the cost of Optional features by itemizing as *an option* in Schedule A. – *Acknowledged and in agreement. SJB GlobalNET, inc*



### 2.3.1 Features Q&A:

	Questions	Answers
2.3.1.1	Call Forward - the ability to forward an inbound call that arrives at a phone to another destination	YES
2.3.1.2	Call Forward - All Users can direct all calls to another station or location	YES
2.3.1.3	Call Forward – Busy- User can redirect calls to another station or location when busy.	YES
2.3.1.4	Call Forward - Ring No Answer- User can redirect calls to another station or location after specified number of rings.	YES
2.3.1.5	Call Forward - Call forward can be programmed on the phone either via a button or menu selection	YES
2.3.1.6	Call Forward - Call forward can be programmed via the user interface from a Thin-Client Terminal	YES
2.3.1.7	Call Forward - Call forward state can be viewed by the phone display	YES
2.3.1.8	Call Forward - One-button send all calls automatically redirects all calls to coverage with a single button push.	YES
2.3.1.9	Call Forward - Voice Mail Must support direct call forward to an individual Voice Mail Box	YES
2.3.1.10	Call Forward - The ability to forward a call based on Call Screening options	YES
2.3.1.11	Call Forward - Class of Service Override -The ability to limit a User's ability to forward calls based on their COS	YES
2.3.1.12	Call Handling - The ability to place, terminate and manipulate calls from a phone	YES
2.3.1.13	Call Handling - Call Drop - No On hook Terminate the call without hanging up the receiver.	YES
2.3.1.14	Call Handling - Call Drop - On hook- Terminate the call by placing the phone on hook	YES
2.3.1.15	Call Handling - Call Place - No Off Hook - The ability to place a call without going off hook	YES
2.3.1.16	Call Handling - Call Place - Off Hook - The ability to place a call after going on hook	YES
2.3.1.17	Call Handling - Call Return - Calls back the last incoming number	YES
2.3.1.18	Call Handling - Last Number Redial - Redials last number called	YES
2.3.1.19	Call Handling - Hands Free Support - Incoming calls will be auto answered in the hands free mode going to the speaker phone with no User intervention	YES
2.3.1.20	Call Handling - Headset support- Plantronics and other 3 <sup>rd</sup> party headsets are supported	YES
2.3.1.21	Call Handling - Mute Button on all phones to disable the microphone for handset and speakerphone.	YES
2.3.1.22	Call Handling - Volume control for speaker, handset, and ringer.	YES
2.3.1.23	Call Handling - Call duration - Display the duration of the call on the terminal display	YES
2.3.1.24	Call Handling - Do Not Disturb – One button ability to change call ring state	YES
2.3.1.25	Call Handling - Forward to Vmail - One button to forward inbound call to voice mail	YES
2.3.1.26	Call Handling - Hold - One button touch to place call on hold	YES

2.3.1.27	Call Handling - Speaker Phone - Toggle Transition call to/from speaker function with single button	YES
2.3.1.28	Call Handling - Date & Time Ability to view the current date and time on phone display	YES
2.3.1.29	Call Handling - Line Status - Ability to view line status visually from phone with BLF (6 lines or greater)	YES
2.3.1.30	Call Handling - Transfer - The ability to invoke a call transfer feature through single button	YES
2.3.1.31	Call Handling - Call Hold Timer - The ability to alert a user they have a call on hold exceeding a configurable length of time	YES
2.3.1.32	Call Handling - Call Hold Indicator -The ability to indicate visually to a user that they have a call on hold	YES
2.3.1.33	Call Handling - Feature Help - The ability to indicate to a user, through a Thin-Client Terminal and GUI interface, who is invoking a feature interactive Help	YES
2.3.1.34	Call History - Display to the user recent call activity on their phone	YES
2.3.1.35	Calling History - User can view the last few missed calls, answered calls and dialed calls through the display on the phone	YES
2.3.1.36	Calling History - User can view the last few missed calls, answered calls and dialed calls through the phone display	YES
2.3.1.37	Call History - Missed call indicator - Visual indication that at least one call has been missed	YES
2.3.1.38	Call History - Remote View - missed call through the web interface	YES
2.3.1.39	Call Hold - Reminder Audible reminder - when the held call has crossed a time threshold	YES
2.3.1.40	Call Hold - Consultation - The ability for users in a hunt group to collaborate while a call is on hold	YES
2.3.1.41	Call Hold - Music on Hold-The ability for a user who is placed on hold to "hear" a defined recording based on department or location	YES
2.3.1.42	Call Hold - Music on Hold - Customer group - A caller hears music when placed on hold and this can be customized per user or per group	YES
2.3.1.43	Call Hold - Music on Hold - The ability for the system administrator to define what "recording" a caller hears while on hold based on department or group	YES
2.3.1.44	Call Park/Pickup - The ability for a user to place a call on hold and have another user pickup the call and talk to the calling party	YES
2.3.1.45	Call Park/Pickup - Call Park Timeout-The call comes back to the original party once the park timer expires	YES
2.3.1.46	Call Park/Pickup - System Park Range The ability for the system administrator to set a range of call park numbers	YES
2.3.1.47	Call Park/Pickup - One Touch - The ability for a user to pickup a call with one touch assuming they have configured their phone to do so	YES
2.3.1.48	Call Park/Pickup - Directed – Protected-The ability to pickup a remote ringing phone from another device with authorization code	YES
2.3.1.49	Call Park/Pickup - Group - System Range The ability for the system administrator to set a range of call park numbers for a specified group	YES
2.3.1.50	Call Park/Pickup - Group - The ability for the system administrator to add a user to a pickup group	YES
2.3.1.51	Call Park/Pickup - Call pickup - A user can answer a call ringing on another extension where both extensions are part of a pickup group	YES

2.3.1.52	Call Park/Pickup - Multi-site call Park - The ability to park and pickup a call across different call processors	YES
2.3.1.53	Call Screening - Gives the system administrator and user the ability to be aware of inbound calls and limit their access to their phone	YES
2.3.1.54	Call Screening - Black List - Gives the user the ability to block incoming calls based on specific numbers or patterns –	YES
2.3.1.55	Call Screening - Toll Screening - Block Access list to restrict the User's ability to make toll calls	YES
2.3.1.56	Call Screening - Call Blocking Allows users to selectively block calls from administrator - defined origins (e.g. specific extensions, ANIs, off-net calls in general)	YES
2.3.1.57	Call Screening - Distinctive Ring – Anonymous - Ability for a user to select a specific ring tone to be played for inbound call that have their Caller ID suppressed	YES
2.3.1.58	Call Screening - Distinctive Ring - Internal Ability for a user to select a specific ring tone to be played for inbound calls that are internal METRO calls	YES
2.3.1.59	Call Screening - Distinctive Ring – External - Ability for a user to select a specific ring tone to be played for inbound calls that are external callers to the system	YES
2.3.1.60	Call Screening - Calling Number Delivery - The ability to display the calling parties number	YES
2.3.1.61	Call Screening - Calling Name Delivery - The ability to display the calling parties name (for internal calls only)	YES
2.3.1.62	Call Screening – Preferences - The ability for an end user to configure their call screening privileges via the web interface	YES
2.3.1.63	Call Screening - Type of Service - The ability for the system administrator to define a User's default call screening preferences	YES
2.3.1.64	Call Screening - Class of Service - The ability for the system administrator to define the basic calling rights of an end- user	YES
2.3.1.65	Class of Service - Class of Service - The ability for the system administrator to define the basic calling rights of an end- user	YES
2.3.1.66	Class of Service - Internal Calls - The ability for the system administrator to limit Internal calls	YES
2.3.1.67	Class of service - Local Calls - The ability for the system administrator to limit local calls	YES
2.3.1.68	Class of Service - Long distance calls - The ability for the system administrator to limit long distance calls	YES
2.3.1.69	Class of service - International Calls - The ability for the system administrator to limit internal calls	YES
2.3.1.70	Class of Service - Toll Calls - The ability for the system administrator to limit Toll calls	YES
2.3.1.71	Class of Service - Toll Free Calls - The ability for the system administrator to limit Toll Free Calls	YES
2.3.1.72	Class of Service - Operator Assisted Calls - The ability for the system administrator to limit Operator assisted calls	YES
2.3.1.73	Class of Service - Emergency Calls - The ability for the system administrator to limit Emergency Calls	YES

2.3.1.74	Class of Service - Redirected Calls - The ability for the system administrator to limit call redirections	YES
2.3.1.75	Class of Service - After Hour Calls - The ability for the system administrator to limit after hour calls	YES
2.3.1.76	Class of Service – Override - The ability for the system administrator to specify class of service override functions (account codes)	YES
2.3.1.77	Type of Service - The ability for a system administrator to define the specific calling features and user or group of users has access to	YES
2.3.1.78	Type of Service - Feature Access-Assignment - The ability for the system administrator to define which features a user can access	YES
2.3.1.79	Type of Service - Feature Default Settings - The ability for the system administrator to define the default setting of user and group features	YES
2.3.1.80	Type of Service - Hunt Group Creation - The ability for the system administrator to create hunt groups	YES
2.3.1.81	Type of Service - Hunt Group Assignment - The ability for the system administrator to assign users to hunt groups	YES
2.3.1.82	Type of Service - Pick up Group Creation - The ability for the system administrator to create pickup groups	YES
2.3.1.83	Type of Service - Pickup up Group – Assignment - The ability for the system administrator to assign users to pickup groups	YES
2.3.1.84	Type of Service - Bridged Line Assignment - The ability for the system administrator to create bridged extensions	YES
2.3.1.85	Type of Service - System Speed dial – Creation - The ability for the system administrator to create system speed dials globally	YES
2.3.1.86	Type of Service - Class of Service- Assignment - The ability for the system administrator to assign users COS	YES
2.3.1.87	Type of Service - Line Appearance- Assignment - The ability for the system administrator to define how many line appearances a user may have	YES
2.3.1.88	Type of Service - Number Assignment- The ability for the system administrator to assign a user an extension(s)	YES
2.3.1.89	Type of Service - User Account – Creation- The ability for the system administrator to create a user account	YES
2.3.1.90	Call Transfer - Consultative - One Button - The ability to transfer a call after consulting with the 3rd party via one button	YES
2.3.1.91	Call Transfer - Blind - One Button The ability to transfer a call without consultation via one button	YES
2.3.1.92	Call Transfer - Voice Mail Directed Automatically redirects all calls to voicemail with a single button push.	YES
2.3.1.93	Call Transfer - Blind - Call Coverage - The ability to transfer a blind transfer to the third parties call coverage after "ring no answer"	YES
2.3.1.94	Call Transfer - Class of Service- Enforcement - The ability to limit blind transfer call coverage and transferor to be limited by their class of service definition	YES
2.3.1.95	Call Transfer - Release - The ability to release the transferor's line appearance once the call transfer is completed	YES
2.3.1.96	Camp On - The ability for a user to request that the system seize an end users line appearance when it returns to the idle state	YES
2.3.1.97	Camp On - Call back - The ability to receive an inbound call when the camped on extension becomes idle (i.e. place a call between two users)	YES

2.3.1.98	Camp On - Multi-site The ability to camp on an extension that is on a different call processor or remote site on the system	YES
2.3.1.99	Camp On - Time Out - The ability to specify a time out on a camp on request	YES
2.3.1.100	Camp On - Queuing - Multiple calls can be camped on to the same extension and the call will be returned in the order in the queue	YES
2.3.1.101	Dialing Plan - The ability to create a private dial-plan	YES
2.3.1.102	Dialing Plan - 3 Digit Dialing Plan - The ability to create a private dialing plan based on 3 digits	YES
2.3.1.103	Dialing Plan - 4 Digit Dialing Plan The ability to create a private dialing plan based on 4 digits (abbreviated dialing)	YES
2.3.1.104	Dialing Plan - Internal Number - The ability for the system to identify that the number dialed is an on-net call even though the call was not indicated as such	YES
2.3.1.105	Dialing Plan - Pattern - Internal Calls - The ability for the system administrator to define internal call patterns	YES
2.3.1.106	Dialing Plan - Pattern - Local Calls - The ability for the system administrator to define local call patterns	YES
2.3.1.107	Dialing Plan - Pattern - Long distance calls - The ability for the system administrator to define long distance patterns	YES
2.3.1.108	Dialing Plan - Pattern - National calls - The ability for the system administrator to define national call patterns	YES
2.3.1.109	Dialing Plan - Pattern - International Calls - The ability for the system administrator to define International call patterns	YES
2.3.1.110	Dialing Plan - Pattern - Toll Calls - The ability for the system administrator to define Toll call patterns	YES
2.3.1.111	Dialing Plan - Pattern - Toll Free Calls The ability for the system administrator to define Toll Free Call pattern	YES
2.3.1.112	Dialing Plan - Pattern - Emergency Calls - The ability for the system administrator to define Emergency Call pattern	YES
2.3.1.113	Hotelling or Hot-Seating- Ability for a user to log into a device and make it appear as though it was their own extension	YES
2.3.1.114	Hotelling - Open Access - Ability to allow any user to log into a phone with an infinite or defined log in time or timeout	YES
2.3.1.115	Hotelling - Multiple Access - Ability to allow a user to log into more than one device at a time	YES
2.3.1.116	Hunt Group – “Ring All” Groups-The group has its own extension. The second call to the group will queue behind the first ringing call.	YES
2.3.1.117	Hunt Group – Circular-Hunt groups may also be referred to as a round robin. The group has its own extension. The next available member answers new call	YES
2.3.1.118	Hunt Group – Linear - The group has its own extension. Calls distributed to the next agent in line.	YES
2.3.1.119	Hunt Group - Voicemail box is available for huntgroup members which can be automatically created. Hunt group mailbox is available in the global directory	YES
2.3.1.120	Hunt Group Coverage - Hunt groups can have time-based, holiday-based call coverage	YES
2.3.1.121	Hunt Group –Chaining - Hunt groups can be chained together as a multi level hunt group	YES

2.3.1.122	Hunt Group - Distinctive Ring - Calls coming into a hunt group can have a distinctive ring	YES
2.3.1.123	Hunt Group - Delayed Ring - Hunt group members can select delays so that they can have delayed ringing	YES
2.3.1.124	Hunt Group - Queue Threshold - Call threshold traps are sent to the phones based on time caller spends in the queue	YES
2.3.1.125	Hunt Group - Queue Threshold - Call threshold traps are sent to the phones based on the number of callers in the queue	YES
2.3.1.126	Hunt Group - Queue Announcement - Announcements are played when a user enters a hunt group queue	YES
2.3.1.127	Hunt Group - Call Reports - Call Reports are generated for every hunt group	YES
2.3.1.128	Hunt Group - Multi-site - Hunt group members can be part of a distributed telephony system Hotline	YES
2.3.1.129	Direct phone to gateway dialing - Provides remote survivability in case of call processor failures, such that the phone dials out/in directly to PSTN.	YES
2.3.1.130	Hot Ring Down - The phone connects to a predetermined number as soon as the user picks up the phone.	YES
2.3.1.131	Warm Ring Down (Warmline) The phone connects to a predetermined number if the user picks up the phone and does not dial a number within a period of time	YES
2.3.1.132	MWI - Message Waiting Indication - MWI A visual indicator of a voicemail message. (I.e. blinking lamp)	YES
2.3.1.133	MWI - Visual - A visual indication (BLF) that one or more messages is available	YES
2.3.1.134	MWI - Count - A visual indication in the display to the number of messages that are available	YES
2.3.1.135	MWI - Type - An indication to the type of messages that are available (voice, email or fax)	YES
2.3.1.136	MWI - Multiple MWIs on a single phone	YES
2.3.1.137	Paging - Phoneset - The ability send audible messages to users or groups of users without them having to take any action	YES
2.3.1.138	Paging - Group (Zone) Send a page to a group of Users that may be distributed at different physical locations on the system	YES
2.3.1.139	Paging - Overhead - Send a page to an overhead paging system by attaching a SIP based endpoint	YES
2.3.1.140	Speed Dial - One Touch Programmable one-touch speed dial on a phone set.	YES
2.3.1.141	Speed Dial - Feature Code Program Speed dial feature keys	YES
2.3.1.142	Speed Dial - Global administrated administrator defined speed dial number	YES
2.3.1.143	Speed Dial - Personal Provisioning - Program speed dials from web interface	YES
2.3.1.144	Speed Dial - BLF Speed Dials phones have busy line field functionality, thus displaying the status of the extension mapped on the device	YES
2.3.1.145	User Directory -Global - The user directory is available on the phone display and through the user web portal.	YES
2.3.1.146	The User Directory is searchable and can be used directly to initiate calls In on one, out on another...	YES

2.3.1.147	Trunk to Trunk - via Redirection - The ability to redirect a trunk call to trunk out to another number through the PST	YES
2.3.1.148	PSTN to PSTN Routing - Support for creating routes to make calls using VOIP for transparent trunking	YES
2.3.1.149	PSTN to IP Routing - Support for creating routes to provide phone numbers to IP destinations	YES
2.3.1.150	IP to PSTN Routing - Support for creating routes to make calls to PSTN destinations	YES
2.3.1.151	IP to IP routing Support for e-mail/URL(SIP) addresses	YES
2.3.1.152	NANP Support for 7/10/11 digit North American Numbering Plan	YES
2.3.1.153	NPA Routing Route calls based on the NPA of the called number in NANP	YES
2.3.1.154	NPA NXX Routing Route calls based on the NPA NXX of the called number in NANP	YES
2.3.1.155	Support for dialing prefixes - This feature allows the use of country specific prefixes used for make local/national/international calls.	YES
2.3.1.156	Alternate Routing to provide alternate routes to reach the same endpoint	YES
2.3.1.157	Network Abbreviated Dialing - Support for abbreviated numbers	YES
2.3.1.158	Call Blocking - Block calls to a specific number or a specific numbering plan	YES
2.3.1.159	Outbound Restriction Ability - to restrict outbound calls from an endpoint	YES
2.3.1.160	Time of day Routing - The ability to route calls based on the time of day	YES
2.3.1.161	Calendar Routing - The ability to route calls based on the day	YES
2.3.1.162	Forward fax as email	YES
2.3.1.163	Retrieve faxes as email	YES
2.3.1.164	Send fax from PC or thin-client terminal	YES
2.3.1.165	Send Messages - Record a message to be sent	YES
2.3.1.166	Send Messages - Play back the message before sending	YES
2.3.1.167	Send Messages - Delete a message before it is stored	YES
2.3.1.168	Send Messages - Send to Extension(s) Send a message to an extension	YES
2.3.1.169	Send Messages - Send to Group List(s) - Send a message to a group	YES
2.3.1.170	Send Messages - Mark Private - Mark a message private so that it cannot be forwarded	YES
2.3.1.171	Send Messages - Mark Priority (urgent) - Mark a message urgent	YES
2.3.1.172	Send Messages - Schedule future date/time - Schedule a message for future delivery	YES
2.3.1.173	Get Messages and Respond - Play back message - Play a message	YES
2.3.1.174	Get Messages and Respond - Rewind a message Play a message	YES
2.3.1.175	Get Messages and Respond - Back >Up (3-4 words at a time) a message	YES
2.3.1.176	Get Messages and Respond - Advance (3-4 words at a time) a message	YES
2.3.1.177	Get Messages and Respond - Skip a message	YES
2.3.1.178	Get Messages and Respond - Save a message	YES
2.3.1.179	Get Messages and Respond - Delete a message before it is stored	YES
2.3.1.180	Get Messages and Respond - Undelete (prior to disconnecting) - Undelete a message before disconnecting	YES
2.3.1.181	Get Messages and Respond - Forward with comment - Forward a message with comments	YES
2.3.1.182	Greeting Administration - Listen to current greetings (up to 9) Listen to the current greetings	YES

2.3.1.183	Greeting Administration - Ability to add, delete, approve greetings voice mail greetings	YES
2.3.1.184	Record User Name - Record, Delete user names	YES
2.3.1.185	Password Management - Change Password System can force the password to be changed at a periodic administrator configurable time	YES
2.3.1.186	Password Management - Cannot use consecutive digits System can force the password to be such that no consecutive digits are used	YES
2.3.1.187	Password Management - Cannot be same as extension - System can force the password to be different from the extension	YES
2.3.1.188	Password Management - Length of password - System can force the length of the password	YES
2.3.1.189	Auto Attendant - Auto-attendant functionality with user directory functionality at DTMF tone	YES
2.3.1.190	Auto Attendant- Configurable for phone, user, extension, department and location	YES
2.3.1.191	Call Return - Return a call to the person leaving the message after hearing the message	YES
2.3.1.192	Custom Greetings - Users can provide their customized greetings for voice mails/ find me follow me	YES
2.3.1.193	Distribution Lists - System distribution lists that can be accessed by a group of users.	YES
2.3.1.194	Extended Absence Greetings - Users can set customized greeting for extended absence.	YES
2.3.1.195	FAX auto delivery - When there is an event in the mailbox a fax notification is sent via fax	YES
2.3.1.196	FAX mailbox - Ability to receive faxes in a mailbox	YES
2.3.1.197	Find Me Follow Me - Gives the user the ability to program the call coverage points based on time of day.	YES
2.3.1.198	Find Me Follow Me - Gives the user the ability to program the call coverage points based on day of week	YES
2.3.1.199	Find Me Follow Me - Gives the user the ability to program the call coverage points based on ANI (caller ID)	YES
2.3.1.200	Future Delivery - Record message to be delivered at a future time	YES
2.3.1.201	Fwd email as - FAX Email is sent to a fax machine	YES
2.3.1.202	Fwd voice as email - Voice can be forwarded as email through a WAV attachment	YES
2.3.1.203	The system supports IMAP4 and POP3	YES
2.3.1.204	Mailbox full - Alert Alerts the user when the mailbox is full	YES
2.3.1.205	Message Annotation - Can annotate a message before forwarding to another party	YES
2.3.1.206	Message Broadcast - system supports a mechanism for all user mailbox to be notified with a message	YES
2.3.1.207	Message Notification - Message notification can call internal/external and/or send an email notification	YES
2.3.1.208	Help - Is Help available through the voice mail system	YES
2.3.1.209	Out-dial from inbox - Provides the user the ability to out-dial a number once he enters into the voice mail system	YES
2.3.1.210	Personal Auto Attendant - Configure a personal auto-attendant for features such as find me follow me	YES



2.3.1.211	Print Fax to Printer - The user can print faxes onto a printer from interface	YES
2.3.1.212	Fax Cover Sheets -Ability to provide a personalized fax cover sheet	YES
2.3.1.213	Prompts Bypass - Provides the ability to bypass prompts using DTMF tones	YES
2.3.1.214	Voice Mail/Fax/Email integration - Retrieve voice mail or faxes as email in an email client	YES
2.3.1.215	Microsoft Active Directory and LDAP supported throughout. If not now, when?	YES

### 2.3.2 Additional Telephone Features Proposers Wish to Propose/Provide

Feature Description	Provided – Yes or No	Cost if not Standard
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## 2.4 IP TELEPHONY/NETWORKING

### 2.4.1 Routers

a) Please propose a routed environment to assure proper functionality – *3Com Router 5231 at ParaCruz and Pacific Station SJB GlobalNET, inc*

b) As to whether the current Adtran Netvanta 3430 model routers are suitable and will allow full functionality of the proposed voice/ messaging system is the responsibility of the Proposer. Please certify here that this existing router infrastructure will work correctly with the proposed solution – *It is strongly recommended that 3Com routers be used for proven interoperability, management and support. Though the Adtran Netanta 3430 is QoS enabled, they have not certified their product with 3Com so there exists no official guaranty that voice traffic will be managed in the correct manor. That being said, data is data and the routers should route according to industry standards. SJB GlobalNET, inc.*

c) If current routers are not suitable please specify replacements as part of your proposal and include them as an itemized cost. – *New 3Com routers have been included as an option. Since you are choosing to install your new VoIP system parallel to your existing system, we can see if the Adtran Nevanta 3430 will meet specification set forward by interoperability QoS before final cut-over. If not, METRO has the option to then purchase 3Com routing to ensure proper QoS. SJB GlobalNET, inc*

d) Include in your proposal all needed interface modules for T1 and PRI applications for the proposed solution as an itemized cost – *Acknowledged and in agreement. SJB GlobalNET, inc*

### 2.4.2 Data Switches

a) The Proposed solution must work with complete intended functionality on the current (LAN) switched network at all the sites in this RFP or you are required to propose updates to the switched environment as part of your proposal if needed. See Appendixes A & B – *Acknowledged and in agreement. SJB GlobalNET, inc*

b) Verify that the proposed solution is completely *inter-operable* with the switched infrastructure diagramed in Appendixes A & B – *The 3Com telephones will work on all listed switches in appendixes A & B. However for ease of management, it is recommended that you replace all non-3Com switches supporting telephones with 3Com or Cisco switches or a switch that support the feature "Voice VLAN" in order to separately VLAN the telephone devices separate from the computer/terminals that are "daisy-chained" to the telephones. SJB GlobalNET, inc*

### 2.4.3 Firewall

a) The current Internet firewall is a Fortinet Fortigate FG-100a – *Acknowledged and in agreement, SJB GlobalNET, inc*

b) Will the current firewall support up to ten concurrent remote users so that they can work effectively with data and voice. – *The FG-100a will provide for up to ten concurrent connections via VPN Note: A software application phone can be loaded on laptops and connect via VPN connection from off-site in order to reduce on hardware and cost. SJB GlobalNET, inc*

c) With an expectation of quality service, and with METRO understanding that the “Internet” cannot support QoS tags (Quality of Service) will your proposed solution provide most remote users an acceptable level of service? – *This question is subjective and depends on the codec that you are running I would suggest G 729 for WAN communications (23Kbps stream) Acceptable level of service on the Mean Opinion Score for codec G 729 is a 3.92 out of 5.0 (better than your home phone) I suggest LAN communication at G 711 (83Kbps) unless bandwidth limitations require less voice bandwidth but running at G 711 which has a MOS of 4.14 out of 5.0. The V.C.X can operate using multiple codecs including G 711, G 729 and G723. SJB GlobalNET inc*

### 2.4.4 Management and Administration

a) A system management solution is desired and must be able to have “Visibility” of phonesets on the network, including 3rd party devices. – *3Com offers several management solutions for their work equipment. Optionally, 3Com Network Director is included to provide management and/or visibility capabilities of 3Com and non-3Com network devices. SJB GlobalNET, inc*

b) Visibility is defined as the ability to see the all phonesets and softphones after the management suit has performed a network “discovery” and automatically populated a GUI (graphical user interface) with the complete list of these devices – *3Com offers Network Supervisor which can perform these basic functions. Network Supervisor runs on Windows XP platform and is distributed by 3Com free of charge. SJB GlobalNET, inc*

c) The management utility should be able to see and access the interfaces to all system components that require administration with a GUI User interface either WEB based or software client. These options must be tested on METRO’s Citrix thin-client terminals prior to bid award – *Acknowledged and in agreement. SJB GlobalNET, inc*

### 2.4.5 Network Management Administration

a) The ability to manage the IP telephony solution and other network components such as switches, routers, wireless bridges, optical bridges, and other components from a single application interface is very desirable – *Optionally, 3Com Network Director is available to meet these requirements. SJB GlobalNET, inc*

b) Please propose options for managing the complete data network and voice solution if possible – *Acknowledged and in agreement. SJB GlobalNET, inc*

c) What Troubleshooting features does the proposed solution have? - *Ping tests, trace routes and other industry standard tools are used to acquire the data from the network/devices to build a list and visual representation of the data network. SJB GlobalNET, inc*

d) Describe what features your proposed solution has for monitoring network and voice performance.

### 2.4.6 Addressing Scheme and VLANs

a) The existing IP addressing scheme is expected to remain in place, and new subnets may be added to METRO's network environment when new sites come on-line – *Acknowledged and in agreement. SJB GlobalNET. inc*

b) Dynamic Host Configuration Protocol (DHCP) for all phoneset stations must be provided anywhere on the METRO network in your proposal. Briefly explain how it is to be implemented and managed. - *If using existing Metro network equipment please explain in detail here how this will work and be managed effectively DHCP can be provided by existing DHCP services using option 128 and 156 SJB GlobalNET. inc SJB GlobalNET. inc.*

c) A voice (VLAN) is required for all phonesets in the METRO network environment – *Voice VLAN will require Voice VLAN enabled switches. Optionally METRO may purchase additional 3Com switches for the telephones. In addition, routers or layer 3 switches will be needed to manage a separate DHCP pool for voice devices SJB GlobalNET. inc*

d) Explain how your proposed solution configures new and moved phonesets to the voice VLAN in the METRO network environment – *If you are using a Voice VLAN enabled switch, the telephone is identified by the first six digits of the MAC address. The connected switch port is then dynamically assigned to the Voice VLAN and offers a trunk-type connection to the telephone that supports the Voice VLAN for the phone and the default VLAN for the up-link port on the telephone device. The telephone assigns its uplink port to the default VLAN SJB GlobalNET. inc*

e) Can the proposed solution lock MAC (Media Access Control) addresses to the switch port? – *All the 3Com switches proposed in the options offer this feature. This is a feature of the switch, not the telephone or VoIP solution SJB GlobalNET. inc*

#### **2.4.7 Antivirus**

a) A “fully-qualified” anti-virus solution is required in your proposed solution if any Microsoft platform is being proposed. Explain in detail how the proposed solution safe-guards Windows-based systems from virus attacks and how “patches” are managed and kept updated – *Optionally, Norton Anti-virus or any other existing site-licensed software that will run on Windows XP/2003. SJB GlobalNET. inc*

b) Are ALL Microsoft patch management duties automated? – *Yes. SJB GlobalNET. inc*

#### **2.4.8 Security**

a) Explain to what extent METRO is susceptible to “hackers” in the proposed network and system environment after the proposed solution is implemented, and what steps are included, and what is optional to prevent intrusion and other exploits. - *The VCX runs entirely on a hardened linux operating system and has firewalled network ports along with trusted end-points to secure the network front from attack. Trunk-to-trunk transfers can be restricted to prevent telephone dial-in hacks and toll restriction along with a “Black List” can be created to block number patterns and URL's (the future of dialing via SIP trunks) which secures the voice interface front SJB GlobalNET, inc*

#### **2.4.9 Quality of Service (QoS)**

a) Proposer shall configure QoS for LAN and WAN segments to best support METRO's current applications and the new IP telephony environment – *Acknowledged and in agreement. SJB GlobalNET. inc*

b) Explain how QoS is implemented for every phoneset on the proposed WAN and LAN hardware. - *Queues are created on the routers and QoS is enabled. QoS is enabled on the non-3Com switches. All 3Com the switches are ready to go SJB GlobalNET. inc*

#### **2.4.10 Wide Area Network**

a) Existing T1 circuits from an ATT State contract are to be retained. Similar State contracts are to be used for provisioning of PRI and analog circuits if needed. – *Acknowledged and in agreement. SJB GlobalNET, inc*

b) Explain how you propose to install and configure WAN segments during business hours and what hardware is used for WAN termination - *If 3Com routers are optionally purchased, an off-line configuration will be created and used to apply new or roll-back configs within seconds. Otherwise, downtime may need to be scheduled depending on your existing configuration. SJB GlobalNET, inc*

c) Digital lines require both a channel service unit (CSU) and a data service unit (DSU). The CSU provides termination for the digital signal and ensures connection integrity through error correction and line monitoring.

1) Is the CSU/DSU *embedded* or an add-on "module" in the proposed solution? How many Ports can be supported by each device? – *Embedded "on-board", there are 1, 2 and 4 port modules. SJB GlobalNET, inc*

2) Describe the proposed solution - *A single PRI circuit at Vernon to provide PSTN inbound/outbound access for Vernon, Operations, Golf Maintenance, Pacific Station, E911 and backup call center inbound access. As well as a single PRI circuit at ParaCruz to provide primary inbound access to the call center and backup inbound/outbound access for Vernon, Operations, Golf Maintenance and Pacific Station. SJB GlobalNET, inc*

d) What type of compression, if any, do you propose to implement for WAN voice connectivity? – *G 729a G 729, G 711u, G 711a. SJB GlobalNET, inc*

e) Is WAN "Packet Shaping" or "WAN Acceleration" included in your proposal? Explain how it works and if optional. - *If needed, traffic shaping and traffic policing will be implemented on the routers. "WAN Acceleration" is only applicable to VPN access and on WAN non-RTP data packets. SJB GlobalNET, inc*

f) How would you implement QoS (Quality of Service) to prioritize voice calls on the WAN connected network? – *By creating queues and enabling QoS on the router WAN and LAN links. SJB GlobalNET, inc*

g) What will be the impact to METRO's data applications across the network? - *Depending on the call load across the WAN links, slower data rates on non-voice data traffic may be occur. SJB GlobalNET, inc*

h) Can your router solution work effectively on the carrier T1 data circuits? – *Yes. SJB GlobalNET, inc*

#### **2.4.11 Data Environment for the Purposes of the RFP**

a) Existing CAT5 or greater wiring is to be assumed, for the purposes of this RFP to be currently in use at all existing METRO sites, and it is assumed to meet TIA/EIA standard 568a or greater (CAT5) and is terminated in a female RJ-45 termination at the end-user station. – *Acknowledged. SJB GlobalNET, inc*

b) The proposed voice solution must be certified to run perfectly on these *older* infrastructures (CAT5) and those that have superseded such as the TIA/EIA 568b standard. – *Acknowledged. SJB GlobalNET, inc*

c) There is no phoneset station Gigabit connection interface required in this RFP, but 10/100Mb Ethernet pass-through is required thin-client terminals and PCs or MACs to connect through the phoneset. - *3Com Basic, Business and Manager Telephones have a 10/100Mb up-link port on the back. The Manager Telephone has a 10/100/1000Mb port. SJB GlobalNET, inc*

d) It is preferred by METRO to retain the *Physical Layer* (cable plant) of the network environment CAT 5 cable existing now; as well as termination panels – *Acknowledged and in agreement so long as the cable passes a Cat5 certification. Otherwise a telephone could experience QoS errors based on a bad cable. An additional cable may be needed where an attendant console is installed. SJB GlobalNET, inc*

e) Power over Ethernet (IEEE 802.3af c3) is assumed to be available to all station ports. – *Acknowledged and in agreement. SJB GlobalNET, inc*

f) No changes to the cable-plant in this Scope of Work except interconnect fiber and copper patch cables if needed to connect phonesets and system hardware – *Acknowledged and in agreement, SJB GlobalNET, inc*

g) Any changes, new additions to the cable-plant “fixes” that may be needed for proper functioning of an end-point station device (IP phoneset) on the existing cable-wire-plant at ALL METRO sites are off contract and not in this Scope of Work. Proposer may be asked to quote under separate contract for cable work if discovered to be needed, but METRO retains right to contract elsewhere for this as it is off contract – *Acknowledged and in agreement. SJB GlobalNET, inc*

## 2.5 IP TELEPHONY ENVIRONMENT

a) The Proposer is required to include in their proposal everything needed to complete, modify and/or upgrade the data network environment including the LAN and WAN so as to fully support and manage Proposer’s proposed voice/messaging/ACD solution for its full functionality – *Acknowledged and in agreement. additionally the option exists to attempt to work with the existing WAN routers should they support the requirements of the 3Com VCX platform. SJB GlobalNET, inc*

b) Proposer is cautioned to remember that METRO operates under *tight fiscal budgets*. Proposers are urged to find cost-effective solutions to the best of their ability assuring long-term viability by providing high quality and competitive cost. - *3Com is the only end-to-end converged network solution that can be purchased from multiple on-line suppliers such as CDWG and with multiple award purchasing vehicles such as CMAS to purchase with ensure the best price possible and give you Purchasing Department shop-ability*

c) Fill in Schedule A Itemization with any additions or changes to the active network components (LAN & WAN) as needed to assure proper functioning of the complete proposed solution – *Acknowledged and in agreement. SJB GlobalNET, inc*

### 2.5.1 Call Processor

a) Call-Processor/Server/Gatekeeper portion is to be fully redundant and run in an active/active failover mode with zero down time for Users when a processor fails for any reason. - *This is how the VCX platform functions in fail-over circumstances. By splitting the cluster between sites, if WAN links fail local phones fail-over to the local call processor. SJB GlobalNET, inc*

b) The call management platform may be centralized at the Network Operations Center (NOC) or distributed at sites, but must provide active/active failover without loss of service to Users at the administration main site even during a WAN failure - *The VCX platform operates in a head quarters/branch office operation or in a distributed site mode depending on the platform core*

*selected Active/active fail-over are incorporated into both solution. The primary differences between VCX core platforms are number of devices – Acknowledged. SJB GlobalNET. inc*

c) Servers included in the proposal must be from a “Tier 1” manufacturer of server hardware and be fully supported by the OEM of the proposed solution – *The server line suggested for use in this RFP is IBM. SJB GlobalNET. inc*

d) No “white box” server platforms allowed Server platform must be from Tier 1 Vendor Prefer a server platform that has an OEM part number and support from the voice solution OEM (option) – *Acknowledged and in agreement. SJB GlobalNET. inc*

e) Describe the processors supporting the total system For example, does a single processor support all system functions or are there separate processors for different functions? The VCX platform is completely scalable from a couple of phones per site to 65,000+ per entire system – *The VCX can be configured where processes can be split between multiple call processors for system components (voicemail system, call processing, CDR system, etc ) or combined all system components into one call processor The solution proposed in this RFP is the latter, running all system components on one call processor in a fully redundant configuration by adding a second call processor for fail-over. SJB GlobalNET. inc*

f) What is the manufacturer and model for each processor? – *VCX Connect 100 Primary server (3Com model number 3CRC100A). VCX Connect 100 Secondary server (3Com model number 3CRC101A). VCX Connect 200 Primary server (3Com model number 3CRC200A), VCX Connect 200 Primary secondary (3Com model number 3CRC201A). VCX V6x00 Branch Office server (3Com model number 3C0VG60003-06). VCX V7005 Series Server (3Com model number 3CRFH701796D-US). SJB GlobalNET. inc*

g) How long has each processor been utilized within this system and how long will this processor be retained? - *VCX Connect 100 platform servers – The VCX Connect 100 platform server – introduced in 2006, VCX Connect 200 platform servers – introduced in 2006. VCX V6x00 Branch office server introduced in 2005. and the VCX V700x Series server - introduced in 2003 SJB GlobalNET. inc*

h) In the event of a processor failure, discuss how its backup processor (if any) will take control of the task. What happens to calls in progress, new calls, and messaging in a failure? - *During a failover incident call control will be transferred from primary to secondary (active/active) If a call is in progress, the call is not interrupted because data from the telephone is sent directly across the network to the called/calling telephone or gateway port, the server only provides call control mostly at the beginning of the call and at the end of the call If a caller is leaving a message then there is a possibility of minor interruption of the message New calls inbound and outbound calls are unaffected SJB GlobalNET. inc*

i) Is the change-over automatic without any human intervention when failover occurs? – *Yes, the failover is instantaneous SJB GlobalNET. inc*

j) How long is the processor changeover process at system capacity? What is the effect on other applications such as messaging, call management, etc ? - *The failover is instantaneous and no affect to the caller/called party is affected Messages can have minor interruption of a message if being left at the time of failover*

k) What is the maximum number of calls that can be supported by each call processor? - *Calls are not limited so much by the call processor but by the bandwidth available to the calls in the network The call processor acts as a proxy server for the telephones and does not bus calls across its network connections SJB GlobalNET. inc*

l) What is the operating system for the call processor? Is this OS subject to virus and other exploits on the network? Explain if Yes. - *The operating system is running a hardened version of Linux, protected from the network front by a firewall and trusted end-points. The hardware is not susceptible to viruses. SJB GlobalNET, inc*

m) How many future versions will the processor likely support before its hardware must be replaced? - *Many versions based on the past history of 3Com and the NBA VoIP platform, ten to fifteen years. SJB GlobalNET inc*

n) Is the call processor memory upgradeable or fixed; to support future versions? - *The memory is upgradeable since the call processor runs on a PC based chassis. No additional memory options are available at the present time because there is no need for additional memory in the server to function at full capacity. SJB GlobalNET, inc*

o) NO OPEN SOURCE software solutions will be considered in this RFP. Only Tier 1 OEMs of IPPBX solutions with a long history of vendor support will be considered for this RFP. - *Acknowledged and in agreement, 3Com has the longest history in the commercially available VoIP systems introduced in 1998. SJB GlobalNET, inc*

p) NO HOSTED IP-VOICE solutions will be considered in this RFP. Only Tier 1 OEMs of IPPBX solutions with a long history of vendor support will be considered for this RFP. - *Acknowledged and in agreement. SJB GlobalNET, inc*

### 2.5.2 Switching Matrix

a) Provide a detailed description of the switching matrix for the proposed system(s). For example, is it based on Time-Division Multiplexing (TDM), IP, etc? Describe all elements that comprise the call switching matrix. - *The switching "matrix" is an all IP based platform with no TDM backplane used in the VCS platform. The elements that comprise the VCS soft switch are 1) IBM server, 2) Network LAN/WAN, 3) PSTN gateways that connect PRI's and analog lines to the IP network for shared access to all devices and 4) user end-points such as telephones connected to the IP network. SJB GlobalNET, inc*

b) How many simultaneous conversations can the system support? - *Calls are not so much limited by the call processor but by the bandwidth available to the calls in the network. The call processor acts as a proxy server for the telephones and does not bus calls across its network connections. SJB GlobalNET, inc*

c) Is there system degradation should the system be supporting its maximum number of simultaneous conversations? Can a higher level of compression be automatically applied if a WAN link is saturated? - *There is no system degradation should the system support its maximum load, rather the network needs to be properly design in order to provide proper QoS. The ability exists to hang hundreds of phones off of one small data pipe. Should low call volumes be used by the small data pipe there will not be problems with call quality. Should hundreds of phones go to use the small data pipe at once, you will experience latency, not from the server but from the link size improper planning back to the server. SJB GlobalNET, inc*

d) Describe how Proposer will load balance/failover the system. Describe Proposers concept of load balancing and failover. - *Call processor will fail over to the standby server instantaneous where the voicemail server (primary and secondary) are synced together. The concept of load balancing can be achieved with the voicemail (a server intense application) however the secondary call processing is instant failover. SJB GlobalNET, inc*

e) Explain whether compression at the LAN or WAN level is proposed. Describe the impact for different compressions standards included in your proposed solution and the Proposers recommended compressions standard. - *All major codecs are support for call compression. 1*

would suggest G 729 for WAN communications (23Kbps stream). Acceptable level of service on the Mean Opinion Score for codec G 729 is a 3.92 out of 5.0 (better than your home phone). We suggest LAN communication at G 711 (83Kbps) unless bandwidth limitations require less voice bandwidth but running at G 711 which has a MOS of 4.14 out of 5.0. The VCX can operate using multiple codecs including G 711, G 729 and G723. SJB GlobalNET inc

f) What is the impact of using compression on network resources and sound quality? - The Mean Opinion Score (MOS, a human scale used to measure call quality on TDM and IP telephones) goes up or down depending on the amount of data being transmitted via the LAN/WAN. The more data, the more bandwidth is needed, the better the call quality. G 729 scores a 3.92 out of 5.0, considered to be Toll quality at 8Kbps + overhead (about 23Kbps stream)

g) Is it possible with the proposed solution to provide one level of compression on the LAN environment and another on the WAN environment? - Yes, we suggest LAN communication at G 711 (around 83Kbps) unless bandwidth limitations require less voice bandwidth but running at G 711 which has a MOS of 4.14 out of 5.0. The VCX can operate using multiple codecs including G 711, G 729 and G723. SJB GlobalNET inc

### 2.5.3 System Memory

a) Is system memory upgradeable for call processors and messaging platforms? - The memory is upgradeable since the call processor runs on a PC based chassis. No additional memory options are available at the present time because there is no need for additional memory in the server to function at full capacity. SJB GlobalNET, inc

b) Is system memory available from the OEM manufacture of the proposed system or from a third party? - The memory is upgradeable since the call processor runs on a PC based chassis. No additional memory options are available at the present time because there is no need for additional memory in the server to function at full capacity. SJB GlobalNET, inc

c) What hardware in your proposal does not support memory upgrades? - Telephone devices and gateways however memory upgrades in those devices are undecided. SJB GlobalNET, inc

d) How do these components stay current with future platform software versions that have higher requirements? - 3Com tends to build code updates to the same level of system capacity delivered. A large capacity server would be needed/added if a site grew in user size in excess of what the current server can support. VCX Connect 100 platform is 100 users per platform cluster. VCX Connect 200 platform is 250 users per platform cluster. VCX V6x00 Branch office platform is 100 users (fail-over). The V7000 platform is a truly scalable Enterprise platform and can up to 65,000+ users platform cluster depending to the configuration. In METRO's case, the V7000 server platform option consists of a primary and a secondary V7005 server.

### 2.5.4 System Redundancy

Redundancy is loosely defined as the capability of an additional system component, of equal or greater functionality, to take over for the failed system component. Redundancy is perceived to be a critical element to METRO.

a) The Proposer shall include a "robust" level of redundancy for the core system - Primary and secondary servers are proposed in the solution for all 3Com VoIP devices on the system. SJB GlobalNET, inc

b) Describe in detail each component of the "fail-over" process. - All call processor applications are actively running on a second server ready for immediate fail-over of all applications. SJB GlobalNET, inc



c) Does both the call processor and messaging platform have fully redundant hardware? – *Both the messaging and call processor have fully redundant hardware SJB GlobalNET. inc*

d) What happens to call processing and calls-in-process during this “fail-over” process? – *The call will continue because the data for the telephone conversation is traveling between the telephone and gateway or other telephone, not traversing the call processor. The call processor is used to setup and tear down calls. Should one call processor setup a call and during mid-call fail, the user would not experience any outage of conversation rather the secondary call processor would tear down the call once the user disconnects the call. SJB GlobalNET. inc.*

e) What is the effect on system statistics, records in memory, logs when a failover occurs? - *Log files record the outage and network management notifies the administrator of the failed server. CDR data is stored on a central server. SJB GlobalNET. inc*

f) What is the length of time required to “fail-over” to the redundant system? – *Instantaneous SJB GlobalNET, inc*

g) Is each redundant element in “hot-standby” and/or “load-sharing” mode? - *The call processing works in “hot-standby” because the load on a call processor is minimal as calls do not travers the server/processor rather communicate directly, using the call processor to only setup and tear down the calls. However the voicemail application operates in “load-sharing” mode because the telephone devices interface directly with the server/processor thereby increasing the server load with more callers accessing voicemail. SJB GlobalNET. inc*

h) What level of redundancy is included for messaging platform(s)? – *Full redundancy of voice messages, voice greetings, distribution lists, passcode/pin, etc. SJB GlobalNET. inc*

i) What level of redundancy is included for PSTN failover? - *A PRI circuit is suggested at Vernon to cover accommodate inbound/outbound calls from Vernon, Operations, Golf Maintenance and Pacific Station. A second PRI circuit or as requested in the bid, eight analog trunk lines are suggested at ParaCruz to support the call center. Should the PRI(s) fail or WAN links to individual sites fail, analog lines will provide backup dial-ability between sites. Note the second PRI at ParaCruz is only suggested but not required for PSTN failover operation using analog circuits. SJB GlobalNET. inc*

j) What level of redundancy is for emergency outgoing calls? - *Should the PRI(s) fail or WAN links to individual sites fail, analog lines will provide backup dial-ability between sites. SJB GlobalNET. inc*

#### **2.5.5 System Reliability and Availability**

a) Proposer’s design should support a minimum of 99.999% Reliability at the system core for both call processor and messaging. Describe how your system supports this goal? – *The 3Com VCX achieves 99.999% or 5-9’s by running all applications on a solid “hardened” Linux operating system in a fully redundant fashion. SJB GlobalNET. inc*

b) What is the system availability for the proposed system? Define how your firm defines system availability – *System availability is defined as having the available resource within the platform to handle a maximum predetermined threshold of calls/services. SJB GlobalNET. inc*

c) Provide a list of single points of failure with the proposed system - *There is no single point of failure within the proposed VCX platform however optionally METRO may choose to upgrade their network infrastructure to provide redundant LAN and WAN links to eliminate the any existing network failure points. SJB GlobalNET. inc*

d) What is OEM stated Mean Time between Failures (MTBF) for the various system components Proposed? – *This one question could take hours to properly find the detailed answers too, and yet the question is vague, asking for "various" system components, not specific components like core components. Where one vendor can research for hours the core components, others could just simply give MERTO a telephone device. This question is too subjective to answer without further detail.* SJB GlobalNET, inc

e) What trunk (PSTN) line redundancy is required so that there is no single-point-of-failure at any physical METRO sites? – *It is recommend that two analog telephone lines be connected to each call processor at the site and four lines connected to the call processor at Vernon.* SJB GobaNET, inc. SJB GlobalNET, inc

### 2.5.6 Migration Path

a) Proposer shall describe the OEM's 'migration path' between versions of manufacturer's system solutions. – *'Migration path' between versions is a simple upgrade each server independently. Interoperability exists between versions.* SJB GlobalNET, inc

b) Explain what hardware/software/license(s) would be retained while future versions are brought in to the environment and, which will not be retained. – *All hardware, software and licenses are retained.* SJB GlobalNET, inc

c) Can the system's complete, database be retained between version migrations? – *Yes.* SJB GlobalNET, inc

d) What is the impact to other applications and equipment such as call center systems, unified message, etc. when a system version upgrade is installed? – *Upgrades should always be planned however interoperability between versions is on the forefront of 3Com engineering designs.* SJB GlobalNET, inc

e) Give a brief description of past system migrations to the current version. Are they compatible both forwards and backwards? *VCX Connect runs version 8.0 while VCX Enterprise runs on version 7.1. VCX Enterprise is scheduled 8.0 release mid-2009. Both are built upon version 1.0 thru 6.0 released between 1999 (as a carrier grade product) and 2005.* SJB GlobalNET, inc

f) Has there been a long history of backwards compatibility with the OEM's previous software code versions, system hardware and phonesets? – *Yes, looking to the past and 3Com's first VoIP product line, components sold in 1998 are still support by the current software version. This show 3Com's dedication to backwards compatibility.*

g) What happens when the system platform moves to a new operating system? – *The VCX platform was developed on the Linux OS and for the Linux OS. It will not be ported to any other software platform other than a Unix/Linux based OS.* SJB GlobalNET, inc

h) Does your proposed system run on either Microsoft XP Professional, Windows Server 2000 or 2003

1) If so describe the migration path to the next version of system software after the OS is retired? – *The VCX core voice component do not. However the contact center as well as call recording software runs on Microsoft Windows XP Pro or Windows Server 2000/2003.* SJB GlobalNET, inc

2) Does your proposal include new OS and/or hardware to accommodate the next 4-5 system/version upgrades? – *Yes it does.* SJB GlobalNET, inc

### 2.5.7 PSTN Connectivity

a) In the context of this RFP PSTN consists of interconnection to PSTN and T1 carrier circuits for point to point data communication. – *Acknowledged and in agreement. SJB GlobalNET. inc*

b) Any new telephone system configuration proposed must have the ability to effectively interface with the local exchange central office, long-distance carriers via direct T-1 or PRI circuit from the central office as well as analog trunk and SIP trunk – *The proposed solution utilizes both T1-PRI interfaces and analog FXO ports. SJB GlobalNET. inc*

c) SIP trunks capability is to be included in the proposed solution. Although they are may not be implemented immediately, the functionality is to be included in your proposal. Include hardware, software and licensing for up to forty (40) SIP trunks. – *Optionally, the Ingate SIParator shall be included as an application layer gateway to host the 40 SIP trunks. SJB GlobalNET, inc*

d) 8-Ports *analog* (FXS/FXO) trunks are to be hardware enabled for the NOC physical location which is the main METRO administration site. These should be configured for system dial-tone failover and to provide the ability to run fax machines locally (FXS/FXO) and provide dial-out for 911 and other calls during a WAN failure. – *Acknowledged however 8-ports may be in excess of what is needed should METRO decide to install a second PRI to support the call center at ParaCruz and provide back inbound/outbound dialing during a primary PRI outage. SJB GlobalNET. inc*

e) Can (FXS/FXO) ports be placed anywhere on the network by means of a distributed processor or gateway appliance? Please include as specified in Schedule A. – *Yes. Acknowledged and in agreement, SJB GlobalNET. inc*

f) 4-Ports *analog* (FXS/FXO) trunks are to be hardware enabled at the Golf Club and Pacific physical locations. These should be configured for system dial-tone failover and to provide the ability to run one (1) fax machines locally (FXS/FXO) and provide dial-out for 911 and other calls during a WAN failure. – *Acknowledged however 4-ports may be in excess of what is needed should METRO decide to install a second PRI to support the call center at ParaCruz and provide back inbound/outbound dialing during a primary PRI outage, SJB GlobalNET. inc*

g) The ParaCruz- Research Park site must have **Stand Alone Capability** for voice/dial-tone, messaging, CDR, ACD and call recording, or Proposer may propose a routed “compression” or acceleration solution on the WAN connections to assure adequate bandwidth and survivability for the above mentioned features – *This is provided for in the VCX solution Acknowledged and in agreement. SJB GlobalNET. inc*

h) All METRO sites shall be configured for system dial-tone failover and to provide the ability to run fax machines locally (FXS/FXO) and provide dial-out for 911 and other calls during a WAN failure at all METRO sites. – *Acknowledged and in agreement. SJB GlobalNET. inc*

i) Can additional FXS and FXO ports be placed *anywhere* on the METRO network by means of a distributed processor or gateway appliance? Please include all needed components and licensing in Schedule A for each site at the METRO to provide PSTN redundancy for the site and the METRO as a whole – *Yes. Acknowledged and in agreement. SJB GlobalNET. inc*

#### 2.5.9 Emergency 9-1-1

a) Explain in detail how 9-1-1 calls will be routed to the PSAP showing the physical address of the facility from which the 9-1-1 call is placed - *When 911 is dialed, the telephone will use a local gateway to connect the call to analog FXO circuits. Even if the Primary and Secondary VCX servers are down, the phones will still place 911 calls to these local FXO gateways. SJB GlobalNET. inc*

b) Explain optional E-9-1-1 solutions, and their cost, that can transmit the actual physical location from which the E-9-1-1 call is placed. For example, the area of the campus, building, room number or other detailed location other than simply the "address" of the facility or how your proposed solution can accomplish this functionality – *Each telephone or group of telephones are assigned a zone number. Each zone number is assigned an emergency DID number to use when dialing 911. When 911 is dialed the call is placed using the emergency DID number as the CallerID. If E911 is enabled through ATT, then the PS/ALI database located at ATT is queried by the PSAP as to the assigned address and location of the DID number displayed to them by caller ID aka the emergency DID zone number. SJB GlobalNET, inc.*

c) What configuration can be done on the proposed system to alert a person at the METRO when a 911 call has been made on the system? - *Optional equipment may be used to notify users of 911 calls. SJB GlobalNET, inc.*

### 2.5.10 Call Routing

System Dialing Plan / Automatic Route Selection (ARS)

a) The system shall be capable of supporting the North American Numbering Plan and any plan revisions through 2012, without additional cost when such is required. – *Will do. Acknowledged and in agreement. SJB GlobalNET, inc.*

b) For local calls, dial "9" + the appropriate 7-digit telephone number (with the telephone systems software automatically determining the actual call routing based upon predetermined routing patterns and user COS (class of service) criteria. – *Will do. Acknowledged and in agreement. SJB GlobalNET, inc.*

c) For long distance calls, dial "9" + "1" + the appropriate 10-digit telephone number with the system's software automatically determining the actual call routing based upon predetermined routing patterns and user COS criteria. – *Will do. Acknowledged and in agreement, SJB GlobalNET, inc.*

d) When an outbound 7-digit telephone number is dialed and it is a METRO telephone number then the call shall be routed over the private METRO network. If the call cannot be placed on the private METRO network it shall then be routed to the PSTN with no User intervention. – *Will do. Acknowledged and in agreement. SJB GlobalNET, inc.*

e) The phoneset will display the status of the call and whether it is "on-net" or dialing thru PSTN. – *Yes.. Acknowledged and in agreement. SJB GlobalNET, inc.*

f) Describe how digit translation, insertion and suppression are capable of performing the necessary number translations to meet the required operational needs functions with the proposed system. – *It will be used in Least Cost Routing (LSR) to manipulate main office numbers and DID numbers to transform digits strings into new digit strings. It can also be used to all dialing code to the front of number such as long distance numbers. For example 9+1+4084720031 is converted to 10-10-321-4084720031. SJB GlobalNET, inc.*

g) System shall offer Class-of-service (COS) restriction-level control of:

1) Trunk group access – *Using blacklists and whitelists administrators can easily control the trunk group access. SJB GlobalNET, inc.*

2) Dialing privileges variable by time of day (by access code, Class of Service permissions, etc ) – *The VCX platform has this capability for open, closed, lunch and holiday schedule. SJB GlobalNET, inc.*

3) Feature access codes for feature access control – *You can invoke a feature by pressing the Feature button and using the telephone keypad to enter the feature code along with any additional information SJB GlobalNET. inc*

h) System shall support access codes for “Hot Seating” or “Hotelling” – *This feature is possible system wide in part by the Global Directory Users can login into up to four local telephone devices and one cluster device or five local telephone devices at once All phones ring simultaneously SJB GlobalNET. inc*

i) System shall support restriction override codes – *This is support via account codes or via hotelling should your extension have access to what you are trying to dial SJB GlobalNET. inc*

j) Main numbers of various departments will be centralized to the NOC on PRI trunk, but the ParaCruz site will retain an analog dial-in capability on their main number (4-ports) locally as well as having incoming calls routed from the NOC – *Noted, should a second PRI not be desired at the ParaCruz site for system redundancy. this will be considered SJB GlobalNET inc.*

### **2.5.11 Message Platform**

a) The desired messaging platform will support voicemail and unified messaging for voice mail and other features - *The VCX complies with these requirements SJB GlobalNET. inc*

b) The messaging platform should be fully secure on the network Explain your patch, anti-virus and firewall solution to assure this application will remain secured. - *The messaging is apart of the VCX platform and is protected for intrusion and viruses in the same manor (Linux 'hardened' OS, firewall). SJB GlobalNET, inc*

c) The messaging platform will support IMAP4 and POP3 standards and have the ability to integrate with both email clients and Microsoft Exchange (latest). - *This integration is NOT in the Scope of Work. This ability exists within the VCX or by way of 3<sup>rd</sup> party application SJB GlobalNET. inc*

d) Does your proposed messaging platform support FAX services? Explain - *VCX supports inbound fax however a 3<sup>rd</sup> party messaging solution can be added to enable outbound fax from the desktop applications. SJB GlobalNET. inc*

e) Please include information about the capabilities of the proposed messaging system. – *The messaging system is a VCX application that have all of the standard voicemail features including message notification Please see appendix for further detailed information. SJB GlobalNET*

f) Is the proposed system a conference bridge? How many on a conference? - *Optionally the VCX includes a conference bridge application that runs on the VCX platform The bridge can scale to Enterprise levels in needed However this conference bridge is not nevesary to support the requirement of this RFP The 3Com telephones can support five plus one conferencing SJB GlobalNET. inc*

g) How much time is included for voice mail messages and how many voice mail ports are included? What can it scale to? - *The voicemail storage depends entirely on the size of your hard drive size on the VCX platform The VCX Connect 100 has a twenty seat (concurrent use) limit while the VCX 200 has a forty seat limit The VCX Enterprise can scale much larger SJB GlobalNET. inc*

h) Describe how a MWI (mail waiting indicator) is able to have multiple voice mail boxes on one phoneset? Is there a light on the phoneset for multiple voice mail boxes? How many MWIs on each type phone proposed? - *The Business phone sets along with the attendant consoles can map their buttons and lamps to associated voicemail boxes These buttons can be used to transfer,*

*select by pressing the button or know that new messages have arrived by the solid red lamp. SJB GlobalNET, inc*

i) Is the messaging platform's operating system current or will it be revised soon? Is there any further development on this version of the operating system? If to be revised in the next three major revisions of the proposed voice solution what will be the upgrade path for METRO? - *The messaging platform is current and future development is always planned. METRO can choose to upgrade as and when they want to the next versions with the assistance of SJB GlobalNET, inc outside the scope of this project. SJB GlobalNET, inc*

#### **2.5.12 Automated Attendant**

a) A required *Automated Attendant* can be configured to answer inbound calls after regular business hours and whenever METRO is closed - *This will be implemented so that calls to the main number are routed based on the time of day. SJB GlobalNET, inc.*

b) Auto Attendants will be configured by the Proposer on the system for each Department (location) in METRO up to two (2) departments, and will answer to "main numbers" for each physical site. - *This data will be gathered during the meeting with the departments and will be implemented as requested. SJB GlobalNET, inc*

c) Auto Attendants will have the ability to use multiple layers (> 19 layers deep) accessible by DTMF tones - *Should this need arise, the VCX can support. SJB GlobalNET, inc.*

d) System capacity shall be at least ninety nine (99) Auto Attendants configurable by User, trunk line, extension, hunt-group, ACD group - *Should this need arise, the VCX can support. SJB GlobalNET, inc.*

e) The system will have the ability to pre-configure pre-scheduled holiday greetings - *Holiday as well as open and closed schedules will be implemented. SJB GlobalNET, inc.*

f) The Receptionist will have the ability to turn on or turn off an Auto Attendant from their phoneset by hitting a pre-configured button with BLF, and from the system GUI interface when properly credentialed by the administrator - *Will do. Acknowledged and in agreement. SJB GlobalNET, inc*

g) The Auto Attendant will have an *Easy-to-Navigate User Directory* available to callers by DTMF tone and multiple prompts with after-hours, week-end and holiday scheduling featureset. - *The VCX platform meets the criteria. SJB GlobalNET, inc*

#### **2.5.13 Remote User Ease-of-Use**

a) Is additional hardware, software or licensing needed to connect a *Remote User* to the system? - *Yes, a VPN connection to the LAN or an application layer Gateway. SJB GlobalNET, inc*

b) A Remote User may need the administrator to create a VPN to connect. Explain the process for *Remote Users* to connect a hard or soft phone to the system off the METRO network. - *The user will be run through a tutorial if using a softphone which will allow them to enter the setting the administrator gave to them. SJB GlobalNET, inc*

c) Are changes to the firewall needed for a *Remote User* to connect to the system? Explain how your solution is configured. - *If an optional application layer gateway is used, no firewall changes are needed to the VCX firewall. The application layer gateway sits in between the LAN and WAN and terminates SIP streams from two sides (WAN telephone device and LAN VCX device. All external SIP streams are terminated at the gateway and a new stream is bridged into the VCX*

*enabling the ability of only open the gateway as a trusted endpoint and let the gateway manage the trust between the external SIP devices SJB GlobalNET. inc.*

d) Provide all hardware, software and licensing for 5 concurrent remote User connections (option).  
*- A Ingate SIParator will be proposed for this solution SJB GlobalNET. inc*

#### **2.5.14 Conferencing**

a) Conferencing from a phoneset is required to support 5 users plus the internal caller - *The VCX supports with no upgrades or conference bridges the ability to support five user plus the originator ( 6 parties total) SJB GlobalNET*

b) A requirement for 10 concurrent conferences to be made from the system all with up to six (6) inside and outside calls on each conference. Please elaborate on your systems conferencing features and limitations. - *Provided that the trunk capacity can accommodate for external callers each phone can (>10) support up to six parties SJB GlobalNET. inc*

c) What hardware, software, and licensing makes up the conferencing solution in your proposal? - *The optional conferencing solution is a VCX application that runs on the VCX platform SJB GlobalNET. inc*

d) Dial in conferencing is not required. - *It is provided in the optional conference bridge SJB GlobalNET. inc*

e) Can a user drop a conference attendee during a conference call without disrupting the rest of the conference? - *Yes. without using a conference bridge the use can use the feature "last confence drop" with will drop the last person joined to the call. In the optional conference bridge. the user can manage the callers via web interface SJB GlobalNET. inc*

#### **2.5.15 Extension Plan**

a) Each site will have an identifiable extension prefix (first two numbers of extension to identify physical site) . - *Will do. a three digit dial plan can be used as well Acknowledged and in agreement. SJB GlobalNET. inc*

b) Least cost routing is required to be configured for all METRO phones to route calls on the Metro network - *Using digit manipulation LCR within METRO telephones will be enabled. SJB GlobalNET. inc*

c) PSTN failover is required for METRO calls that cannot connect over WAN circuits. The failover must be seamless and not require input from the User - *Using digit manipulation calls are routed via FXO trunks to other sites and then transferred to the extension dial. automatically SJB GlobalNET, inc*

d) DID integration in is to be included in extension planning and integration. - *DID numbers will be assigned to all extension numbers for inbound calls SJB GlobalNET. inc*

e) Main numbers will not be used for outbound calls and should be constantly available to answer new incoming calls. - *Inbound calls should arrive via the PRI and EAR implemented on the PRI to support failover of the PRI service to secondary PRI or analog huntgroup SJB GlobalNET. inc.*

f) Currently Main numbers are physically paired to analog trunks at each physical location. Explain how you tentatively propose to centralize trunks to a PRI circuit, retain main numbers, and assure caller ID (with caller name, not just number) - *Convert all published telephone numbers into DID numbers that arrive via the PRI circuit and terminate those calls to the same locations as their old analog circuits did SJB GlobalNET. inc.*

## 2.5.16 Unified Messaging (UM)

- a) No User configuration for Unified Messaging is included in this Scope of Work – *Acknowledged and in agreement. SJB GlobalNET, inc*
- b) The Metro administrator shall be trained in the process of configuring an email client so that he can “roll-out” UM to Users when ready. – *Acknowledged and in agreement. SJB GlobalNET, inc*
- c) Written instructions for Users to help configure their own email client will be provided by the Proposer. – *Acknowledged and in agreement. SJB GlobalNET, inc*
- d) Windows and Web-Based Faxing from Metro PCs and primarily the thin-client terminals is required in this RFP. A secure, web-based or client software based (must run on effectively on Citrix), faxing utility must be proposed and itemized in your Proposal and be fully licensed for 110 Users. – *We are proposing Castelle FaxPress solution to support both inbound and outbound faxing from the thin-client terminals - SJB GlobalNET, inc.*
- e) Fax Reporting - a variety of information about the fax transactions is to be kept in log files. A report that is convenient, user-friendly tool should generate the fax transaction log information in a variety of report formats (i.e. fax history, sender, time sent, destination address, bill-back codes, etc). The reports shall provide comprehensive analysis of the fax processing transactions, and shall be easily exported to spreadsheets, databases, and other report generators. Fax transmission tracking. Support for Crystal Reports is very desirable. – *FaxPress can support these features. SJB GlobalNET, inc*
- f) The FAX solution should support and integrate with Microsoft Active Directory to a high degree, but no integration with MS AD in this Scope of Work - *FaxPress complies with this requirement SJB GlobalNET, inc*
- g) Drop Directory: Production Faxing - The Proposed FAX solution shall support easy deployment of automated, production faxing. - *FaxPress complies with this requirement SJB GlobalNET, inc.*
- h) Third-party applications shall have the ability to access the “Drop Directory” to send outgoing faxes and retrieve incoming faxes. The “Drop Directory” shall support fax jobs submitted in any native document format, and also supports priority fax job settings controlled by the third party application. Drop directories can be defined in any sharable folders on the network accessible to the FAX solution - *FaxPress complies with this requirement SJB GlobalNET, inc*
- i) System Backup and Restore - The Proposed FAX solution should come with a backup and restore function designed to protect user files and data in case of any unexpected system failure. The Proposed FAX solution shall have the ability to back-up system files, user information, and fax job data to a sharable network folder. - *FaxPress complies with this requirement SJB GlobalNET, inc*
- j) Error Correction - Phone line noise during fax transmission can sometimes cause errors in the received image, usually causing one or more scan lines to be dropped from the image. As long as there aren't too many errors, the page is accepted and confirmed because it is still readable. If too many errors occur, however, the fax will be rejected. The default Error Correction Mode (ECM) guarantees faxes will be sent and received with no errors, as long as the sending or receiving machine also supports ECM. Propose a solution that supports ECM - *FaxPress complies with this requirement SJB GlobalNET, inc*



- k) Microsoft Word-Based Cover Pages - It is a requirement that cover pages can be created in Microsoft Word or WordPad, allowing all of Word's familiar formatting and editing power to be used in customizing cover pages. The solution must support Microsoft Word 2000 and forward - *FaxPress complies with this requirement SJB GlobalNET. inc*
- l) International Character Support - With fax cover pages created in Microsoft Word and WordPad, in addition to supporting English, must also support the use of international characters on your fax cover pages. - *FaxPress complies with this requirement SJB GlobalNET. inc*
- m) An Embedded Fax Archive, to keep a FAX database and content store that eliminates the need to keep copies of faxed documents is very desirable. - *FaxPress complies with this requirement SJB GlobalNET. inc*
- n) Priority User and Fax Job Priority Support is desirable. - *FaxPress complies with this requirement SJB GlobalNET. inc*
- o) Internal Document Routing – Send faxes to internal users in addition to remote fax recipients is a requirement. - *FaxPress complies with this requirement SJB GlobalNET. inc*
- p) Group Users Support- *FaxPress complies with this requirement SJB GlobalNET. inc.*
- q) Faxing straight from Microsoft and other third party applications is a requirement- *FaxPress complies with this requirement SJB GlobalNET. inc*
- r) Customizable Notification Features, allowing users to monitor document delivery status is required. - *FaxPress complies with this requirement SJB GlobalNET. inc*
- s) Incoming and outgoing fax queue sorting, according to sender, status, destination, etc is very desirable - *FaxPress complies with this requirement SJB GlobalNET. inc*
- t) The ability to fax messages to both email and fax recipients simultaneously is required - *FaxPress complies with this requirement SJB GlobalNET. inc*
- u) Immediate or scheduled batch faxing; scheduling faxes for off-peak hours which can reduce document delivery costs is required. - *FaxPress complies with this requirement SJB GlobalNET. inc*
- v) Least-cost fax routing via the Metro Intranet and world-wide Internet Faxing to minimize telephone charges is required - *FaxPress complies with this requirement. SJB GlobalNET. inc*
- w) Can the proposed FAX solution integrate with the proposed IPPBX system so that trunks (PSTN) are shared and given appropriate priority? Explain the interface environment on the hardware layer between FAX solution and IPPBX. - *FaxPress complies with this requirement SJB GlobalNET. inc.*

#### **2.5.17 Music on Hold (MOH)**

- a) MOH must be available to caller when on Hold – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- b) MOH must be available to caller when a call is transferred – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

c) Can your proposed solution provide separate MOH services for each physical METRO location? – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

d) Can your proposed solution provide separate MOH services for different departments, groups and Users regardless of physical location? – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

e) The various MOH files should be in WAV file format and be easily importable and manageable - *Provided they are in the correct file format. Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

#### **2.5.18 Voice Mail Ports (how many)**

a) This Scope of Work requires a minimum of 18 Voice Mail Ports (VMP) – *VCX Connect 100 platform supports a maximum of 20 ports per cluster with no licensing, VCX Connect 200 platform supports a maximum of 60 ports per cluster with no licensing, and the VCX Enterprise platform does not state limits in documentation (> 100 ports) SJB GlobalNET. inc*

b) It is assumed that a VMP is “in-use” when a User is receiving a Voice Mail, retrieving a voice mail, and if the Auto-Attendant is engaged with a call – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

c) State if any other functions use a VMP and how many VMPs are include in your proposal. – *There is no licensing module for voicemail ports on the VCX platform. The VCX will support up to the maximum listed above. SJB GlobalNET. inc*

#### **2.5.19 Phoneset Ease of Use**

a) It is required that the phonesets be easy to use This does not negate a desire for feature richness, but asks for simplified operations that ‘feel’ like legacy phones Users are accustomed to – *3Com Phoneset are easy to use and function like traditional PBX system*

b) Phonesets must receive IP addresses via DHCP which is required in your proposal for all locations on the METRO network; this is to be done without user intervention - *This is provided for with the 3Com Router option or by adding a layer 3 switch at each site Or the existing router may be able to accommodate the DHCP needs of the 3Com phones I leave this option up to METRO in order to save them on equipment cost*

c) All future upgrades to phoneset firmware is to be done without User intervention. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

d) Adding a new phoneset to the environment must be Plug-and-Play for Users – *Affirmative using DHCP option 184 to set the IP address of the call processor. Acknowledged and in agreement. SJB GlobalNET. inc*

#### **2.5.20 Multiple Language Support**

a) Explain briefly your proposed solution’s support for multiple languages This Scope of work includes only configuration for US English at this time. – *The VCX is a global VoIP platform and has support for multiple system languages SJB GlobalNET. inc*

b) Can the proposed system prompts be set to support multiple languages by DTMF tone or another method? - – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

#### **2.5.21 Call Accounting**

a) A centralized Call Accounting system will be required in your proposal - *The VCX includes a centralized call detail reporting system within the VCX application platform SJB GlobalNET. inc*

b) The call accounting system must provide a robust complement of feature/reporting capabilities. - *Affirmative. the report software includes an embedded reports feature as well. Acknowledged and in agreement. SJB GlobalNET. inc*

c) The CDR (Call Detail Reporting) record output by the telephone system shall, at a minimum, provide the following outbound call detail data immediately upon completion of the call transaction:

- 1) Date and time call originated
- 2) Duration of call
- 3) Number called (digits dialed)
- 4) Originating agent
- 5) Trunk route and member used
- 6) Account code(s) to identify call resolution
- 7) Number of calls received
- 8) Number of calls answered
- 9) Number of calls abandoned
- 10) Average time to answer a call
- 11) Average time to abandon a call
- 12) Longest call waiting
- 13) Percentage of calls over a defined service level goal
- 14) Average duration of a call
- 15) Total number of agents
- 16) Total number of agents logged in
- 17) Time an agent is logged in
- 18) Time an agent is unavailable
- 19) The CDR record shall, at a minimum, provide the following inbound call detail data immediately upon completion of the call transaction or in real time:
  - a) date and time call received;
  - b) duration of call;
  - c) terminating station; and
  - d) trunk route and member used

- *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

20) The proposed *Call Accounting System* should have the ability to interface with telephones within METRO's network and monitor for call abuse, and analyze call records. - *The proposed call accounting system by Trivium does meet these requirements HOWEVER. there may be a low cost solution from ATT to resolve billing matters if that is the goal of the call accounting system SJB GlobalNET. inc*

21) The package must also have the capability to allocate phone costs by identifying usage, to different departments, locations, and individuals. - *The proposed call accounting system by Trivium does meet these requirements SJB GlobalNET*

22) All hardware, software and licensing required for a fully operational system must be provided as well as detailed system hardware, software and functional descriptions. - *The proposed call accounting system by Trivium does meet these requirements SJB GlobalNET*

23) Also desirable is automatic report generation and the automatic email report distribution capabilities. - *The proposed call accounting system by Trivium does meet these requirements SJB GlobalNET*

24) Must integrate with Crystal Reports - *The proposed call accounting system by Trivium does meet these requirements. SJB GlobalNET*

## 2.6 VOICE/MESSAGING SYSTEM ADMINISTRATION

- a) Telephone system voice processing, phonesets and messaging administration shall be performed on a local and/or centralized basis through METRO's *thin-client terminals* and a few PCs. - *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- b) If proposed GUI (graphical user interface) is web-based the application MUST operate correctly on METRO's **Citrix application servers** and thin-client terminals. Explain how you will prove this concept prior to contracting for this RFP. - *All web interfaces are built for Internet Explorer or Firefox. SUB GlobalNET, inc*
- c) If GUI proposed (graphical user interface) is software -based the application MUST operate correctly on METRO's **Citrix application servers** and thin-client terminals. Explain how you will prove this concept prior to contracting for this RFP. - *All user and administrator functions are administered via the web. SJB GlobalNET, inc*
- d) Does your proposed system *administration interface* get upgraded as the other system components go to new versions? - *The look and feel of the web pages do not change unless features or buttons are added. SJB GlobalNET. inc*
- e) How many different GUI interfaces are there for your complete system solution? - *One to three interface(s) for voice/messaging system administration depending on what core option is selected. SJB GlobalNET. inc*
- f) What training classes and certifications are available for the administration of the proposed solution? - *There is an optional 3-day administrator training provided by 3Com. SJB GlobalNET. inc*
- g) Explain any administrator functions that are not supported in a centralized administration environment - *There are none that are outside of the centralized administration. Auto-attendant can be administered via CLI interface as can many other VCX applications. SJB GlobalNET. inc*
- h) Authorized personnel shall be able to control and administer the entire System through the System Administration Utility (SAU). - *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- i) The system administration utility shall allow the telephone administrator to view and print traffic information from the System. Such information shall be available on demand or on a programmable periodic basis. - *Acknowledged and in agreement. SJB GlobalNET, inc*
- j) The system administration utility shall allow the telephone administrator to make changes to system and station feature operating parameters in all nodes of all systems real-time both locally and remotely. - *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*
- k) Can add/delete/change of System and station user features and capabilities (e.g., extension assignment, feature button assignment, COS, call forwarding, hunt pattern and membership, call pick up group assignment, can be made easily by METRO in-house IT staff after training? - *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- l) Call routing patterns for routing internal METRO calls over the network is required to be configured - *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

m) Emergency 911 calls to the PSAP are be configured to reflect location-based ANI of the physical address where each emergency call originates from – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

n) System administration utility(s) shall have the capability to program phoneset COS (class of service) and support pre-programmed; for subsequent (by time and date) execution – *The VCX has this capability. SJB GlobalNET. inc.*

o) The system shall provide access control (entry level security) for the system administration utility (SUA) – *The VCX has this capability. Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

p) The system shall permit the assignment of multiple categories of access privileges such that different restrictions can be applied to different administrative and operational staff. – *The VCX has this capability. Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

q) The System shall keep an audit trail of all significant events, changes and alarms for administrator review – *The VCX has this capability. Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

r) It is required of every proposed solution to assist in tracking down potential problems or abuse, authorized personnel shall be able to invoke exceptional and detailed logging of all or specific event(s) by specific station(s), trunk(s), access code(s), etc in the System. Explain. – *The VCX has this capability. Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

## **2.7 BACKUP**

Describe the media in which system database(s) can be “backed up”. Briefly describe manual and automatic and scheduled backup procedures. Using METRO’s LAN/WAN, can system backup take place on central servers, NAS or SAN? - *The backup can be automated and triggered by several methods including schedule and TFTP pull method. The administrator builds a script in a scripting language or Linux cron file that automatically pulls the backup off of the VCX servers. The script can then place that file in any storage container accessible to it. SJB GlobalNET. inc.*

## **2.8 DIAGNOSTICS AND TROUBLE-SHOOTING**

a) The Proposed Diagnostics and Troubleshooting solution for this RFP should be simple in design and use, but feature rich – *This system design conforms with these parameters. SJB GlobalNET. inc*

b) Please explain how troubleshooting can be handled by in-house IT personnel and what management utilities are included in your proposal – *A management solution has been proposed to assist with network monitoring, troubleshooting and management. SJB GlobalNET. inc.*

## **2.9 REMOTE DIAGNOSTIC AND CORRECTIVE CAPABILITIES**

a) Explain how the system can be maintained, diagnosed and corrected when needed remotely over the internet. – *Using log files and debugging trace files all tools are on the call processor and available via telnet. SJB GlobalNET. inc*

## **2.10 ERROR AND ALARM LOGGING AND NOTIFICATION CAPABILITIES**

a) Describe the system’s error logging capabilities – *Logical switch can be set and debugging tools turned on to capture all data errors and anomalies for analysis. The VCX platform system was build with remote management at the heart of its design. SJB GlobalNET. inc*

b) Can the system send alarm indications to one or more administrative terminals, phones and PDAs? - *Acknowledged and in agreement. SJB GlobalNET. inc*

## **2.11 SYSTEM ACCESS AND SECURITY**

a) Describe the proposed system's access and security controls, including the types of access permitted and the layers/hierarchies allowed for system administration. - *Multiple user accounts can be created to manage various aspect of the VCA Platform There is separated access to the voicemail, call processor. CLI and CDR applications SJB GlobalNET. inc*

## **2.12 PHONESET**

### **2.12.1 Phoneset Formfactor-Cordless**

a) A cordless phoneset formfactor with system *Programmable Feature Keys*, license(s) and that is headset ready are required components of the desired system – *The VCA offers the Model 3106, Model 3107 and Model 3108. each support programmable feature keys and are headset ready SJB GlobalNET. inc*

b) What type cordless phones work with the proposed solution? - *Model 3106, Model 3107 and Model 3108. SJB GlobalNET. inc.*

c) Can cordless phonesets in your proposal be placed anywhere on the METRO network within a three hundred foot range? - *Yes, provided that the frequencies used are available to support the distance SJB GlobalNET. inc*

d) Is any other hardware required to connect a cordless phone to the system at any network port (like an ATA- Analog Terminal Adapter)? Are licenses required? – *No, SJB GlobalNET. inc*

e) The cordless phoneset must have the ability to transfer a call and put a call on hold without the need of a feature code. – *All cordless phones have this capability SJB GlobalNET. inc*

f) The cordless phoneset is desired have a LCD display with caller ID and other call status information – *All cordless phones have display screens SJB GlobalNET. inc*

g) Cordless phonesets should have a belt buckle latch or other means of fastening to a User's clothing for mobility within the office - *The Model 3106 and 3107 both have belt latches SJB GlobalNET. inc.*

h) Cordless phoneset should have 4-hours minimum TALK battery life and recharge quickly when placed in a "Charging Base-Station". – *All cordless phones have this capability SJB GlobalNET. inc*

i) Cordless phoneset should have 24-hours minimum IDLE battery life and recharge quickly when placed in a "Charging Base-Station". – *All cordless phones have this capability SJB GlobalNET. inc*

j) Cordless phoneset should have volume controls and a mute button – *All cordless phones have volume control and mute buttons SJB GlobalNET. inc*

### **2.12.2 Phoneset Formfactor-Executive and Business Class**

a) Phoneset must be IP-based with a switched 10/100 Mb Ethernet pass-through port – Both the executive and business class phones have switchports. - *The Business phone (3102) has 10/100Mbps and the Manager phone (3103)10/100/1000Mbps SJB GlobalNET. inc*

- b) Phoneset must be supported entirely by *Power over Ethernet (POE)* (IEEE 802.3af c3). – *Yes they are POE devices. SJB GlobalNET. inc*
- c) Phonesets should have an easily readable LCD display with caller ID name, time of day and indication of how many voice mail messages the User has visible on display as well as directory of METRO Users, logs of missed calls, dialed calls, and other information. – *The model 3102 and 3103 meet these requirements SJB GlobalNET. inc*
- d) Phonesets must have full-duplex speaker-phone and have good performance and sound quality. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- e) It is desired that ALL phonesets have multiple BLFs (Busy Lamp Field) and that programmable buttons be configurable for many functions. - *Model 3102 has eighteen and the Model 3103 has twelve. SJB GlobalNET. inc*
- f) A phoneset must have a mute button for handset speaker phone and headset – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- g) Phoneset to display number of messages waiting – *Affirmative. Acknowledged and in agreement, SJB GlobalNET. inc*
- h) Phoneset must be capable of acting as a *Paging System* through the speakerphone speaker of the phoneset when *paging* with proper credentials through the proposed system – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- i) The headset amp shall be built into the phoneset so no external “amplifier” is needed. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*
- j) The executive formfactor should have *wide-band audio* performance and excellent conference sound ability. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

### 2.12.3 Reception Stations

- a) A full-featured *Hardware Reception Console* is to be included at four (4) physical sites and is also to include an integrated software based reception station at four (4) physical sites – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- b) Both hardware and software Reception Stations are to show if a User is on a call by displaying a BLF in hardware and another indication in the software GUI. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*
- c) The Hardware reception console should have greater than 40 programmable buttons with BLFs - *Attendant comes with fifty buttons and the ability to shift key to have one hundred. SJB GlobalNET. inc*
- d) Both the hardware and software Reception Consoles will have the ability to allow the receptionist to know the state (busy, forward, out for holiday/vacation, etc ) the extension is in prior to transferring a call – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

### 2.12.4 Wi-Fi Enabled Phonesets

- a) Not in this Scope of Work, but may be desirable in the future. Does your proposed solution support this functionality? Yes, 3Com offers the 3108 Wi-Fi telephone SJB GlobalNET, inc.

b) Does the proposed system OEM offer a Wi-Fi phoneset? – *Optional. needed a WiFi network to operate SJB GlobalNET. inc*

## **2.13 SUPPORT FOR “OPEN STANDARDS”**

a) Open Standards; especially SIP for inter-operability with third party *applications, end-stations and trunks* shall be included in cost of proposal. – *The VCX was built from the ground up using SIP unlike most PBX an IPPBXs where additional SIP server are needed in addition to the call processor. SJB GlobalNET. inc*

### **2.13.1 System Inter-Operability**

a) The proposed system(s) must be inter-operable with the METRO’s current operating systems, server platforms, application servers, applications, thin-client terminals and Citrix as well as network distribution and active components – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

b) The proposed telephone system should be inter-operable with IP-based paging and intercom systems based on industry standards. What systems are available for IP-based paging and intercom systems? – *Affirmative. Cyberdata SIP based speakers can be used with the VCX platform Acknowledged and in agreement. SJB GlobalNET. inc*

c) Describe the level of *integration potential* for CTI (computer telephony Integration) enabled applications with you proposed solution (none to be configured in this Scope of Work). – *Full CTI intareation is available SJB GlobalNET. inc*

## **2.14 CONTACT CENTER FEATURE (ACD)**

a) Real-Time Reports and “Supervisor” for Contact Center and CDR (Call Detail Reporting) – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

b) Call Logging and Call Recording for inbound and outbound calls. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

c) Archiving is required for all agents in contact center – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

d) Include all hardware software and licensing in proposal – *Affirmative. Acknowledged and in agreement, SJB GlobalNET, inc*

e) Call routing to “agents” is currently “Most Idle Agent” rather than “all phones ring” – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

f) Agent should be able to view real-time “queue status” on the display of the phone and/or a PC based GUI (must support Citrix thin-client environment) – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

g) Agent should be able to view statistics including number of calls waiting, time of longest call waiting – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

h) “Agents” shall have the ability to log in and log out of the “agent” group by use of a button on the phoneset that shall give an indication on the menu or with a light (BLF) that the “agent” is logged in – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*



f) Does your proposed ACD reporting solution support the following (Answer YES or NO):

- 1) Average call duration
- 2) Average talk time
- 3) Average time to abandon
- 4) Wait time (average and total)
- 5) Total number of received calls
- 6) Total number of answered calls
- 7) Total number of abandoned calls
- 8) Reports that are configurable in various time brackets
- 9) Interval reports showing Queue and agent statistics for 15 minute periods
- 10) Delay before answering
- 11) Agent activity and productivity reports
- 12) Group/skill activity and utilization reports
- 13) Peak time reporting (daily, weekly and monthly) with historical trend analysis
- 14) Crystal Reports integration
- 15) Real-time supervisor visibility of "Agent Status"
- 16) Real-time visibility as to next Agent in line to receive a call
- 17) The ability of an Agent to enter an "Activity Code" after a call to categorize the nature of the call in the ACD logs by pressing a pre programmed button or with a DTMF tone.

– *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

g) Can callers navigate automated attendant prompts to receive information while still waiting in a queue? – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

h) ACD reporting application should provide standard and customizable reports without having to use an external report writer. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

i) ACD reporting application should provide flexible reporting tools – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

j) ACD reporting application should have a Windows or web based interface that provides real-time and historical data – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

k) ACD reporting application should be available to designated METRO staff in any department. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

l) ACD reporting application should allow ODBC (Open Data Base Connectivity) access to the reporting database so that the METRO can use Crystal Reports to create reports that combine Call Center data with CRM (Customer Relationship Management) or financial data. – *Affirmative. Acknowledged and in agreement, SJB GlobalNET. inc*

m) When silently monitoring a call, can a supervisor speak to the agent to provide clarification or coaching without the outside caller hearing the supervisor with your proposed solution? – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

n) ACD Supervisors should be able to dynamically monitor (through a GUI window on their PC or Citrix client terminal) all their assigned groups and agents – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

o) A Supervisor should be able to log-in/out, and make available/unavailable an agent from the supervisor application. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

p) The system shall announce the expected wait time based on a dynamic calculation of the number of calls waiting, the number of agents logged on and the Average Speed to Answer? – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

- q) Can the proposed solution create a report that will allow supervisors to compare call statistics between different time periods (last month versus the same period 1 year ago)? – *Affirmative, Acknowledged and in agreement. SJB GlobalNET, inc*
- r) Four (4) seats of ACD reporting application licenses are required – *Affirmative. Acknowledged and in agreement, SJB GlobalNET, inc*
- s) Three (3) ACD “Supervisors” seats or licenses are required – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- t) Ten (16) ACD Agent licenses are required – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- u) A “Real-Time Supervisors Dashboard” with customizable fields is required and must run on Citrix with thin-client terminals or PCs. This tool must be available on the Metro network so Supervisors can look at data from any physical site with proper credentials and determine Agent status and history. It is required that the “Real-Time Supervisors Dashboard” can clearly show the next Agent to receive a call in an ACD or call center group – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- v) Activity Codes must be able to identify the type of call after an Agent has ended the call. The Agent shall be able to press a programmable button on the phoneset or use a DTMF tone to categorize the type of call in system logs. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

## 2.15 CONTACT CENTER RECORDING

- a) Recording of all contact center voice interaction for later review and evaluation is required. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- b) Record an agent through a series of calls without Supervisor intervention – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- c) Describe your proposed ACD recording application including hardware, software, voice-quality codec, agent and supervisor interface, indexing system for finding archived recordings, recording medium, redundancy and other items included in your proposal. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- d) Call Recording for sixteen (16) “Contact Center Agents” is required in this RFP. The proposed recording solution is to meet all State and local laws as well as national laws that may be applicable for recording voice and notification – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- e) The Agents” may be physically “distributed” on the METRO network with ten (10) Agents at the ParaCruz physical site and six (6) Agents at the Pacific Metro physical site. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- f) Explain where your contact center application platform will physically reside and how it will send data over the network. – *At ParaCruz. SJB GlobalNET, inc*
- g) What compression and codec(s) are included with your call recording solution? *G 711 or G 729. SJB GlobalNET, inc*

h) Is the proposed call recording application SIP based? – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

### **3. CABLING REQUIREMENTS**

#### **3.1 EXISTING CABLE-PLANT**

- a) Existing cable-plant is not in this Scope of Work  
Additions to, or repairs of the wire or fiber cable plant is not required – *Affirmative, Acknowledged and in agreement. SJB GlobalNET, inc*
- b) All existing connections from switches to desktops are CAT 5 or better quality for the purpose of this RFP – *Affirmative. Acknowledged and in agreement, SJB GlobalNET, inc*
- c) System components should interconnect to the METRO switched network with CAT 6 interconnect patch cables direct to switch at either 100MB or 1GB (IEEE 802.3). – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- d) Phonesets will connect at 100MB Ethernet (802.3af) and no other connection shall be allowed. It is assumed for the purposes of this RFP this port will be provided by METRO – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

### **4.0 SPACE & ENVIRONMENTAL REQUIREMENTS**

#### **4.1 UPS**

Battery backup and AC power surge protection will be provided by METRO

- a) Specify as option for the UPS to be able to supply one (1) hour capacity for the “core system” components and “end-stations” of your proposal – *Affirmative. Acknowledged and in agreement, SJB GlobalNET, inc*
- b) Propose surge protectors for all trunk lines to protect system ports as required (Towermax or similar) – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

### **5.0 IMPLEMENTATION - MIGRATION PLAN**

#### **5.1 OPTIONS FOR INSTALLATION**

- a) A *Turnkey Installation* of ALL system components and all required “services” contents of this RFP is to be proposed – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- b) A *limited Installation*, configuration and extensive administrator training to facilitate a METRO- assisted installation This option would take the form of the proposer doing the main system installation and primary configuration and METRO installing phones and filling in user data to reduce cost due to limited budgets – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- c) Contractor will work with METRO personnel to minimize disruption of METRO operations. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*
- d) Briefly describe your proposed installation plan to minimize disruption of METRO operations – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

#### **5.2 IDENTIFY PROPOSER ACCOUNT TEAM**

a) Provide the name and credentials of the proposed *Project Manager*. Please include OEM Vendor certifications and, or resume. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc Please see resume locate in the appendix*

b) Provide the name and credentials of the proposed *lead-engineer*. Please include OEM Vendor certifications and, or resume – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc Please see resume locate in the appendix*

### 5.3 IDENTIFY DESIGN OF PROPOSED SOLUTION

The Proposer must include diagrams and other notes to describe the technology environment and call flow features of the proposed solution. Discuss how the proposed solution will suit METRO's needs – *Affirmative. Please see diagrams locate in the appendix. Acknowledged and in agreement. SJB GlobalNET. inc*

### 5.4 TRAINING PLAN

Training will be a key element in the successful implementation of the new voice / messaging system. METRO seeks to be self-sufficient to the greatest degree possible after the new system is implemented.

a) Comprehensive training will be required for all Users of all new systems and applications to be provided by the successful Contractor. A TRAIN-THE-TRAINER APPROACH may be acceptable, but describe clearly what deliverables are included in your proposal for this section – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) Proposer's overall training plan must be detailed, address all requirements described herein, and 1) include the number of users planned for each training session, 2) number of sessions planned, 3) number of phones/terminals provided for training, 4) qualifications of trainers to be used, 5) outline of training session content (for agents, attendant console operators, supervisors and administrators), and 6) training schedule. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

c) Provide METRO an "on-going" *professional services* pay-rate for system training, *as needed* (time and materials); from a qualified professional certified on the system solution proposed \$125.00 Per hour, w/ 4-hour minimum. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

d) What printed materials are to be presented to Users? METRO shall be given the right to reproduce Proposer training materials, manuals, feature reference cards, and other documentation. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

e) Training sessions will be conducted at METRO's facilities and shall include hands-on training utilizing fully functioning telephone sets and thin-client terminals as appropriate), with trainers describing and demonstrating functions, activation and application of *all relevant features*, services and applications of the proposed system – *Affirmative, Acknowledged and in agreement. SJB GlobalNET*

f) The proposed system shall have extensive *Context Sensitive Help* with end-user guides to facilitate Users resolving their own issues without the intervention of METRO's IT Department – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

### 5.5 ADMINISTRATOR TRAINING

a) The METRO will have up to four staff members that are to be trained concurrently to perform simple/common telephone and voice mail changes, additions and moves to the system. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) Proposer must offer a minimum of eight 8 hours of training METRO Administrators for moves, Adds and changes to the system. Basic system administration – telephone and voice mail – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

- Feature use
- Basic Reporting
- Automated attendant menus and recordings
- Re-setting voice mail box passwords
- And other administration functions to be determined

c) Proposers are to include the METRO IT Administrators (4 persons) into ALL User training sessions and provide them with all documentation related to training

1) Are Vendor qualified classes and certifications available for the proposed system and applications? – *Yes. go to www.3commiversity.com and select VoIP VCX to find the most recent training dates this area*

2) Is web-base training available for the proposed systems and applications? *Yes. Web based training is available for single use, multiple use and site license (unlimited) use SJB GlobalNET*

## 5.6 FIRST DAY/WEEK IN SERVICE

a) Unless otherwise proposed specifically the main system components are to be installed, configured first and operating and then the end-points will be deployed – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) The current METRO telecom environment should remain in place and functioning past the time of the installation of the new systems so that a *zero-down-time cutover* can be achieved – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

c) The Proposer will provide on-site technical support and will with due diligence assure a “*painless*” cutover to carrier circuits, and will remain involved until all issues are resolved or in the process of being resolved. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

## 5.7 INSPECTIONS, TESTING, CUT-OVER, ACCEPTANCE

### 5.7.1 Inspections

a) METRO shall have the right to inspect the work at any time In the event of questionable work, METRO’s reasonable decisions with respect to necessary corrective action shall be final and by the terms and conditions herein this RFP – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) An inspection shall be made of the systems by authorized representatives of METRO and Proposer before the Cutover(s) and prior to performing acceptance tests on any System transition phase The inspection shall be of such character and extent as to disclose any unsatisfactory condition of hardware, software or the configuration of either. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

c) Where any of the following conditions are observed during inspections or testing of the System, sufficiently detailed examinations shall be made to disclose the full extent of their existence:

- Failure to comply with the quantity of equipment specified for installation;
- Failure to comply with design specifications;

- Failure to comply with applicable laws, ordinances, regulations or building codes;
- Apparatus or equipment functionally or cosmetically damaged;
- Other adverse conditions resulting from failure to meet generally accepted standards of good workmanship

– *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

d) Upon discovery and validation of the existence of any unacceptable conditions, Proposer shall act to rectify such conditions as quickly as possible so as not to negatively impact the project implementation schedule – *Affirmative. Acknowledged and in agreement, SJB GlobalNET*

e) METRO shall be notified of the correction of all unacceptable conditions as soon as they are completed METRO reserves the right to re-inspect corrected work. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

### 5.7.2 Testing Plan

a) All standard and optional systems shall be tested for proper operation. The proposer shall submit the manufacturers suggested installation checklist / planning guide filled in and confirming system functionality – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) METRO shall review the checklist and may include other checklist items – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

c) A representative of METRO shall be present during the checklist process and approve all procedures – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

d) The vendor shall schedule the checklist verification dates/times one- week in advance with METRO – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

### 5.7.3 General Testing

a) The vendor shall submit a checklist for systems testing including the System Planning Guide. This is a test for system operations; telephone set testing, auto attendant testing and contact center and recording testing. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) Further, METRO shall have the ability to add application-testing procedures to the checklist – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

c) Tests to include all functions and features of all Proposer-provided station sets and terminals to ensure proper operation – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

d) Tests to include voice processing and call processing functions – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

e) Tests of all emergency power and bypass equipment – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

f) Tests to confirm that all trunking, tie-line, data circuits and equipment have been installed, are functioning properly and reliably, and are properly balanced to provide optimal operation and performance with the System – *Affirmative. Acknowledged and in agreement, SJB GlobalNET*

g) Tests to confirm that all inter-system connectivity and functionality have been installed and are operating correctly and reliably – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

h) Testing including 911 to show proper *physical site address* to PSAP. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET*

- i) If METRO deems the proposed testing plan inadequate, METRO shall provide reasonable detail of such deficiencies and Proposer shall revise its plan to incorporate reasonable additional METRO testing requirements. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*
- j) Proposer shall furnish all necessary test equipment and perform all work required to determine or modify the performance of the System to meet the specified functions in an optimal manner – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*
- k) At such time as all tests have been completed to Proposer's satisfaction, Proposer shall give METRO written notice thereof, provide to METRO written documentation of test results within ten (10) days after conclusion of each test, and set (or confirm as applicable) the date of each System Cutover phase. If METRO notifies Proposer in writing of deficiencies in the results of such tests, Proposer shall not proceed to any Cutover until such material deficiencies have been corrected to METRO's reasonable satisfaction. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET*
- l) Failure to meet the requirements of any portion of the test plan shall be deemed a failure of the test, which shall be rescheduled after appropriate corrections have been made. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

#### 5.7.4 Cutover

- a) "Cutover" shall mean the date at which the system is fully functional and capable of supporting ALL end-user stations and trunks, and the concurrently the new system receives network connectivity to the PSTN. Main number(s) continuity is required on day one (METRO main department numbers will be available constantly during METRO business hours) – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*
- b) Proposer shall develop a comprehensive Cutover Plan This plan shall include specific detail of each cutover phase and step, scheduled to facilitate METRO, Carrier, and Implementer coordination – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*
- c) The Cutover Plan shall detail the steps, methodology and schedule that will be used in implementing the new systems with the minimum inconvenience to METRO staff – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*
- d) A goal of "zero-down-time" for both network and voice during business hours is to be adhered to except for circumstances beyond the control of the Proposer – *Affirmative, Acknowledged and in agreement. SJB GlobalNET*
- e) The cutover Plan shall clearly define the responsibilities of both the Proposer and METRO in the cutover process. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*
- f) The Cutover Plan shall describe the number of technical, training and general support personnel committed to be on-site immediately following Cutover (i.e., how many personnel with what skills/credentials on-site for how long following Cutover?). – *The cut-over will require no more than one person to conduct. With the proper pre-cut-over and post-cut-over training, site are able to adapt quickly to the new system and are usually quite happy to move to using it. With the phone sets in place prior to the cut-over and live, the staff will have plenty of time to familize themselves with the system. In order to manage the cut-over the smoothest, it is recommended that Panacruz be cut-over separately and before Vernon. SJB GlobalNET*
- g) The Cutover Plan shall be designed to show the cutover date for the system, as agreed to by METRO, the Proposer and applicable common carrier(s). – *Affirmative, Acknowledged and in agreement. SJB GlobalNET*

h) The Cutover Plan shall be submitted for approval no less than fifteen (15) days prior to Cutover – *Affirmative. The cut-over date should be known after the equipment has arrived Acknowledged and in agreement. SJB GlobalNET*

#### 5.7.5 System Final Acceptance

a) The term “*System Final Acceptance*” shall be defined as METRO’s acknowledgment to Proposer that contracted work has been successfully completed and the System has substantially performed to the specifications and requirements of the Agreement, without the occurrence of a material system component failure for a period of thirty (30) consecutive calendar days following *System Cutover*. During this thirty day period, there shall be no substantial or user-affected problems. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) METRO shall notify Proposer of any occurrence or condition that could delay or prevent Project Acceptance, immediately upon its discovery. Upon notification of any occurrence or condition that METRO reasonably deems unacceptable, Proposer shall use its best efforts to correct the failure as soon as possible. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

c) If the unacceptable condition constitutes, in METRO’s reasonable opinion, a material System component failure, the Project Acceptance Period shall be halted and only upon Proposer notification to METRO, in writing, of correction of the failure, shall the thirty-calendar-day Acceptance Period begin again where it left off. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

d) The date of Project Acceptance shall be the later of the end of the initial Post-Cutover thirty-calendar day Acceptance Period or any extension thereof as described herein. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET*

e) Project Acceptance shall not be unreasonably withheld. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

f) In the event METRO does not notify Proposer within thirty (30) calendar days after Cutover of any particulars in which METRO deems the System unacceptable and no material System failures have occurred during this period, Proposer shall notify METRO in writing that the System has been deemed Accepted as of the last day of the Acceptance Period. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

g) If the System does not meet Acceptance criteria within ninety (90) calendar days after Cutover, METRO shall have the option to: (h) request replacement hardware and/or software, as appropriate, be installed (up to and including the entire System if necessary to bring System into operational compliance); (i) delete the defective portion of the System from this Agreement in accordance with default provisions; (j) extend the Acceptance Period; or (k) terminate this Agreement in accordance with default provisions. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

h) METRO’s options shall remain in force until such time as the System meets all Project Acceptance test criteria as stated in this RFP and Proposer response document and is accepted or 180 calendar days after Cutover, whichever occurs first. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

#### 5.8 ESCALATION PLAN

a) Within ten (10) calendar days after contract execution, successful Proposer shall provide METRO with an escalation plan and procedure, including names, telephone numbers (office,



home and pager) for all key project personnel, including Proposer project manager, project engineer and other relevant technical resources, appropriate local sales and management personnel, and corporate executive management, up to and including the President and CEO of the Proposer's organization. This escalation plan shall detail the process, timing, and circumstances under which escalation shall be instituted by either Proposer field personnel or METRO – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) At *Cutover(s)* Proposer's president and regional vice-president/general manager shall be available by phone or pager. Such contact numbers shall be made available to METRO no later than three days prior to cutover(s). – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

## 5.9 SYSTEM DOCUMENTATION

a) Within ten (10) days after *System Cutover* to PSTN, Proposer shall provide METRO with reproducible plans and other documentation accurately reflecting switching system and peripheral application system "*as-built*s." Complete information concerning the System features and location/configuration/class of service, VLANs, IP subnets, User extensions, User location, User position, User button mappings, ACD groups, METRO main numbers and other relevant details will be presented to the METRO in hardcopy form (binder) – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

b) Documentation must be presented in such a manner that METRO can, without physically auditing the telephone, ACD application, voice mail, stations, servers, gateways and other components of the system be able to determine the location and configuration of all System elements – *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

c) Minimum documentation includes but is not limited to:

- 1) Single-line/schematic drawing showing connectivity of all systems, peripherals, etc.
- 2) Database print for all databases and configurations for all Proposer-provided systems.
- 3) Spreadsheet of all User IDs and respective system termination port or address.
- 4) User assignment spreadsheet with the following minimum information (Excel): Name, physical location, extension, type of phoneset, phoneset serial number, IDF cross-connect, class-of-service, group assignments, voice mailbox assignment, etc

– *Affirmative. Acknowledged and in agreement. SJB GlobalNET*

## 6.0 EQUIPMENT ITEMIZATION

a) Associated with this section, Proposer **MUST** provide a detailed, system equipment, installation labor, license and software breakdown for each system configuration proposed in the Schedule A section of this RFP – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

b) This line-item breakdown **MUST** include quantities, item designations, item description, unit cost and extended costs – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

c) The line-item equipment breakdown **MUST** include, by category, all switching system components, telephone station sets, auxiliary/peripheral equipment, software, voice processing, voice mail, fax and unified messaging, call accounting, ACD, call center, conferencing, battery back-up,, gateway, interconnect cables, and other cost related items included in your proposal – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

d) Minor, incidental materials such as mounting hardware, backboards and other misc need not be itemized – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

e) When detailing 'groups' that include multiple items, provide a detailed itemization breakdown – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

f) The Proposer is responsible for providing all equipment, software, licenses and labor to support all applications described in this document. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

g) Schedule A information will be critical to validate inclusion of all necessary system components, compare system proposals and provide a basis for inventory of tangible deliverables. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

## 7.0 PRICING

Refer to attached spreadsheets in *Schedule A – COST ITEMIZATION*– *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

### 7.1 PRICING BREAKOUT-OPTIONS

a) Provide options for *various levels* of professional services and/OR *Product Only* options for METRO's consideration. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

b) The Metro is not interested in financing this project. Please do not offer lease options – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 8.0 WARRANTY AND MAINTENANCE

a) Proposer warrants that the System, including all hardware, software, equipment, parts, materials and labor referenced herein shall, under normal use and service, be free from defects and faulty workmanship for a minimum of one (1) year from the date of Cutover ("*OEM Warranty Period*"). – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

b) Proposer warrants and represents to METRO that the System shall function in accordance with all requirements of this RFP and the Proposer responses stipulating performance criteria and standards, and current specifications and descriptions published or disseminated by the System manufacturer as performance and/or operational "*practices*" with respect to each respective System as a whole as well as all individual components and/or applications of each System – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

c) Proposer (or the OEM Vendor) shall maintain an inventory, within 4 hours delivery time to METRO, for all components that are reasonably necessary to perform optimal service on the System for the duration of the Warranty Period and subsequent maintenance agreement periods – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

d) Prescribed inventory levels shall not be diminished. Removed parts shall be restocked within a contractually agreed time. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

e) Proposer shall maintain fully trained technical staff competent on all System hardware and software within fifty (50) miles of METRO for the life of the Warranty Period. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

f) The number of such fully trained and competent staff available from the specified locale shall be sufficient to provide the level of Service responsiveness and support committed to by Proposer herein. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET. inc*

g) METRO shall be entitled to have its employees or agents make software additions, moves and changes to the database for the System and moves and changes to the System hardware provided herein ("Alterations"), and the successful Proposer shall be deemed to have given its consent thereto as long as all such Alterations are performed in accordance with the applicable portions of the System manufacturer's and the successful Proposer's practices, copies of which shall be provided to METRO by the successful Proposer prior to System Acceptance. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

h) Alterations to the system performed by METRO shall have no negative effect on the System Warranty or subsequent maintenance agreements, other than the successful Proposer's ability to charge METRO a maintenance fee for any additions made that increase the successful Proposer's requirement to service such additions. The maintenance fee charged for such additions shall be consistent with the fees charged for the same (or similar) equipment as described in the maintenance schedule included with the response to this RFP and shall be pro-rated as necessary to make charges co-terminus with existing Warranty or maintenance period. If no maintenance fee for similar equipment exists, METRO and the Successful Proposer shall mutually determine a fair and reasonable fee. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

i) If equipment additions are outside the realm of the successful Proposer's expertise, inventorying, restocking, or servicing abilities, the successful Proposer shall have the option of not maintaining such equipment – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

j) Therefore, if these requirements require additional cost to METRO, then state these additional costs in your response. Merely replying "we do not provide this level of support, we offer depot service, there is a time & material cost to METRO, etc" is not permitted. – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

k) Can the Proposer's company support all "networking" equipment – hardware, software and professional services; to the extent that it is an integral part of the overall telephone system application? – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

l) Does the OEM vendor offer system support if the successful Proposer is found to be "inadequate"? – *Affirmative. 3Com Professional Services. SJB GlobalNET, inc*

## **8.1 RESPONSE TO SYSTEM PROBLEMS**

Warranty service shall include Proposer and /or OEM response to System problems. Please itemize options for maintenance in Schedule A – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

### **8.1.1 Proposer Response to Maintenance Issues**

a) Warranty service shall include Proposer and /or OEM response to System problems in the following manner: – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

b) Service shall include all parts and labor, and be available twenty-four (24) hours per day, seven (7) days per week and with a four (4)-hour technical response for critical System components – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

c) Itemize one (1) year of 24X7X4 hour service to include on-site engineering for all critical system components including advanced hardware replacement (4 hour). – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

d) Itemize one (1) year NBD (next business day) X 5 day a week hardware replacement for phonesets in this proposal as an option – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

e) State cost for additional years for up to the next five (5) years – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

### 8.1.2 Service Response

a) Response to *Emergency Maintenance* calls shall not exceed four (4) hours response time and this is to include the time for hardware replacement (4-hour) and on-site technical assistance if needed (4-hour) – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

b) “Response” shall mean METRO will indicate the problem device or issue and a service ticket will be started. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

c) Emergency maintenance shall be defined as follows:

- 1) An entire physical location is down without dial tone.
- 2) A main reception position is inoperative.
- 3) A majority of trunks in a specific trunk group is inoperative including a main number.
- 4) The entire system is inoperative.
- 5) The messaging system is inoperative.
- 6) The voice processing system is inoperative.
- 7) There are two or more system re-boots in a twenty-four hour period.
- 8) Disruption in service to a single user of material nature. Material nature shall mean METRO’s operations are critically affected.

– *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

d) When a request for Emergency Service is received from METRO, Proposer agrees to dispatch qualified maintenance personnel, as required, to arrive at the affected METRO facility within two (4) hours of said request if not resolved by remote connection or telephone support. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

e) If a declared Emergency condition is successfully corrected by Proposer within the 4-hour response period via remote diagnostic routines and no Proposer on-site presence is required to restore the System to proper performance levels, the 4-hour on-site response requirement shall be waived. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

f) A “Request for Service” when an Emergency does not exist shall be deemed to be a request for “Routine Service” – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

g) When a request for *Routine Service* is received from METRO, Proposer agrees to cause qualified maintenance personnel, as required, to arrive at the affected METRO facility within the “next business day” of said request, 8:00 A.M. to 5:00 P.M. local time, Monday through Friday, excluding weekends and METRO holidays. If a routine service condition is successfully corrected by Proposer/OEM within the required response period via remote diagnostic routines and no Proposer on-site presence is required to restore the System to proper performance levels, the “next business day” on-site response requirement shall be waived. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

h) In the event of a System Emergency, the Successful Proposer shall: (i) prioritize METRO’s Emergency; (ii) escalate within the successful Proposer’s technical and management organizations as necessary to resolve the Emergency; (iii) use its best efforts to correct the Emergency within four (4) hours from receipt of notice of such Emergency; and, (iv) maintain continuous effort until the Emergency is corrected to METRO’s reasonable satisfaction. – *Affirmative, Acknowledged and in agreement. SJB GlobalNET. inc*

i) In the event that any Emergency is not corrected by the Successful Proposer within twelve (12) hours from receipt of notice with respect thereto, the successful Proposer shall replace that portion of the System causing such Emergency with new items of equipment or software (meeting the requirements hereof) within twenty-four (24) hours from receipt of the notice with respect to such Emergency – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

j) Proposer will provide a service escalation call list – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

k) In the event that the successful Proposer elects to perform field repair on defective equipment and such repaired equipment continues to experience repeated failures adversely affecting the System, the successful Proposer shall, upon METRO's written request, replace such defective equipment rather than continuing to perform field repairs thereon – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

l) If a problem reported to Proposer is determined by Proposer to be a common carrier or private carrier related problem, Proposer shall: (i) immediately notify appropriate METRO personnel and assist in the notification of the problem to the appropriate carrier; (ii) assist and work with METRO personnel to coordinate with carriers determined to be involved in the problem, including, if necessary, participation in on- and off-site system and circuit testing and meetings as may be required to resolve the problem in a timely manner; (iii) use its best efforts to assist METRO personnel in achieving timely resolution of the problem, including, if necessary, escalation within Proposer's and/or common carrier's or private carrier's technical and management organizations; and, (iv) be responsible, on a per-incident basis, for charges assessed METRO by a "carrier" due to Proposer's erroneous involvement of carrier personnel in a problem that is ultimately determined to be a System related problem. (v) Should the condition require that Proposer "re-boot" the system or performs any action that could lead to a system "re-boot" or any other adverse condition, Proposer shall first notify METRO's management and obtain permission before proceeding. This condition pertains to both "remote" and "on-site" conditions – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

## **8.2 POST-WARRANTY MAINTENANCE**

### **8.2.1 Desired Maintenance Options**

a) METRO understands that Proposers may offer different levels of post-warranty maintenance at different costs. Proposers are encouraged to submit pricing formulas for all available options, including fixed-cost multi-year programs – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

b) METRO is specifically interested in the post-Warranty maintenance options described below  
1) 24-hour per day X 7-days per week X 4-Hour maintenance for critical system components w/ hardware replacement and on-site engineering services (4-hour)  
2) 8 hours per day X 7 -days per week XNBD (next business day) response time for non-critical components such as phonesets  
– *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

### **8.2.2 Maintenance Process**

Confirm that the Proposer will provide itemized maintenance invoices for the global environment  
a) Describe the process for reporting and clearing a service call - *Reporting and clearing will be done via our helpdesk at 888-987-8647 SJB GlobalNET, inc.*

b) Describe Proposer technicians' escalation procedure for unresolved problems – *Unresolved problems are escalated to our sr network manager for review. SJB GlobalNET, inc.*

c) Describe your firm's "Service-Level Measur-ables," the qualitative and quantitative service criteria and performance standards by which METRO satisfaction is measured – *We have both qualitative and quantitative standards for both service criteria and performance standards SJB GlobalNET, inc.*

### 8.2.3 Parts

Can the Proposer assure that authorized service and replacement parts for all system elements will be available from the manufacturer and, or Proposer for a period of at least ten (10) years following initial System Cutover? – *Affirmative. 3Com supports their equipment for 5 years after end of life announcements Acknowledged and in agreement. SJB GlobalNET, inc*

### 8.2.4 Disaster Recovery

Describe your disaster-recovery methodologies and options should there be a "catastrophic event" at a METRO site regarding the overall network communication systems - *Full fail over is designed into the system to survive beyond catastrophic fail-over events. Please review fail-over diagram in the appendix SJB GlobalNET, inc*

### 8.2.5 Software Updates and Patches

1) METRO shall be notified of any improved or updated software releases when issued by the manufacturers of any products/equipment provided by Proposer METRO shall be offered these updates in a timely manner and at a cost not to exceed that charged to other METRO's with similar size and type systems – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

2) What is the process for installing Microsoft patches when they are released? Explain how your organization promptly gets patches approved for installation and hoe is the METRO notified of new patches – *Patches area automatically updated SJB GlobalNET, inc*

3) Software "*Patches and Fixes*" required to correct any operational problems prohibiting the system from functioning as designed and/or as described in this RFP, the proposal and/or any subsequent contractual agreement (whichever function is more advantageous to METRO) shall be provided to METRO in a timely manner, at no cost to METRO for up to 5 years "*Timely manner*" in this context shall be defined as that time frame, the specific nature of which shall be dependent on system impact and shall be negotiated with Proposer, but under no circumstances shall be longer than thirty (30) calendar days from date of METRO's notification to Proposer of a problem that qualifies under this provision – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

## 8.3 LONG-TERM SUPPORT

Since this project is a part of the METRO's "Modernization" program that continues through 2010, the METRO is seeking proposers who can demonstrate they have the capacity and viability to provide both project and long-term support – *SJB GlobalNET can provide you with the ongoing support services needed SJB GlobalNET, inc*

### 8.3.1 PROPOSER'S BASE CUSTOMER

Describe the Proposers typical customer base - *Typical customer base are multi-site 20 – 1000 user base Average of about 50 users per branch office SJB GobalNET,inc*

### 8.3.2 Repair Facilities

a) Do you have a maintenance/repair "laboratory" with the system makes/models that you support, where technicians can attempt to "duplicate" a customer problem on your laboratory system? – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

b) Provide information about your headquarters and local facilities. – *Located in Palo Alto, CA*

c) Where is the local Proposer's technical location and how many full-time staff are associated with this site? – *Palo Alto, CA with for full-time staff*

### 8.3.3 Service Authorization

Are all proposed system(s) manufactured by the Proposer? What service authorizations does the Proposer have from the manufacturer of the proposed solution? - *Voice Certification. LAN Certification. WAN Certification and Wireless Certification SJB GlobalNET, inc*

### 8.3.4 OEM Partnership

Define the level of partnership between the Proposer and the OEM manufacturer(s). – *Bronze level (soon to be Silver)*

### 8.3.5 Level of Support

Describe the level-of-support and ability to provide a complete system, including the number of Proposer's technicians are certified to technically support the system(s) under a maintenance agreement - *We have two certified VCA engineers as well as wireless and LAN as well SJB GlobalNET, inc*

### 8.3.6 Local Presence

1) Do you plan to install and support this RFP project using your company resources, or subcontract for any or all of the installation and support? - *If any other unlisted outsource/partner arrangement, please explain in detail. Both in house and sub-contract for portions of the project and configuration – SJB GlobalNET, inc*

2) How many years have you supported the greater Santa Cruz area as a reseller of this technology? - *Three years as a reseller and ten years of engineering.*

## 9.0 REFERENCES

Provide three (3) customer references with a minimum project size of over 100 IP telephones in a multi-location configuration, with the same or approximate configuration of that of the desired system herein. Proposer may contact each reference prior to ensure she/he is available for reference verification purposes and the telephone number is correct – *Affirmative. Acknowledged and in agreement. SJB GlobalNET, inc*

### Reference Number 1

- *San Benito County Office of Education. Ron Wheelahan. (831) 630-2563*
- *rwheel@sbcoe.k12.ca.us*
- *August, 2007*
- *3Com NBX version 6.0 single PRI plus analog circuit at each site*

- *100 Business and Basic phonesets with across three sites running on a 3Com core and edge network*

**Reference Number 2**

- *SunPower Corporation, Richard Austin. (408) 240-5468*
- *Richard Austin@sunpowercorp.com*
- *December 2008 – present*
- *Cisco Call Manager version 6. global deployment with 200 digital trunk ports and 400 SIP trunk ports*
- *2500. model 7940 and 7960 telephone devices across twenty-two sites using Microsoft Communication Server for Unified Messaging running on a Cisco core and edge network*
- *One hundred ACD agents using Cisco IPCCx*

**Reference Number 3**

- *First Pay Ltd , Justin Stuart-Young. (268) 481-3729*
- *[jsy@first-pay.com](mailto:jsy@first-pay.com)*
- *April 2007*
- *3Com VCX V7000 version 7.1. with a single PRI*
- *100 business and basic phonesets with a 3Com core and edge network*
- *EasyRun Epic Call Center (Epic also develops 3Com eXchange call center for 3Com) with 16 agents*



**PART IV  
GENERAL CONDITIONS TO THE CONTRACT**

1. GENERAL PROVISIONS

1.01 Governing Law & Compliance with All Laws

This Contract is governed by and construed in accordance with the laws of California. Each party will perform its obligations hereunder in accordance with all applicable laws, rules, and regulations now or hereafter in effect. Contractor shall ensure throughout the terms of this Agreement that all federal, state and local laws and requirements are met including any requirements METRO is obligated to perform because of receipt of grant funding. Contractor shall also be required to fulfill its obligation as a federal and/or state and/or local sub-recipient of grant funding – *Acknowledged and in agreement. SJB GlobalNET, inc*

1.02 Right to Modify Contract

METRO may extend the term of this Contract, expand the Scope of Work, or otherwise amend the Contract. Any such extension, expansion or amendment shall be effective only upon written agreement of the parties in accordance with Section 13.14 – *Acknowledged and in agreement. SJB GlobalNET, inc*

2. TERMINATION

2.01 Termination for Convenience

2.01.01 The performance of Work under this Contract may be terminated by METRO upon fifteen (15) days' notice at any time without cause for any reason in whole or in part, whenever METRO determines that such termination is in METRO's best interest – *Acknowledged and in agreement. SJB GlobalNET, inc*

2.01.02 Upon receipt of a notice of termination, and except as otherwise directed by METRO, the Contractor shall: (1) stop work under the Contract on the date and to the extent specified in the notice of termination; (2) place no further orders or subcontracts for materials, services, or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated; (3) terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the notice of termination; (4) assign to METRO in the manner, at the time, and to the extent directed by METRO all of the rights, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case METRO shall have the right, at its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts; (5) settle all outstanding liabilities and claims arising out of such termination or orders and subcontracts, with the approval or ratification of METRO, to the extent METRO may require, which approval or ratification shall be final for all the purposes of this clause; (6) transfer title to METRO and deliver in the manner, at the time, and to the extent, if any, directed by METRO the fabricated or unfabricated parts, work in progress, completed work, supplies and other material produced as a part of, or acquired in connection with the performance of, the work terminated and the completed or partially completed plans, drawings, information and other property which, if the Contract had been completed, would have been required to be furnished to METRO; (7) use its best efforts to sell, in the manner, at the time, to the extent, and at the price(s) directed or authorized by METRO, any property of the types referred to above provided, however, that the Contract shall not be required to extend credit to any

purchaser, and may acquire any such property under the conditions prescribed by and at a price(s) approved by METRO, and provided further, that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made to METRO to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work covered by this Contract or paid in such other manner as METRO may direct; (8) complete performance of such part of the Work as shall not have been terminated by the notice of termination; and (9) take such action as may be necessary, or as METRO may direct, for the protection or preservation of the property related to this Contract which is in the possession of the Contractor and in which METRO has or may acquire an interest. – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 2 02 Termination for Default

2 02 01 METRO may, upon written notice of default to the Contractor, terminate the whole or any part of this Contract if the Contractor: (1) fails to complete the Scope of Work within time period stated in the Specifications section of the IFB; (2) fails to perform any of the other provisions of the Contract; or (3) fails to make progress as to endanger performance of this Contract in accordance with its provisions – *Acknowledged and in agreement. SJB GlobalNET. inc*

2 02 02 If the Contract is terminated in whole or in part for default, METRO may procure, upon such terms and in such manner as METRO may deem appropriate, supplies or services similar to those so terminated Without limitation to any other remedy available to METRO, the Contractor shall be liable to METRO for any excess costs for such similar supplies or services, and shall continue the performance of this Contract to the extent not terminated under the provisions of this clause. – *Acknowledged and in agreement. SJB GlobalNET. inc*

2 02 03 If, after notice of termination of this Contract under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the default was excusable under the provisions of this clause, the rights and obligations of Contractor and METRO shall be considered to have been terminated pursuant to termination for convenience of METRO pursuant to Article 2 01 from the date of Notification of Default – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 2 03 No Limitation

The rights and remedies of METRO provided in this Article 2 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract. – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 3 FORCE MAJEURE

### 3 01 General

Neither party hereto shall be deemed to be in default of any provision of this Contract, or for any failure in performance, resulting from acts or events beyond the reasonable control of such party For purposes of this Contract, such acts shall include, but not be limited to, acts of God, civil or military authority, civil disturbance, war, strikes, fires, other catastrophes, or other "force majeure" events beyond the parties' reasonable control; provided, however, that the provisions of this Section 3 shall not preclude METRO from canceling or terminating this Contract (or any order for any product included herein), as

otherwise permitted hereunder, regardless of any force majeure event occurring to Contractor. – *Acknowledged and in agreement. SJB GlobalNET. inc.*

3 02 Notification by Contractor

Contractor shall notify METRO in writing as soon as Contractor knows, or should reasonably know, that a force majeure event (as defined in Section 3 01) has occurred that will delay completion of the Scope of Work. Said notification shall include reasonable proofs required by METRO to evaluate any Contractor request for relief under this Article 3. METRO shall examine Contractor's notification and determine if the Contractor is entitled to relief. METRO shall notify the Contractor of its decision in writing. METRO's decision regarding whether or not the Contractor is entitled to force majeure relief shall be final and binding on the parties. – *Acknowledged and in agreement. SJB GlobalNET. inc*

3 03 Losses

Contractor is not entitled to damages, compensation, or reimbursement from METRO for losses resulting from any "force majeure" event – *Acknowledged and in agreement. SJB GlobalNET. inc*

4 PROFESSIONAL STANDARDS

Contractor shall at all times during the term of this Contract possess the technical ability, experience, financial ability, overall expertise, and all other skills, licenses, and resources necessary to perform and complete the scope of work in a timely, professional manner so as to meet or exceed the provisions of this Contract. – *Acknowledged and in agreement. SJB GlobalNET. inc*

5 PROFESSIONAL RELATIONS

5.01 Independent Contractor

No relationship of employer and employee is created by this Contract. In the performance of its work and duties, Contractor is at all times acting and performing as an independent contractor in the practice of its profession. METRO shall neither have nor exercise control or direction over the methods by which Contractor performs services pursuant to this Contract (including, without limitation, its officers, shareholders, and employees); provided, however, that Contractor agrees that all work performed pursuant to this Contract shall be in strict accordance with currently approved methods and practices in its profession, and in accordance with this Contract. The sole interest of METRO is to ensure that such services are performed and rendered in a competent and cost effective manner. – *Acknowledged and in agreement. SJB GlobalNET. inc*

5 02 Benefits

Contractor (including, without limitation, its officers, shareholders, subcontractors and employees) has no claim under this Contract or otherwise against METRO for social security benefits, workers' compensation benefits, disability benefits, unemployment benefits, vacation pay, sick leave, or any other employee benefit of any kind. – *Acknowledged and in agreement. SJB GlobalNET. inc*

6. INDEMNIFICATION FOR DAMAGES, TAXES AND CONTRIBUTIONS

6 01 Scope

Contractor shall exonerate, indemnify, defend, and hold harmless METRO (which for the purpose of Articles 6 and 7 shall include, without limitation, its officers, agents, employees and volunteers) from and against:

- 6 01 01 Any and all claims, demands, losses, damages, defense costs, or liability of any kind or nature which METRO may sustain or incur or which may be imposed upon it for injury to or death of persons, or damage to property as a result of, or arising out of, or in any manner connected with the Contractor's negligence, recklessness or willful misconduct under the provisions of this Contract. Such indemnification includes any damage to the person(s) or property (ies) of Contractor and third persons – *Acknowledged and in agreement, SJB GlobalNET. inc*
- 6 01 02 Any and all Federal, state and local taxes, charges, fees, or contributions required to be paid with respect to Contractor, Contractor's officers, employees and agents engaged in the performance of this Contract (including, without limitation, unemployment insurance, social security, and payroll tax withholding) – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 7. INSURANCE

### 7.01 General

Contractor, at its sole cost and expense, for the full term of this Contract (and any extensions thereof), shall obtain and maintain at minimum all of the following insurance coverage. Such insurance coverage shall be primary coverage as respects METRO and any insurance or self-insurance maintained by METRO shall be excess of Contractor's insurance coverage and shall not contribute to it. – *Acknowledged and in agreement. SJB GlobalNET. inc.*

### 7.02 Types of Insurance and Minimum Limits

Contractor shall obtain and maintain during the term of this Contract:

- (1) Worker's Compensation and Employer's Liability Insurance in conformance with the laws of the State of California (not required for Contractor's subcontractors having no employees). – *Acknowledged and in agreement. SJB GlobalNET. inc.*
- (2) Contractors vehicles used in the performance of this Contract, including owned, non-owned (e.g. owned by Contractor's employees), leased or hired vehicles, shall each be covered with Automobile Liability Insurance in the minimum amount of \$1,000,000.00 combined single limit per accident for bodily injury and property damage – *Acknowledged and in agreement. SJB GlobalNET. inc.*
- (3) Contractor shall obtain and maintain Comprehensive General Liability Insurance coverage in the minimum amount of \$1,000,000.00 combined single limit, including bodily injury, personal injury, and property damage. Such insurance coverage shall include, without limitation:
  - (a) Contractual liability coverage adequate to meet the Contractor's indemnification obligations under this contract – *Acknowledged and in agreement. SJB GlobalNET. inc*
  - (b) Full Personal Injury coverage – *Acknowledged and in agreement. SJB GlobalNET. inc*
  - (c) Broad form Property Damage coverage – *Acknowledged and in agreement. SJB GlobalNET. inc*

(d) A cross-liability clause in favor of METRO – *Acknowledged and in agreement. SJB GlobalNET. inc.*

(4) Contractor shall obtain and maintain Professional Liability Insurance coverage in the minimum amount of \$1,000,000.00 – *Acknowledged and in agreement. SJB GlobalNET. inc.*

#### 7.03 Other Insurance Provisions

(1) As to all insurance coverage required herein, any deductible or self-insured retention exceeding \$5,000.00 shall be disclosed to and be subject to written approval by METRO – *Acknowledged and in agreement. SJB GlobalNET. inc.*

(2) If any insurance coverage required hereunder is provided on a "claims made" rather than "occurrence" form, Contractor shall maintain such insurance coverage for three (3) years after expiration of the term (and any extensions) of this Contract – *Acknowledged and in agreement. SJB GlobalNET. inc.*

(3) All required Automobile Liability Insurance and Comprehensive or Commercial General Liability Insurance shall contain the following endorsement as a part of each policy: "The Santa Cruz Metropolitan Transit District is hereby added as an additional insured as respects the operations of the named insured" – *Acknowledged and in agreement. SJB GlobalNET. inc.*

(4) All the insurance required herein shall contain the following clause: "It is agreed that this insurance shall not be canceled until thirty (30) days after METRO shall have been given written notice of such cancellation or reduction" – *Acknowledged and in agreement. SJB GlobalNET. inc.*

(5) Contractor shall notify METRO in writing at least thirty (30) days in advance of any reduction in any insurance policy required under this Contract – *Acknowledged and in agreement. SJB GlobalNET. inc.*

(6) Contractor agrees to provide METRO at or before the effective date of this Contract with a certificate of insurance of the coverage required. – *Acknowledged and in agreement. SJB GlobalNET. inc.*

(7) All insurance shall be obtained from brokers or carriers authorized to transact business in California and are satisfactory to METRO – *Acknowledged and in agreement. SJB GlobalNET. inc.*

#### 8. SINGLE PROPOSAL

If only one proposal is received in response to the RFP, Offeror may be required to submit to METRO within five (5) days of METRO demand, a detailed cost proposal. METRO may conduct a cost or price analysis of the cost proposal to determine if the proposal price(s) are fair and reasonable. Offeror shall cooperate with METRO in compiling and submitting detailed information for the cost and price analysis – *Acknowledged and in agreement. SJB GlobalNET. inc.*

#### 9. NO DISCRIMINATION

The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or

such other remedy, as recipient deems appropriate. – *Acknowledged and in agreement. SJB GlobalNET, inc.*

## 10. DISADVANTAGED BUSINESS ENTERPRISES

The Board of Directors of the Santa Cruz Metropolitan Transit District has adopted a Disadvantaged Business Enterprise Policy to promote the participation of disadvantaged business enterprises (DBE's) in all areas of METRO contracting to the maximum extent practicable. Consistent with the DBE Policy, the Contractor shall take all necessary and reasonable steps to ensure that DBE firms have the maximum practicable opportunity to participate in the performance of this project and any subcontracting opportunities thereof. – *Acknowledged and in agreement. SJB GlobalNET, inc.*

## 11. PROMPT PAYMENT

### 11.01 Prompt Progress Payment to Subcontractors

The prime contractor or subcontractor shall pay to any subcontractor not later than 10-days of receipt of each progress payment, in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The 10-days is applicable unless a longer period is agreed to in writing. Any delay or postponement of payment over 30-days may take place only for good cause and with METRO's prior written approval. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanctions, and other remedies of that Section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance, and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors. – *Acknowledged and in agreement. SJB GlobalNET, inc.*

### A. Prompt Payment of Withheld Funds to Subcontractors

METRO shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by METRO of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by METRO. Any delay or postponement of payment may take place only for good cause and with METRO's prior written approval. Any violation of these provisions shall subject the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies, otherwise available to the contractor or subcontractor in the event of: a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance; and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors. – *Acknowledged and in agreement. SJB GlobalNET, inc.*

Prime subcontractors must include the prompt payment language of paragraph 1 in all subcontracts, regardless of subcontractor's DBE status. Failure of a prime contractor to uphold prompt payment requirements for subcontractors will result in METRO withholding reimbursement for completed work. – *Acknowledged and in agreement. SJB GlobalNET, inc.*

## 12. RESERVED

## 13. MISCELLANEOUS PROVISIONS

13 01 Successors and Assigns

The Contract shall inure to the benefit of, and be binding upon, the respective successors and assigns, if any, of the parties hereto, except that nothing contained in this Article shall be construed to permit any attempted assignment which would be unauthorized or void pursuant to any other provision of this Contract – *Acknowledged and in agreement. SJB GlobalNET, inc*

13 02 Survival of Rights and Obligations

In the event of termination, the rights and obligations of the parties which by their nature survive termination of the services covered by this Contract shall remain in full force and effect after termination. Compensation and revenues due from one party to the other under this Contract shall be paid; loaned equipment and material shall be returned to their respective owners; the duty to maintain and allow inspection of books, accounts, records and data shall be extended as provided in Section 13 15; and the hold harmless agreement contained in Article 6 shall survive – *Acknowledged and in agreement. SJB GlobalNET, inc*

13 03 Limitation on METRO Liability

METRO's liability is, in the aggregate, limited to the total amount payable under this Contract – *Acknowledged and in agreement. SJB GlobalNET, inc*

13 04 Drug and Alcohol Policy

Contractor shall not use, possess, manufacture, or distribute alcohol or illegal drugs during the performance of the Contract or while on METRO premises or distribute same to METRO employees – *Acknowledged and in agreement. SJB GlobalNET, inc*

13 05 Publicity

Contractor agrees to submit to METRO all advertising, sales promotion, and other public matter relating to any service furnished by Contractor wherein METRO's name is mentioned or language used from which the connection of METRO's name therewith may, within reason, be inferred or implied Contractor further agrees not to publish or use any such advertising, sales promotion or publicity matter without the prior written consent of METRO – *Acknowledged and in agreement. SJB GlobalNET, inc*

13 06 Consent to Breach Not Waiver

No provision hereof shall be deemed waived and no breach excused, unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented. Any consent by any party to, or waiver of, a breach by the other, whether express or implied, shall not constitute a consent to, waiver of, or excuse for any other different or subsequent breach. – *Acknowledged and in agreement. SJB GlobalNET, inc*

13 07 Attorneys' Fees

In the event that suit is brought to enforce or interpret any part of this Contract, the prevailing party shall be entitled to recover as an element of its costs of suit, and not as damages, a reasonable attorney's fee to be fixed by the court. The "prevailing party" shall be the party who is entitled to recover its costs of suit, whether or not the suit proceeds to final judgment. A party not entitled to recover its costs shall not recover attorney's fees. No sum for attorney's fees shall be counted in calculating the amount of a judgment for

purposes of determining whether a party is entitled to recover its costs or attorney's fees – *Acknowledged and in agreement. SJB GlobalNET, inc.*

13.08 No Conflict of Interest

Contractor represents that it currently has no interest, and shall not have any interest, direct or indirect, that would conflict in any manner with the performance of services required under this Contract. – *Acknowledged and in agreement. SJB GlobalNET, inc*

13.09 Prohibition of Discrimination against Qualified Handicapped Persons

Contractor shall comply with the provisions of Section 504 of the Rehabilitation Act of 1973, as amended, pertaining to the prohibition of discrimination against qualified handicapped persons in federally-assisted programs – *Acknowledged and in agreement. SJB GlobalNET, inc*

13.10 Cal OSHA/Hazardous Substances

13.10.01 Contractor shall comply with California Administrative Code Title 8, Section 5194, and shall directly (1) inform its employees of the hazardous substances they may be exposed to while performing their work on METRO property, (2) ensure that its employees take appropriate protective measures, and (3) provide METRO's Manager of Facility Maintenance with a Material Safety Data Sheet (MSDS) for all hazardous substances to be used on METRO property. – *Acknowledged and in agreement. SJB GlobalNET, inc*

13.10.02 Contractor shall comply with Cal OSHA regulations and the Hazardous Substance Training and Information Act. Further, said parties shall indemnify METRO against any and all damage, loss, and injury resulting from non-compliance with this Article. – *Acknowledged and in agreement. SJB GlobalNET, inc*

13.10.03 Contractor will comply with the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) California Health and Safety Code Section 25249.5 - 25249.13. Contractor will ensure that clear and reasonable warnings are made to persons exposed to those chemicals listed by the State of California as being known to cause cancer or reproductive toxicity. – *Acknowledged and in agreement. SJB GlobalNET, inc*

13.10.04 Contractor shall be solely responsible for any hazardous material, substance or chemical released or threatened release caused or contributed to by Contractor. Contractor shall be solely responsible for all clean-up efforts and costs. – *Acknowledged and in agreement. SJB GlobalNET, inc*

13.11 Non-Assignment of Contract

The Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of the Contract or Contractor's right, title or interest in or to the same or any part thereof without previous written consent by METRO; and any such action by Contractor without METRO's previous written consent shall be void. – *Acknowledged and in agreement. SJB GlobalNET, inc*

13.12 No Subcontract



Contractor shall not subcontract or permit anyone other than Contractor or its authorized staff and subcontractors to perform any of the scope of work, services or other performance required of Contractor under this Contract without the prior written consent of METRO. Any such action by Contractor without METRO's previous consent shall be void. – *Acknowledged and in agreement. SJB GlobalNET. inc*

13.13 Severability

If any provision of this Contract is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall continue in full force and effect, and shall in no way be affected, impaired or invalidated – *Acknowledged and in agreement, SJB GlobalNET. inc*

13.14 All Amendments in Writing

No amendment to this Contract shall be effective unless it is in writing and signed by duly authorized representatives of both parties. – *Acknowledged and in agreement. SJB GlobalNET. inc*

13.15 Audit

This Contract is subject to audit by Federal, State, or METRO personnel or their representatives at no cost for a period of four (4) years after the date of expiration or termination of the Contract. Requests for audits shall be made in writing, and Contractor shall respond with all information requested within ten (10) calendar days of the date of the request. During the four-year period that the Contract is subject to audit, Contractor shall maintain detailed records substantiating all costs and expenses billed against the Contract. – *Acknowledged and in agreement. SJB GlobalNET. inc*

13.16 Smoking Prohibited

Contractor, its employees and agents shall not smoke in any enclosed area on METRO premises or in a METRO vehicle – *Acknowledged and in agreement. SJB GlobalNET. inc*

13.17 Responsibility for Equipment

13.17.01 METRO shall not be responsible nor held liable for any damage to person or property consequent upon the use, or misuse, or failure of any equipment used by Contractor, or any of its employees, even though such equipment be furnished, rented or loaned to Contractor by METRO. – *Acknowledged and in agreement. SJB GlobalNET. inc*

13.17.02 Contractor is responsible to return to METRO in good condition any equipment, including keys, issued to it by METRO pursuant to this Agreement. If the contractor fails or refuses to return METRO-issued equipment within five days of the conclusion of the contract work METRO shall deduct the actual costs to repair or replace the equipment not returned from the final payment owed to contractor or take other appropriate legal action at the discretion of METRO – *Acknowledged and in agreement, SJB GlobalNET. inc*

13.18 Grant Contracts

- 13.18.01 Contractor shall ensure throughout the terms of this Agreement that all federal, state and local laws and requirements are met including any requirements METRO is obligated to perform because of receipt of grant funding. Contractor shall also be required to fulfill its obligation as a federal and/or state and/or local sub-recipient of grant funding. – *Acknowledged and in agreement, SJB GlobalNET, inc*
- 13.19 Time of the Essence
- 13.19.1 Time is of the essence in this Contract – Acknowledged, SJB GlobalNET, inc.
- 13.20 "Piggyback" Clause
- 13.20.1 The Vendor agrees to allow the Santa Cruz Metropolitan Transit District and other public agencies and school districts in the State of California to purchase additional items, at the same terms and conditions as this bid, during the period of time that this bid is in effect.
- 13.20.2 Districts and agencies may order additional items in quantities of one or more.
- 13.20.3 Any liability created by Purchase Orders issued against this agreement shall be the sole responsibility of the district or agency placing the order.
- 13.20.4 Prices and terms shall remain firm and in effect for 365 days following the award of this bid, unless otherwise specified.
- 13.20.5 SJB GlobalNET,inc reserves the right not honor purchases using the "Piggyback" Clause for reasons of product availability, price changes and other financial hardships or losses due to economic changes. This statement however does not change in any way the terms of this Contract with Santa Cruz Metropolitan Transit District.

**PART V**  
**CONTRACT FOR VOIP TELEPHONE SYSTEM (09-07)**

THIS CONTRACT is made effective on \_\_\_\_\_, 2009 between the SANTA CRUZ METROPOLITAN TRANSIT DISTRICT, a political subdivision of the State of California ("METRO"), and SJB GlobalNET, inc. ("Contractor").

**1 RECITALS**

**1.01 METRO's Primary Objective**

METRO is a public entity whose primary objective is providing public transportation and has its principal office at 370 Encinal Street, Suite 100, Santa Cruz, California 95060.

**1.02 METRO's Need for VOIP Telephone System**

METRO has the need for VOIP Telephone System. In order to obtain these services, METRO issued a Request for Proposals, dated December 24, 2008, setting forth specifications for such services. The Request for Proposals is attached hereto and incorporated herein by reference as Exhibit "A".

**1.03 Contractor's Proposal**

Contractor is a firm/individual qualified to provide VOIP Telephone System and whose principal place of business is 2455 El Camino Real, Suite B, Palo Alto, CA 94306. Pursuant to the Request for Proposals by METRO, Contractor submitted a proposal for VOIP Telephone System, which is attached hereto and incorporated herein by reference as Exhibit "B".

**1.04 Selection of Contractor and Intent of Contract**

On \_\_\_\_\_, METRO selected Contractor as the offeror whose proposal was most advantageous to METRO, to provide the VOIP Telephone System described herein. This Contract is intended to fix the provisions of these services.

METRO and Contractor agree as follows:

**2. INCORPORATED DOCUMENTS AND APPLICABLE LAW**

**2.01 Documents Incorporated in this Contract**

The documents below are attached to this Contract and by reference made a part hereof. This is an integrated Contract. This writing constitutes the final expression of the parties' contract, and it is a complete and exclusive statement of the provisions of that Contract, except for written amendments, if any, made after the date of this Contract in accordance with Section 13.14.

**A. Exhibit "A"**

Santa Cruz Metropolitan Transit District's "Request for Proposals" dated December 24, 2008.

**B. Exhibit "B" (Contractor's Proposal)**

Contractor's Proposal to METRO for VOIP Telephone System, signed by Contractor and dated January 28, 2009.

2.02 Conflicts

Where in conflict, the provisions of this writing supersede those of the above-referenced documents, Exhibits "A" and "B". Where in conflict, the provisions of Exhibit "A" supersede Exhibit "B".

2.03 Recitals

The Recitals set forth in Article 1 are part of this Contract.

3 DEFINITIONS

3.01 General

The terms below (or pronouns in place of them) have the following meaning in the contract:

- 3.01.01 CONTRACT - The Contract consists of this document, the attachments incorporated herein in accordance with Article 2, and any written amendments made in accordance with Section 13.14
- 3.01.02 CONTRACTOR - The Contractor selected by METRO for this project in accordance with the Request for Proposals issued December 24, 2008
- 3.01.03 CONTRACTOR'S STAFF - Employees of Contractor.
- 3.01.04 DAYS - Calendar days
- 3.01.05 OFFEROR - Contractor whose proposal was accepted under the terms and conditions of the Request for Proposals issued December 24, 2008.
- 3.01.06 PROVISION - Any term, agreement, covenant, condition, clause, qualification, restriction, reservation, or other stipulation in the contract that defines or otherwise controls, establishes, or limits the performance required or permitted by either party.
- 3.01.07 SCOPE OF WORK (OR "WORK") - The entire obligation under the Contract, including, without limitation, all labor, equipment, materials, supplies, transportation, services, and other work products and expenses, express or implied, in the Contract.

4 TIME OF PERFORMANCE

4.01 Term

The term of this Contract will be for a period not to exceed one (1) year and shall commence upon the issuance of the contract by METRO.

At the option of METRO, this contract agreement may be renewed for four (4) additional one (1) year terms upon mutual written consent.

5. COMPENSATION

5.01 Terms of Payment

METRO shall compensate Contractor in an amount not to exceed the amounts/rates agreed upon by METRO. METRO shall reasonably determine whether work has been successfully performed for purposes of payment. Compensation shall be made within thirty (30) days of METRO written approval of Contractor's written invoice for said work. Contractor understands and agrees that if he/she exceeds the \$ \_\_\_\_\_ maximum amount payable under this contract, that it does so at its own risk.

5.02 Invoices

Contractor shall submit invoices with a purchase order number provided by METRO on a monthly basis. Contractor's invoices shall include detailed records showing actual time devoted, work accomplished, date work accomplished, personnel used, and amount billed per hour. Expenses shall only be billed if allowed under the Contract. Telephone call expenses shall show the nature of the call and identify location and individual called. Said invoice records shall be kept up-to-date at all times and shall be available for inspection by METRO (or any grantor of METRO, including, without limitation, any State or Federal agency providing project funding or reimbursement) at any time for any reason upon demand for not less than four (4) years after the date of expiration or termination of the Contract. Under penalty of law, Contractor represents that all amounts billed to METRO are (1) actually incurred; (2) reasonable in amount; (3) related to this Contract; and (4) necessary for performance of the project.

6. NOTICES

All notices under this Contract shall be deemed duly given upon delivery, if delivered by hand; or three (3) days after posting, if sent by registered mail, receipt requested; to a party hereto at the address hereinunder set forth or to such other address as a party may designate by notice pursuant hereto.

METRO

Santa Cruz Metropolitan Transit District  
370 Encinal Street  
Suite 100  
Santa Cruz, CA 95060  
Attention: General Manager

CONTRACTOR

SJB GlobalNET, inc.  
2455 El Camino Real, Suite B  
Palo Alto, CA 94306

Attention: Sean Brender

7. AUTHORITY

Each party has full power and authority to enter into and perform this Contract and the person signing this Contract on behalf of each has been properly authorized and empowered to enter into this Contract. Each party further acknowledges that it has read this Contract, understands it, and agrees to be bound by it.

Signed on \_\_\_\_\_

METRO - SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

\_\_\_\_\_  
Leslie R. White  
General Manager


CONTRACTOR -

By \_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
Margaret Rose Gallagher  
District Counsel

*Unsure if I should sign now?*



**PART VI  
FEDERAL TRANSIT ADMINISTRATION REQUIREMENTS  
FOR NON-CONSTRUCTION CONTRACTS**

1.0 GENERAL

This Contract is subject to the terms of a financial assistance contract between the Santa Cruz Metropolitan Transit District and the Federal Transit Administration (FTA) of the United States Department of Transportation – *Acknowledged and in agreement. SJB GlobalNET, inc*

2.0 INTEREST TO MEMBERS OF OR DELEGATES TO CONGRESS

In accordance with 18 U S C. 431, no member of, nor delegates to, the Congress of the United States shall be admitted to a share or part of this Contract or to any benefit arising there from. – *Acknowledged and in agreement. SJB GlobalNET, inc*

3.0 INELIGIBLE CONTRACTORS

Neither Contractor, subcontractor, nor any officer or controlling interest holder of Contractor or subcontractor, is currently, or has been previously, on any debarred bidders list maintained by the United States Government – *Acknowledged and in agreement. SJB GlobalNET, inc*

4.0 EQUAL EMPLOYMENT OPPORTUNITY (Not applicable to contracts for standard commercial supplies and raw materials)

In connection with the execution of this Contract, the Contractor shall not discriminate against any employee or application for employment because of race, religion, color, sex, age (40 or over), national origin, pregnancy, ancestry, marital status, medical condition, physical handicap, sexual orientation, or citizenship status. The Contractor shall take affirmative action to insure that applicants employed and that employees are treated during their employment, without regard to their race, religion, color, sex national origin, etc. Such actions shall include, but not be limited to the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and, selection for training including apprenticeship. Contractor further agrees to insert a similar provision in all subcontracts, except subcontracts for standard commercial supplies or raw materials – *Acknowledged and in agreement, SJB GlobalNET, inc*

5.0 TITLE VI CIVIL RIGHTS ACT OF 1964

During the performance of this Contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor"), agrees as follows:

5.1 Compliance with Regulations

The Contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this Contract – *Acknowledged and in agreement. SJB GlobalNET, inc*

5.2 Nondiscrimination

The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, religion, color, sex, age or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited in Section 21.5 of the Regulations, including employment

practices when the Contract covers a program set forth in Appendix B of the regulations.  
– *Acknowledged and in agreement. SJB GlobalNET. inc*

5.3 Solicitations for Subcontracts, Including Procurements of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, religion, color, sex, age or national origin –  
*Acknowledged and in agreement. SJB GlobalNET, inc*

5.4 Information and Reports

The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by METRO or the Federal Transit Administration (FTA) to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information is required or a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to METRO, or the Federal Transit Administration, as appropriate, and shall set forth what efforts it has made to obtain the information –  
*Acknowledged and in agreement. SJB GlobalNET. inc*

5.5 Sanctions for Noncompliance

In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, METRO shall impose such contract sanctions as it or the Federal Transit Administration may determine to be appropriate, including, but not limited to:

- (a) Withholding of payments to the Contractor under the Contract until the Contractor complies; and/or, – *Acknowledged and in agreement. SJB GlobalNET. inc*
- (b) Cancellation, termination or suspension of the Contract, in whole or in part –  
*Acknowledged and in agreement. SJB GlobalNET. inc*

5.6 Incorporation of Provisions

The Contractor shall include the provisions of Paragraphs (1) through (6) of this section in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as METRO or the Federal Transit Administration may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may require METRO to enter into such litigation to protect the interests of METRO, and, in addition, the Contractor may request the services of the Attorney General in such litigation to protect the interests of the United States – *Acknowledged and in agreement. SJB GlobalNET. inc*

6.0 CLEAN AIR AND FEDERAL WATER POLLUTION CONTROL ACTS (Applicable only to contracts in excess of \$100,000)

Contractor shall comply with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 USC 1857[h]), Section 508 of the Clean Water Act (33 USC 1368), Executive Order 11738, and Environmental Protection Agency Regulations (40 CFR, Part 15), which prohibit the use under



non-exempt Federal contracts, grants or loans of facilities included on the EPA List of Violating Facilities. Contractor shall report all violations to FTA and to the USEPA Assistant Administrator for Enforcement (EN0329). – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 7.0 CONSERVATION

Contractor shall recognize mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 USC Section 6321, et seq). – *Acknowledged and in agreement, SJB GlobalNET. inc*

## 8.0 AUDIT AND INSPECTION OF RECORDS (Applicable only to sole source or negotiated contracts in excess of \$10,000)

Contractor agrees that METRO, the Comptroller General of the United States, or any of their duly authorized representatives shall, for the purpose of audit and examination, be permitted to inspect all work, materials, payrolls and other data and records with regard to the project, and to audit the books, records and accounts with regard to the project. Further, Contractor agrees to maintain all required records for at least three years after METRO makes final payments and all other pending matters are closed. – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 9.0 LABOR PROVISIONS (Applicable only to contracts of \$2,500.00 or more that involve the employment of mechanics or laborers)

### 9.1 Overtime Requirements

No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any work week in which he or she is employed on such work to work in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half (1 1/2) times the basic rate of pay for all hours worked in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in such work week, whichever is greater. – *Acknowledged and in agreement. SJB GlobalNET. inc*

### 9.2 Violation; Liability for Unpaid Wages; Liquidated Damages

In the event of any violation of the clause set forth in subparagraph (b)(1) of 29 CFR Section 5.5, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for METRO of Columbia or a territory, to such district or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (b)(1) of which such individual was required or permitted to work in excess of eight (8) hours in excess of the standard work week of forty (40) hours without payment of the overtime wages required by the clause set forth in subparagraph (b)(1) of 29 CFR Section 5.5. – *Acknowledged and in agreement. SJB GlobalNET. inc*

### 9.3 Withholding for Unpaid Wages and Liquidated Damages

DOT or METRO shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be

necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b)(2) of 29 CFR Section 5.5 – *Acknowledged and in agreement. SJB GlobalNET. inc*

9.4 Nonconstruction Grants

The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three (3) years from the completion of the Contract for all laborers and mechanics, including guards and watchmen, working on the Contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made and actual wages paid. Further, METRO shall require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the Contractor or subcontractor for inspection, copying or transcription by authorized representatives of DOT and the Department of Labor, and the Contractor or subcontractor will permit such representatives to interview employees during working hours on the job – *Acknowledged and in agreement. SJB GlobalNET. inc*

9.5 Subcontracts

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (5) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (5) of this paragraph – *Acknowledged and in agreement. SJB GlobalNET. inc*

10.0 CARGO PREFERENCE (Applicable only to Contracts under which equipment, materials or commodities may be transported by ocean vehicle in carrying out the project) – *Acknowledged and in agreement. SJB GlobalNET. inc*

The Contractor agrees:

10.1 To utilize privately owned United States-flag commercial vessels to ship at least fifty percent (50%) of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners and tankers) involved, whenever shipping any equipment, materials or commodities pursuant to this section, to the extent such vessels are available at fair and reasonable rates for United States- flag commercial vessels – *Acknowledged and in agreement. SJB GlobalNET. inc*

10.2 To furnish within 30 days following the date of loading for shipments originating within the United States, or within thirty (30) working days following the date of loading for shipment originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) above, to METRO (through the prime Contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, 400 Seventh Street, S.W., Washington D. C. 20590, marked with appropriate identification of the project – *Acknowledged and in agreement. SJB GlobalNET. inc*

10.3 To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this Contract. – *Acknowledged and in agreement. SJB GlobalNET. inc*

11.0 BUY AMERICA PROVISION

This procurement is subject to the Federal Transportation Administration Buy America Requirements in 49 CFR 661. A Buy America Certificate, if required format (see Form of Proposal or Bid Form) must be completed and submitted with the proposal. A proposal that does not include the certificate shall be considered non-responsive. A waiver from the Buy America Provision may be sought by METRO if grounds for the waiver exist. Section 165a of the Surface Transportation Act of 1982 permits FTA participation on this Contract only if steel and manufactured products used in the Contract are produced in the United States. In order for rolling stock to qualify as a domestic end product, the cost of components produced in the United States must exceed sixty percent (60%) of the cost of all components, and final assembly must take place in the United States – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 12.0 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

### 12.1 Policy

It is the policy of the U.S. Department of Transportation that Disadvantaged Business Enterprises as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this Agreement. Consequently, the DBE requirements of 49 CFR Part 26 apply to this Agreement. – *Acknowledged and in agreement. SJB GlobalNET. inc*

### 12.2 DBE Obligation

METRO and Contractor agree to insure that Disadvantaged Business Enterprises as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts and subcontracts under this Agreement. In this regard, METRO and Contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to insure that Disadvantaged Business Enterprises have the maximum opportunity to compete for and perform Contracts. METRO and Contractor shall not discriminate on the basis of race, creed, color, national origin, age or sex in the award and performance of DOT-assisted Contracts. – *Acknowledged and in agreement. SJB GlobalNET. inc*

### 12.3 Transit Vehicle Manufacturers

Transit vehicle manufacturers must certify compliance with DBE regulations. – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 13.0 CONFLICT OF INTEREST

No employee, officer or agent of METRO shall participate in selection, or in the award of administration of a contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when (1) the employee, officer or agent; (2) any member of his or her immediate family; (3) his or her partner; or (4) an organization that employs, or is about to employ, has a financial or other interest in the firm selected for award. METRO's officers, employees or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractors, potential Contractors or parties of sub agreements. – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 14.0 MOTOR VEHICLE EMISSION REQUIREMENTS (Applicable only to Contracts involving the purchase of new motor vehicles)

The Contractor must provide a certification that:

- (a) The horsepower of the vehicle is adequate for the speed, range, and terrain in which it will be required and also to meet the demands of all auxiliary equipment – *Acknowledged and in agreement. SJB GlobalNET. inc*

- (b) All gases and vapors emanating from the crankcase of a spark-ignition engine are controlled to minimize their escape into the atmosphere – *Acknowledged and in agreement. SJB GlobalNET. inc.*
- (c) Visible emission from the exhaust will not exceed No. 1 on the Ringlemann Scale when measured six inches (6") from the tail pipe with the vehicle in steady operation. – *Acknowledged and in agreement, SJB GlobalNET, inc*
- (d) When the vehicle has been idled for three (3) minutes and then accelerated to eighty percent (80%) of rated speed under load, the opacity of the exhaust will not exceed No. 2 on the Ringlemann Scale for more than five (5) seconds, and not more than No. 1 on the Ringlemann Scale thereafter – *Acknowledged and in agreement. SJB GlobalNET. inc*

15 0 MOTOR VEHICLE SAFETY STANDARDS (Applicable only to contracts involving the purchase of new motor vehicles)

The Contractor will assure that the motor vehicles purchased under this contract will comply with the Motor Vehicle Safety Standards as established by the Department of Transportation at 49 CFR Parts 390 and 571. – *Acknowledged and in agreement. SJB GlobalNET. inc*

16 0 DEBARRED BIDDERS

The Contractor, including any of its officers or holders of a controlling interest, is obligated to inform METRO whether or not it is or has been on any debarred bidders' list maintained by the United States Government. Should the Contractor be included on such a list during the performance of this project, Contractor shall so inform METRO – *Acknowledged and in agreement. SJB GlobalNET. inc*

17 0 PRIVACY (Applicable only to Contracts involving the administration of any system of records as defined by the Privacy Act of 1974, on behalf of the Federal Government)

17 1 General

METRO and Contractor agree:

- (a) To comply with the Privacy Act of 1974, 5 U.S.C. 552a (the Act) and the rules and regulations issued pursuant to the Act when performance under the Contract involves the design, development or operation of any system of records on individuals to be operated by METRO, its contractors or employees to accomplish a Government function – *Acknowledged and in agreement. SJB GlobalNET. inc*
- (b) To notify the Government when METRO or Contractor anticipates operating a system of records on behalf of the Government in order to accomplish the requirements of this Agreement, if such system contains information about individuals which information will be retrieved by the individual's name or other identifier assigned to the individual. A system of records subject to the Act may not be employed in the performance of this Agreement until the necessary approval and publication requirements applicable to the system have been carried out. METRO or Contractor, as appropriate, agrees to correct, maintain, disseminate, and use such records in accordance with the requirements of the Act, and to comply with all applicable requirements of the Act. – *Acknowledged and in agreement. SJB GlobalNET. inc*
- (c) To include the Privacy Act Notification contained in this Agreement in every subcontract solicitation and in every subcontract when the performance of Work under the proposed subcontract may involve the design, development or

operation of a system of records on individuals that is to be operated under the Contract to accomplish a Government function; and – *Acknowledged and in agreement. SJB GlobalNET, inc*

- (d) To include this clause, including this paragraph in all in subcontracts under which Work for this Agreement is performed or which is awarded pursuant to this Agreement or which may involve the design, development, or operation of such a system of records on behalf of the Government. – *Acknowledged and in agreement. SJB GlobalNET, inc*

## 17.2 Applicability

For purposes of the Privacy Act, when the Agreement involves the operation of a system of records on individuals to accomplish a Government function, METRO, third party contractors and any of their employees are considered to be employees of the Government with respect to the Government function and the requirements of the Act, including the civil and criminal penalties for violations of the Act, are applicable except that the criminal penalties shall not apply with regard to contracts effective prior to September 27, 1975. In addition, failure to comply with the provisions of the Act or of this clause will make this Agreement subject to termination – *Acknowledged and in agreement. SJB GlobalNET, inc*

## 17.3 Definitions

The terms used in this clause have the following meanings:

- (a) "Operation of a system of records" means performance of any of the activities associated with maintaining the system of records on behalf of the Government including the collection, use and dissemination of records – *Acknowledged and in agreement, SJB GlobalNET, inc*
- (b) "Records" means any item, collection or grouping of information about an individual that is maintained by METRO or Contractor on behalf of the Government, including, but not limited to, his education, financial transactions, medical history, and criminal or employment history and that contains his name, or the identifying number, symbol or other identifying particular assigned to the individual, such as a finger or voice print or a photograph – *Acknowledged and in agreement. SJB GlobalNET, inc*
- (c) "System of records" on individuals means a group of any records under the control of METRO or Contractor on behalf of the Government from which information is retrieved by the name of the individual or by some identifying number, symbol or other identifying particular assigned to the individual – *Acknowledged and in agreement. SJB GlobalNET, inc*

## 18.0 PATENT RIGHTS (Applicable only to research and development contracts)

If any invention, improvement or discovery of METRO or contractors or subcontractors is conceived or first actually reduced to practice in the course of or under this project which invention, improvement, or discovery may be patentable under the Patent Laws of the United States of America or any foreign country, METRO (with appropriate assistance of any contractor or subcontractor involved) shall immediately notify the Government (FTA) and provide a detailed report. The rights and responsibilities of METRO, third party contractors and subcontractors and the Government with respect to such invention will be determined in accordance with applicable Federal laws, regulations, policies and any waivers thereof – *Acknowledged and in agreement. SJB GlobalNET, inc*

## 19.0 RIGHTS IN DATA (Applicable only to research and development contracts)

The term "subject data" as used herein means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under this Contract. The term includes graphic or pictorial delineation in media such as drawings or photographs; text in specifications or related performance or design-type documents, machine forms such as punched cards, magnetic tape or computer memory printouts; and information retained in computer memory. Examples include, but are not limited to, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications and related information. The term does not include financial reports, cost analyses and similar information incidental to contract administration – *Acknowledged and in agreement. SJB GlobalNET. inc*

All "subject data" first produced in the performance of this Agreement shall be the sole property of the Government. METRO and Contractor agree not to assert any rights at common law or equity and not to establish any claim to statutory copyright in such data. Except for its own internal use, METRO and Contractor shall not publish or reproduce such data in whole or in part, or in any manner or form, nor authorize others to do so, without the written consent of the Government until such time as the Government may have released such data to the public. This restriction, however, does not apply to Agreements with academic institutions. METRO and Contractor agree to grant and do hereby grant to the Government and to its officers, agents, and employees acting within the scope of their official duties, a royalty-free, non-exclusive and irrevocable license throughout the world:

- (a) To publish, translate, reproduce, deliver, perform, use and dispose of, in any manner, any and all data not first produced or composed in the performance of this Contract but which is incorporated in the work furnished under this Contract; and – *Acknowledged and in agreement. SJB GlobalNET. inc*
- (b) To authorize others so to do. – *Acknowledged and in agreement. SJB GlobalNET. inc*

METRO and Contractor shall indemnify and save and hold harmless the Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by METRO and Contractor of proprietary rights, copyrights or rights of privacy, arising out of the publication, translation, reproduction, delivery, performance, use, or disposition of any data furnished under this Contract – *Acknowledged and in agreement. SJB GlobalNET. inc*

Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent – *Acknowledged and in agreement, SJB GlobalNET. inc*

The third and fourth paragraphs under Section 19.0 above are not applicable to material furnished to METRO or Contractor by the Government and incorporated in the work furnished under the Contract, provided that such incorporated material is identified by METRO or Contractor at the time of delivery of such work. – *Acknowledged and in agreement. SJB GlobalNET, inc*

In the event that the project, which is the subject of this Agreement, is not completed, for any reason whatsoever, all data generated under that project shall become subject data as defined in the Rights in Data clause in this Contract and shall be delivered as the Government may direct. This clause shall be included in all subcontracts under this Contract. – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 20.0 NEW RESTRICTIONS ON LOBBYING

### 20.1 Prohibition

- (a) Section 1352 of Title 31, U.S. Code, provides in part that no appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative

agreement to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement – *Acknowledged and in agreement. SJB GlobalNET. inc*

(b) The prohibition does not apply as follows:

(i) Agency and legislative liaison by Own Employees – *Acknowledged and in agreement. SJB GlobalNET, inc*

(ii) Professional and technical services by Own Employees – *Acknowledged and in agreement. SJB GlobalNET. inc*

(iii) Reporting for Own Employees – *Acknowledged and in agreement. SJB GlobalNET. inc*

(iv) Professional and technical services by Other than Own Employees – *Acknowledged and in agreement. SJB GlobalNET. inc*

## 20.2 Disclosure

(a) Each person who requests or receives from an agency a Federal contract shall file with that agency a certification, included in Form of Proposal or Bid Forms, that the person has not made, and will not make, any payment prohibited by Section 20.1 of this clause – *Acknowledged and in agreement. SJB GlobalNET. inc*

(b) Each person who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, Standard Form-L.L.L., "Disclosure of Lobbying Activities," if such person has made or has agreed to make any payment using non-appropriated funds (to include profits from any covered Federal action), which would be prohibited under Section 20.1 of this clause if paid for with appropriated funds – *Acknowledged and in agreement. SJB GlobalNET, inc*

(c) Each person shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under paragraph (c)(2) of this section. An event that materially affects the accuracy of the information reported includes: – *Acknowledged and in agreement. SJB GlobalNET. inc*

(i) a cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or – *Acknowledged and in agreement, SJB GlobalNET. inc*

(ii) a change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or – *Acknowledged and in agreement. SJB GlobalNET. inc*

(iii) a change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action. – *Acknowledged and in agreement. SJB GlobalNET. inc*

- (d) Any person who requests or receives from a person referred to in paragraph (c)(i) of this section a subcontract exceeding \$100,000 at any tier under a Federal contract shall file a certification, and a disclosure form, if required, to the next tier above – *Acknowledged and in agreement. SJB GlobalNET. inc*
- (e) All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the person referred to in paragraph (c)(i) of this section. That person shall forward all disclosure forms to the agency – *Acknowledged and in agreement. SJB GlobalNET, inc.*

20.3 Agreement

In accepting any contract resulting from this solicitation, the person submitting the offer agrees not to make any payment prohibited by this clause. – *Acknowledged and in agreement. SJB GlobalNET. inc*

20.4 Penalties

- (a) Any person who makes an expenditure prohibited under Section 20.1 of this clause shall be subject to a civil penalty of not less than \$10,000 for each such expenditure – *Acknowledged and in agreement. SJB GlobalNET. inc*
- (b) Any person who fails to file or amend the disclosure form to be filed or amended if required by this clause, shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure. – *Acknowledged and in agreement. SJB GlobalNET. inc*
- (c) Contractors may rely without liability on the representations made by their sub-contractors in the certification and disclosure form – *Acknowledged and in agreement. SJB GlobalNET. inc*

20.5 Cost allowability

Nothing in this clause is to be interpreted to make allowable or reasonable any costs which would be unallowable or unreasonable in accordance with Part 31 of the Federal Acquisition Regulation. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any of the provisions of Part 31 of the Federal Acquisition Regulation – *Acknowledged and in agreement. SJB GlobalNET. inc*



**PART VII  
SANTA CRUZ METROPOLITAN TRANSIT DISTRICT  
PROTEST PROCEDURES**

**PROCUREMENT PROTESTS**

All protests shall be filed, handled and resolved in a manner consistent with the requirements of Federal Transit Administration (FTA) Circular 4220 1E Third Party Contracting Guidelines dated June 19, 2003 and the Santa Cruz Metropolitan Transit District's (METRO) Protest Procedures which are on file and available upon request – *Acknowledged and in agreement. SJB GlobalNET, inc*

Current FTA Policy states that: "Reviews of protests by FTA will be limited to:

- (1) a grantee's failure to have or follow its protest procedures, or its failure to review a complaint or protest; or
- (2) violation of Federal law or regulation.

An appeal to FTA must be received by the cognizant FTA regional or Headquarters Office within five (5) working days of the date the protester learned or should have learned of an adverse decision by the grantee or other basis of appeal to FTA" (FTA Circular 4220 1E, Section 7, paragraph 1, Written Protest Procedures) Protests relating to the content of this Request for Proposal (RFP) package must be filed within ten (10) calendar days after the date the RFP is first advertised. Protests relating to a recommendation for award solicited by this RFP must be filed by an interested party within five (5) calendar days after the staff's written recommendation and notice of intent to award is issued to the offerors. The date of filing shall be the date of receipt of protests or appeals by METRO – *Acknowledged and in agreement. SJB GlobalNET, inc*

All Protests shall be filed in writing with the Finance Manager, Santa Cruz Metropolitan Transit District, 370 Encinal Street, Suite 100, Santa Cruz, CA 95060. **No other location shall be acceptable.** METRO will respond in detail to each substantive issue raised in the protest. The Finance Manager shall make a determination on the protest normally within ten (10) working days from receipt of protest. Any decision rendered by the Finance Manager may be appealed to the Board of Directors. The Protester has the right within five (5) working days of receipt of determination to file an appeal restating the basis of the protest and the grounds of the appeal. In the appeal, the Protester shall only be permitted to raise factual information previously provided in the protest or discovered subsequent to the Finance Manager's decision and directly related to the grounds of the protest. The Board of Directors has the authority to make a final determination and the Board of Director's decision shall constitute METRO's final administrative remedy – *Acknowledged and in agreement. SJB GlobalNET, inc*

In the event the protestor is not satisfied with METRO's final administrative determination, they may proceed within 90 days of the final decision to State Court for judicial relief. The Superior Court of the State of California for the County of Santa Cruz is the appropriate judicial authority having jurisdiction over Proposal Protest(s) and Appeal(s). Bid includes the term "offer" or "proposal" as used in the context of negotiated procurements

The Offeror may withdraw its protest or appeal at any time before METRO issues a final decision. – *Acknowledged and in agreement. SJB GlobalNET, inc*

Should METRO postpone the date of proposal submission owing to a protest or appeal of the solicitation specifications, addenda, dates or any other issue relating to this procurement, METRO shall notify, via addendum, all parties who are on record as having obtained a copy of the solicitation documents that an appeal/protest had been filed, and the due date for proposal submission shall be postponed until METRO has issued its final decision – *Acknowledged and in agreement. SJB GlobalNET, inc*

A letter of protest must set forth the grounds for protest and shall be fully supported with technical data, test results, or other pertinent information related to the subject being protested. The Protestor is

responsible for adhering to METRO's protest procedures. – *Acknowledged and in agreement. SJB GlobalNET, inc*

An Offeror may seek FTA review of METRO's decision. A protest appeal to the FTA must be filed in accordance with the provisions of FTA circular 4220.1E. Any appeal to the FTA shall be made not later than five (5) working days after a final decision is rendered under METRO's protest procedure. Protest appeals should be filed with:

Federal Transit Administration  
Regional Administrator Region IX  
201 Mission Street, Suite 2210  
San Francisco, CA 94105-1839

– Acknowledged and in agreement, SJB GlobalNET, inc

Santa Cruz Metropolitan  
Transit District



**ADDENDUM NO. 1**

Date of Issue: January 16, 2009

Request for Proposal (RFP) No. 09-07

For VOIP Telephone System

Notice is hereby given that the Santa Cruz Metropolitan Transit District, Santa Cruz, State of California is providing the following clarifications, modifications, additions and / or deletions to the Request for Proposal (RFP) No 09-07 for VOIP Telephone System This Addendum shall become a part of the original RFP as issued by the Santa Cruz Metropolitan Transit District

Receipt of this Addendum No 1 shall be acknowledged in your proposal response Any adjustment resulting from this addendum shall be included in the RFP Where in conflict, the terms and conditions of this addendum supersede those in the Request for Proposal All questions concerning this Addendum shall be referred to Lloyd Longnecker, Purchasing Agent at 370 Encinal Street, Suite 100, Santa Cruz, CA 95060, (831) 426-0199 Voice, (831) 423-2918 Fax, or email address [llongnecker@scmttd.com](mailto:llongnecker@scmttd.com)

This Addendum forms a part of the Contract Documents, and modifies the following as noted below:

1. **ADDENDUM CONTENT:**

1.1 Addendum No. 1: 8 pages

**CHANGES TO RFP TERMS AND CONDITIONS:**

2.1 Correct address listed on page I-1, Part I INSTRUCTIONS TO OFFERORS, Article 3 DELIVERY OF PROPOSALS TO METRO as follows:

DELIVERY OF PROPOSALS TO METRO: Proposals (1 original and 4 copies) must be delivered to METRO Purchasing Office, ~~140 Vernon Street, Suite B,~~ 370 Encinal Street, Suite 100, Santa Cruz, California, 95060 on or before the deadline noted in the RFP

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

2.2 Additional Proposal Response Requirement Disaster Recovery is defined as the process, policies and procedures related to preparing for recovery or continuation of technology infrastructure critical to an organization after a system or systems fails for whatever reason

a) Briefly describe in your RFP response a disaster recovery plan for the systems proposed

b) Describe which system components are mission critical

c) Which mission critical components have a single point of failure?

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

**BIDDERS REQUESTS FOR CLARIFICATIONS:**

3.1 Question: Do prevailing wage requirements apply to this project?

Answer: Yes, Pursuant to Section 1773 of the Labor Code, the general prevailing rate of wages for this project has been determined by the Director of the Department of Industrial Relations, and such prevailing rate of wages is listed in the State of California, Department of Industrial Relations publication entitled General Prevailing Wage Rates, current edition, available by going to the world wide web at the following

370 Encinal Street, Suite 100, Santa Cruz, CA 95060 (831) 426-6080, FAX (831) 426-6117

METRO OnLine at <http://www.scmttd.com>

address: <http://www.dir.ca.gov/dlse/DPRefugeDetermination.html> No laborer employed directly upon the site of the work shall receive less than the prevailing wage rates as determined by the Director of the Department of Industrial Relations

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 2 Question: Is METRO looking for or have a preference for a particular manufacturer's solution such as Cisco? *Answer METRO is not looking for any particular brand, but instead for a solution that achieves the most required functions and highest value at reasonable cost*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 3 Question: Is SCMTD looking for open-standards based technology such as SIP endpoints to implement right away, or are you just requesting that the system should be able to support these in the future? *Answer SIP end-point, trunk and application interface is required to be "fully supported" as per the RFP End points may use SIP or other protocols*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 4 Question: There are questions regarding Contact Center, reporting, recording, etc. Could METRO please elaborate on the current requirements for the system proposed in response to this RFP? Some follow up questions:

a How many agent profiles? *Answer Currently logins at ParaCruz are by physical phone, with 3 Dispatch and 7 Call Agent phones There are actually 7 Call Agents and 5 Dispatcher positions The 6 desired phones/agents at Metro are not currently on any Contact Center system*

b How many simultaneously logged-in agents does the contact center need to support? *Answer Sixteen required and room for growth*

c How many supervisor licenses? *Answer Provide four (4) contact center Supervisor licenses*

d. Do you require skills- based routing? If so please elaborate on requirements *Answer No skills based routing in this scope of work*

e Does METRO currently have an Interactive Voice Response (IVR) to provide automated access to the public via phone/web? Is this a desired capability? *Answer No SCMTD does not have IVR No IVR in this scope of work*

f Reporting requirements? *Answer: Refer to Part III, item 2 5 21 and other parts of the RFP*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 5 Question: What type of thin clients are currently being used? Please be specific re: version etc. *Answer METRO uses a number of different models of Neoware thin clients (3000, 3000CX, C50, Capio 500/508, Capio One, Eon 4000I, Eon 4000S, Neo 310, Neo E140)*

3 6 Question: What are the conferencing requirements? *Answer Refer to Part III, item 2 5 14*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 7 Question: Minimum required number of conference participants? *Answer Refer to Part III, item 2 5 14*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 8 Question: Minimum number of simultaneous conferences? Audio only, or is web conferencing required? *Answer Refer to Part III, item 2 5 14*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 9 Question: Do you require ad hoc only or schedule-able conferencing? *Answer Scheduled conferencing is not required, but may be offered as an option*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 10 Question: Does the conference bridge need to integrate with Windows/outlook calendar for meeting invitations? *Answer No*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 11 Question: Do you have security requirements for conferences such as passwords? *Answer No*

- 3 12 Question: Do you have an existing vendor to support your existing Adtran Routers and QoS Provisioning? *Answer No*
- 3 13 Question: What are the number of ports on your 4210 POE switches? *Answer 24 plus uplink*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 14 Question: Are any POE switches at the remote sites? *Answer Yes, it is assumed for the purposes of the RFP that all ports are POE*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 15 Question: Does every end point already have a POE port? *Answer Yes, it is assumed for the purposes of the RFP that all ports are POE*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 16 Question: How many POE Ports are required total? *Answer None added*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 17 Question: What type of switches are in place today? *Answer 3Com 4210 or 4500 on the edge except ParaCruz site with two Baystack 24 Port 470-24T-PWR-ETH*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 18 Question: Do all of the end points have a minimum of Category 5 cabling in place today? *Answer Yes, it is assumed for the purposes of the RFP that all ports meet EIA/TIA 568a*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 19 Question: Has a network assessment been performed to ensure that the network is capable of handling VoIP calls? *Answer Yes, it is assumed for the purposes of the RFP that all ports meet EIA/TIA 568a*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 20 Question: How many trunks per location, what type (PRI, Analog trunk, DID trunks)? *Answer Refer to Part III, item 2 5 7*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 21 Question: Does each site already have there own DID range? *Answer DIDs have not yet been ordered, but a PRI shall be ordered for the main Vernon Site at which time DID's will be integrated/defined for each site Each other site currently has multiple analog lines, some of which will be retained for fail over and peripheral devices*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 22 Question: Receptionist console 2 12.3 would you like a PC console or a traditional TDM based console? *Answer Refer to Part III, item 2 12 3*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 23 Question: Would you like to have OCS capability in the overview section it mentions (the new system is expected to enable employees to more effectively communicate and leverage information technology resources)? *Answer Presence is not required, but may be included as an option There is no MS Outlook in the environment*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 24 Question: In Part III, item 2 4.5 it mentions monitoring voice quality is monitoring voice quality a requirement for this RFP? *Answer Monitoring of voice quality is Highly Desirable, but not required*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 25 Question: What type of BCM is currently in place today (50,200,400)? *Answer As per RFP instructions the current telecom environment is to be abandoned*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 26 Question: What is the serial number of the BCM? *Answer Not relevant It is to be abandoned*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 27 Question: In Part III, item 2 15 it mentions only 16 agents is this the total of all Contact Center agents? *Answer This is the number of physical agent phones If licensing/configuration is by user login (not phone login as is the case with the Nortel system) then we have 18 total agents, in 2 departments and 3 categories*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 28 Question: Is Call recording a requirement? *Answer Yes*  
 - Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3 29 Question: Are you looking for a BCM environment for all sites would converting the BCM to another platform be an issue (CS100 OE)? *Answer Not looking for any particular brand, but instead for a solution*

*that achieves the most required functions and highest value at reasonable cost*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 30 Question: Part III, item 2 12 1 cordless phones, are they a requirement for the proposed solution?  
*Answer Yes, as specified WiFi phones may be alternately proposed with the understanding that no wifi infrastructure currently exists Third party solutions are acceptable*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 31 Question: Will the contractor have access to a network engineer that can configure a separate VLAN for the proposed solution?  
*Answer: Network access will be provided to the successful contractor for the purpose of configuration as needed*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3.32 Question: Is there going to be a data link between the Vernon (future Administration/NOC) and Encinal (current Administration/NOC) to accommodate the transition period?  
*Answer: That link has been eliminated as January 13, 2009 to prepare for construction at Vernon.*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 33 Question: If yes to question 3 32, what is the link type and speed?  
*Answer Not applicable(NA)*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 34 Question: If yes to question 3 32, what is the data usage expected on the link between Vernon and Encinal before and during the transition period?  
*Answer: NA*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 35 Question: If yes to question 3 32, will all users including the NOC be moved at the same time or would you prefer the ability to move users/departments from Encinal to Vernon individually and still offer system survivability to both Encinal and Vernon?  
*Answer System is to be installed at one or the other sites (Encinal or Vernon) depending on move date Assume for the RFP that the system will be installed at Vernon*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 36 Question: If no to question 3 32, will the transition from one facility to the other include all users and NOC concurrently?  
*Answer No transition from Encinal to Vernon is in this scope of work The system should be installed to one or the other site based on timeframe of deployment Any assistance needed to "move" the core system or end-points after initial installation is off contract and not in this scope of work*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 37 Question: If no to question 3 32, will users at the Encinal site be 'data accessible' to the Vernon NOC via a remote site, for example via Pacific Station while Pacific Station has dual T1's to Encinal and Vernon at the transition period?  
*Answer: NA*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 38 Question: If yes to question 3 37, what is the data usage expected on the link between the remote site (Pacific Station) and Encinal before and during the transition period (number of users to transition over to Vernon, thin client + phone)?  
*Answer None*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 39 Question: If yes to question 3 37, will you still want system survivability to both Encinal and Vernon users during the transition period?  
*Answer Not Applicable*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 40 Question: If METRO decides to do a phased user/department transition from Encinal to Vernon, does METRO want the ability for the users/departments to move their phone from Encinal to Vernon without the need of administrative interaction on the call processors (plug-and-play, with remote survivability while connected at each site)?  
*Answer While this physical move is not in the scope of work, it is desired to "without the need of administrative interaction on the call processors" move endpoints from one site to another without changes to the config after initial installation Since METRO would be moving the entire site from Vernon to Encinal, this should not be an issue*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 41 Question: Is call recording required for all sites with ACD agent functionality or at a single site with a majority/all agents at one site?  
*Answer A call recording server would be expected for both sites with contact center agents METRO currently has a call recording server at the ParaCruz site, where the Nortel phones are located*

3 42 Question: Is a SIP wireless mobility option needed where a Wi-Fi enable portable or cell phone can register to a wireless switched 802 11b/g network at each site and retain its extension profile, number and features, allowing users to move from site to site with a single portable SIP/Wi-Fi enable phone/cell phone?

*Answer: Not a requirement in this scope May be added as an option*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 43 If yes or optional to question 3 42, would Santa Cruz METRO be interested at this time in a managed wireless switched network option for each site to support Wi-Fi/SIP phones and other Wi-Fi enabled devices such as computers, video surveillance, public address intercoms, PDA's, time clocks, etc?

*Answer: Not a requirement in this scope May be added as an option*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 44 Question: Part III, item 1 2 1 indicates the information for Encinal is not being provided because Administration IT and Facilities are moving to Vernon. However, the initial installation is expected at Encinal. Is information regarding the current network infrastructure at Encinal available so we can predetermine whether or not upgrades are required? If vendors are expected to provide assurance or certify that our proposed solution with work with all existing equipment, we will need the information on the Encinal site in advance

*Answer: The Encinal site environment will move to the Vernon site "as a whole" and the physical move is outside this scope. For the purposes of this RFP they are the same environment; Encinal and Vernon are the same. Depending on project timeline will determine the actual MPOE and NOC that will be installed by the bidder*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 45 Question: Is there any specification regarding the number of fax ports required?

*Answer: 5 ports*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 46 Question: Is there a description of the WAN topology (i.e. # of T1s) between Encinal and Vernon?

*Answer: As of 1/13/09, there is no WAN connection between Encinal and Vernon. Encinal connects directly to Golf/Fleet via T1*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 47 Question: Do you have an inventory of the UPS equipment in use at all sites?

*Answer: Yes METRO IT supplies UPS's for all workstations, switches, etc., with central 16KVA UPS's for the computer room and central switches. A recommendation of what size UPS is best for the phone equipment is appreciated but not required*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 48 Question: What kind of AC outlets (i.e. Nema L6-30, Nema L5-15, or Nema L5-20) are available at each site?

*Answer: Outlets are normally Nema 5-20s (which accept 5-15 plugs), but may be 5-15s in some of the older or leased buildings. Since METRO supplies APC UPS's between raw wall power and the equipment, this is not an issue.*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 49 Question: In Appendix A: regarding the T1 connections between the Vernon location and ParaCruz / Pacific location, are these point-to-point T1 connections or are they internet T1 connections with VPN built on top of it?

*Answer: Point to Point T1s as the diagrams indicate*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 50 Question: For the attendant consoles. Are the requirements for 4 dedicated hard consoles with BLF and 4 soft consoles with a GUI BLF?

*Answer: Yes*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 51 Question: Regarding the data network, please provide the exact make and model number for the switches in the following locations:

ParaCruz: *Answer: Two Baystack 24 Port 470-24T-PWR-ETH*

Pacific: *Answer: one 3-Com 4210 24 port PWR*

Operations: *Answer: one 3-Com 4250 24 port PWR, and one 3-Com 4210 24 port PWR*

Golf Maintenance facility: *Answer: one 3-Com 4250 24 port PWR*

Exact model number of the 3Com 4210 PWR Switch at 110 Vernon: *Answer: two 3-Com 4250 24 port PWR, and one 3-Com 4210 24 port PWR*

Exact model number of the 3Com switch used as the ?Core? in the Appendix A: Metro 110 Vernon VOIP Layout *Answer: 3-Com 4250 24 port PWR or 3-Com 4210*

Is the Fiber Link to the Golf Maintenance Facility Single Mode or Multi Mode? What type of connectors on the Fiber Patch Panels? *Answer: Multi-Mode with SC connectors*

Is it the desire of Metro to have a single vendor solution for the Routers and Switches if this will facilitate a common management platform? *Answer Yes it is Highly Desirable, but not required*

Will more weight be given to a solution that can re-use existing LAN/WAN equipment with no management platform or one that proposes new equipment with a management platform? *Answer It is highly desirable to have a fully managed environment that includes all components and is easy to use.*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 52 Question: Can this RFP be used as a Master RFP in the future for subsequent bids by other entities?

*Answer. Other agencies are welcome to use this RFP as a guide for preparation of their own RFP*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 53 Question: Do they have a configurable Dynamic Host Configuration Protocol (DHCP) server at all of their locations? *Answer No, DHCP is required to be provided by the proposer and is to use existing infrastructure to clearly define how it is to work at all locations*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 54 Question: Can we get a copy of the disaster recover plan OR a summary of the telephony portion of the plan? *Answer No plan currently exists for telecom at the METRO*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 55 Question: Regarding Part III, item 1 2 1, should quote include relocation of Encinal to Vernon or will that be priced after the installation? *Answer If the initial installation can be done at the Encinal location, it will not include other sites immediately The subsequent move to Vernon will be done entirely by METRO staff*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 56 Question: Has METRO's data network been certified for VOIP? *Answer It is assumed for the purposes of this RFP that the cable-plant meets EIA/TIA 568a and IEEE 802 3 and any issues subsequently found will be handled "off-contract" and outside this scope of work*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 57 Question: Can we get a soft copy of the RFP in word to edit our answers? *Answer You may convert the format to facilitate responding in the same document, being careful not to change the content of the original RFP*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 58 Question: What is the average daily per minute count on the call center calls? *Answer Average call length for the ParaCruz site is about 2 5 minutes and the average number of calls per day is about 200 (5 00 AM to 10 30 PM) There are 4 primary agents at Metro and there are no available statistics*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 59 Question: How long do call center recordings need to be retained on the local drive? *Answer Our informal policy is to keep at least 3 months of data accessible by the application For ParaCruz this amounts to less than 1 Gbyte per month of storage and less than 12 GB per year It is expected that Metro will have a separate server, which means that disk space should never be an issue*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 60 Question: How much rack space is available at each site for new VoIP and network equipment?

*Answer It is assumed for the purposes of this RFP that adequate rack space exist at all sites If additional space is needed it will be handled internally by METRO*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 61 Question: How much power and how many power outlets are available at the MDF or location of the telephone equipment at each site? *Answer It is assumed for the purposes of this RFP that adequate power outlets exist at all sites If additional outlets are needed it will be handled internally by METRO*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 62 Question: What is the DBE participation goal? *Answer There is no participation goal listed for this project, however METRO has adopted an annual DBE participation goal of 1 32% for Federally funded procurements in fiscal year 2009*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 63 Question: Where can we obtain an rtf/doc version of this RFP so we can add answers and return?

*Answer See response provided in question 3 57 above*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 64 Question: Regarding Part III, item 1 1.2, Is Santa Cruz considering replacing the system at Para Cruz/Research Park? *Answer Yes*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET



3 65 Question: Regarding Part III, item 1 2 1, please clarify the following per site

- 1 Number of end-points
  - a IP
    - i Executive
      1. Specify button/feature requirements
    - ii Business Class
      1. Specify button/feature requirements
    - iii. Receptionist
  - b Analog
    - i Fax
    - ii. Modem
    - iii Conference Room
    - iv Cordless

*Answer For the basic answer to most of these see RFP Part III, item 2 12, Schedule A 1 1 and Appendix A (which lists the current number of workstations, phones and faxes) The numbers in Schedule A 1 1 should be used for the response*

*The actual quantities that will be ordered may change since what "class" of phone set is assigned to each person cannot be decided until METRO has decided on who's solution to go Only then will we know what features are available by phone type We also plan on purchasing some spares but this ratio will also depend on the solution chosen*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

2. Number of PSTN trunks *Answer Refer to answers to questions 3 20 and 3 21*
  - a Analog
  - b Digital (T1/PRI)
- 3 Call-Center
  - a. Agents *Answer See answer to question 3 27*
  - b Supervisors *Answer Up to 4 supervisors, two each at two physical sites*

3 66 Question: With the move of Administration, IT, and Facilities from Encinal to Vernon, will there still be a presence at Encinal, or will the location be abandoned? If it will remain, how many users and what kind will remain at Encinal? *Answer METRO will abandon the Encinal site with the move to Vernon*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 67 Question: Regarding Part III, item 2 4 1 Routers: Will Santa Cruz be able to provision Quality of Service policies in their routed environment? Can weighted-fair-queuing, bandwidth limitation, and priority of service based on DCP headers be supported? *Answer: QOS and priority of service are assumed to be supported for the purposes of the RFP. Also assume bandwidth is not an issue*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 68 Question: Regarding Part III, item 2 4 2 Data Switches: Can current software loads and feature lists be provided for the current LAN infrastructure? Will they support multiple VLANs and VLAN tagging? Is LLDP supported for device identification and automatic COS application? *Answer Am unclear what is meant by feature lists in the current LAN infrastructure By software loads, I'm assuming network loads are meant For the RFP assume these are not an issue The switching environment will support VLAN and VLAN tagging Some of the switches support LLDP See answer to question 3 51*

- Affirmative, Acknowledged and in agreement, SJB GlobalNET

3 69 Question: Regarding Part III, item 2 4 3 Firewall: In what environment will remote workers be utilized? Are remote workers expected to use softphones or IP "hard" phones? Understanding that the specification is for 10 concurrent users, how many total remote users will there be? *Answer: Either or both softphones or IP hard phones can be recommended Currently, METRO's expectation is for only a few likely remote users This could obviously change with time*

- 3.70 Question: Regarding Part III, item 2.4.10: Is the vendor expected to provide a router solution for the WAN? In previous sections it is specified that the IP Telephony solution be compatible with the existing WAN architecture. *Answer: No*
- Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3.71 Question: Regarding Part III, item 2.4.11: e) Are the existing data switches PoE capable today or is PoE part of this proposal? *Answer: It is assumed for the purposes of the RFP that all ports are POE.*
- Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3.72 Question: Regarding Part III, items 2.5.4 and 2.5.5: Understanding the redundancy requirements in the core, what are the requirements for the other sites for Reliability/Availability? *Answer: see below*  
 What level of "survivability" is needed should there be a wan failure? *Answer: see below*
- Basic call answer/call hold? *Answer: Yes, for all sites except ParaCruz, which must maintain full capability, with the possible exception of voicemail*
  - Or full feature survivability, including voicemail dial-around *Answer: see previous answer*
  - With the distributed call-center Agents? *Answer: see previous answer*
  - Is it important that all agents are measured under one reporting and recording platform? *Answer: All agents by site need to be measured and recorded as a group. Note that we have two distinct Call Center departments. The actual call center measurement activity can be separate from the recording activity, if that is what is being asked. It is expected that there will be a separate recording server at each of the two sites to reduce network traffic*
- Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3.73 Question: Regarding Part III, item 2.5.8: The document goes from 2.5.7 to 2.5.9. Just want to make sure we haven't missed something. *Answer: There is no item 2.5.8, this was an error in the numbering of items*
- Affirmative, Acknowledged and in agreement, SJB GlobalNET
- 3.74 Question: Regarding Part III, item 2.5.16: What email server/client is in use @ Metro? *Answer: sendmail on Solaris, using Eudora as a client. In the future METRO may convert to a different client, but still plans to continue using sendmail*
- Affirmative, Acknowledged and in agreement, SJB GlobalNET
4. **ADDITIONAL INFORMATION:**
- NONE AT THIS TIME
- Affirmative, Acknowledged and in agreement, SJB GlobalNET  
 Lloyd Longnecker  
 Purchasing Agent

**END OF ADDENDUM NO. 1**

## Schedule 1A - Option A Proposal VCX Connect 100

Option A is our Primary proposal and consists of the VCX Connect 100 Call Processor with a call processor at each site to provide remote survivability to the local telephones. Each call processor has four analog trunk FXO ports except for Vernon and ParaCruz which have eight each. We have proposed the VCX platform because of its unmatched flexibility, scalability, reliability and price. The end-user devices, licenses and configuration are all relatively the same in each option. The differences between the three option proposals A, B, and C are the core voice components.

3Com parts and professional services have been quoted you using WSCA pricing. This same pricing is available to you from any other 3Com reseller (including online, CDWG) and is good for the life of the WSCA contract.

It is our intent in this proposal to provide METRO with the ability to remove or add anything listed on this Schedule A1.1 or the Other Optional Equipment pages. METRO also has the ability to purchase no equipment from SJB GlobalNET and purchase all or some of the equipment listed in this response from CDWG thereby ensuring that METRO is getting the best price for the equipment all of the time. Should METRO choose to purchase equipment from CDWG, SJB GlobalNET will honor the terms of the installation listed in the response.

Three benefits for METRO in choosing 3Com are 1) all 3Com parts can be found on the internet and are more available from suppliers than competitor parts thereby giving METRO the purchasing advantage, 2) 3Com parts are already available under WSCA pricing making it easy for metro to purchase at a guaranteed 22% to 40% off the list price, and 3) the majority of METRO network consists of 3Com switches allowing the VCX to take advantage of key features available in the 3Com switches such as the Voice VLAN feature without the need to upgrade.

Note: Option A, though a lower equipment, cost does not meet one requirement of this RFP. Rather than one IP web interface to manage the entire system, there will be three IP web interfaces. This is because Option A consists of three clustered VCX systems split between two sites, except for at Vernon which has both a primary and secondary call processor. Each of the three VCX systems can scale up to 100 users.

BONUS: METRO already owns CallRex 3.0 which can be use to record the VCX extensions. We included another server to meet the requirement, 'not to use any old equipment', and will install the latest version of CallRex on the new server or MERTO may want to remove this item all together and use their existing server. We have included 5 more licenses to cover the Pacific Station agents. Depending on METRO's final design, a second server may be needed at Pacific Station or use the old unit for that. No additional licensing is needed for the second server. Please note that the existing phone system connected to the CallRex system is no longer supported by TellRex, according to

## Schedule 1A - Option B Proposal VCX Connect 200

Option B is our Primary proposal and consists of the VCX Connect 200 Call Processor with a call processor at each site to provide remote survivability to the local telephones. Each call processor has four analog trunk FXO ports except for Vernon and ParaCruz which have eight each. We have proposed the VCX platform because of its unmatched flexibility, scalability, reliability and price. The end-user devices, licenses and configuration are all relatively the same in each option. The differences between the three option proposals A, B, and C are the core voice components.

3Com parts and professional services have been quoted you using WSCA pricing. This same pricing is available to you from any other 3Com reseller (including online, CDWG) and is good for the life of the WSCA contract.

It is our intent in this proposal to provide METRO with the ability to remove or add anything listed on this Schedule A1.1 or the Other Optional Equipment pages. METRO also has the ability to purchase no equipment from SJB GlobalNET and purchase all or some of the equipment listed in this response from CDWG thereby ensuring that METRO is getting the best price for the equipment all of the time. Should METRO choose to purchase equipment from CDWG, SJB GlobalNET will honor the terms of the installation listed in the response.

Three benefits for METRO in choosing 3Com are 1) all 3Com parts can be found on the internet and are more available from suppliers than competitor parts thereby giving METRO the purchasing advantage, 2) 3Com parts are already available under WSCA pricing making it easy for metro to purchase at a guaranteed 22% to 40% off the list price, and 3) the majority of METRO network consists of 3Com switches allowing the VCX to take advantage of key features available in the 3Com switches such as the Voice VLAN feature without the need to upgrade.

Note: Option A, though a lower equipment, cost does not meet one requirement of this RFP. Rather than one IP web interface to manage the entire system, there will be two IP web interfaces. This is because Option B consists of two clustered VCX systems split between two sites. Each VCX systems can scale up to 250 users.

included another server to meet the requirement, 'not to use any old equipment', and will install the latest version of CallRex on the new server or MERTO may want to remove this item all together and use their existing server. We have included 5 more licenses to cover the Pacific Station agents. Depending on METRO's final design, a second server may be needed at Pacific Station or use the old unit for that. No additional licensing is needed for the second server. Please note that the existing phone system connected to the CallRex system is no longer supported by TellRex, according to TellRex.

## Schedule 1A - Option C Proposal VCX Enterprise

Option C is our Primary proposal and consists of the VCX Enterprise V7005 Call Processor with a V6000 Branch Office call processor at each site to provide remote survivability to the local telephones. Each call processor has six analog trunk FXO ports except for Vernon and ParaCruz which have eight each. We have proposed the VCX platform because of its unmatched flexibility, scalability, reliability and price. The end-user devices, licenses and configuration are all relatively the same in each option. The differences between the three option proposals A, B, and C are the core

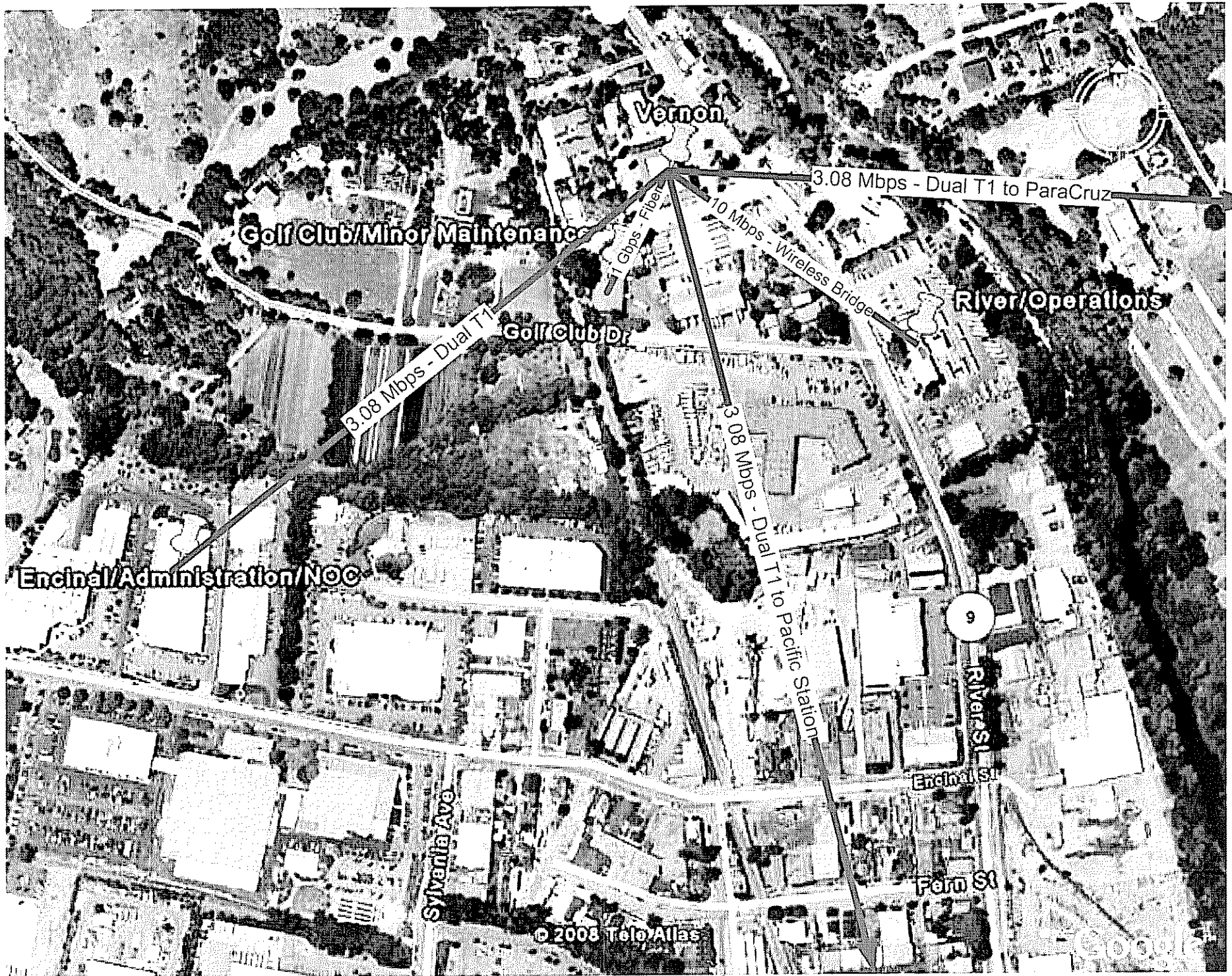
3Com parts and professional services have been quoted you using WSCA pricing. This same pricing is available to you from any other 3Com reseller (including online, CDWG) and is good for the life of the WSCA contract.

It is our intent in this proposal to provide METRO with the ability to remove or add anything listed on this Schedule A1.1 or the Other Optional Equipment pages. METRO also has the ability to purchase no equipment from SJB GlobalNET and purchase all or some of the equipment listed in this response from CDWG thereby ensuring that METRO is getting the best price for the equipment all of the time. Should METRO choose to purchase equipment from CDWG, SJB GlobalNET will honor the terms of the installation listed in the response.

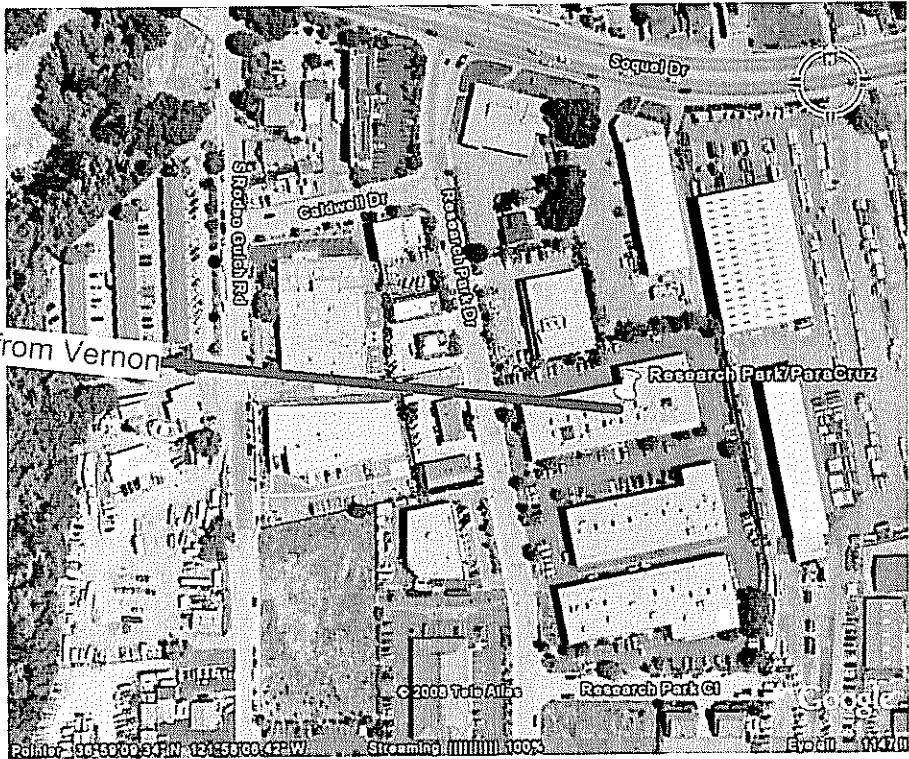
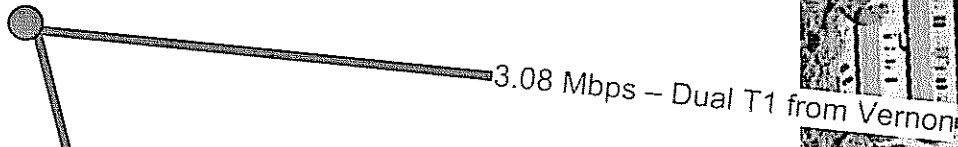
Three benefits for METRO in choosing 3Com are 1) all 3Com parts can be found on the internet and are more available from suppliers than competitor parts thereby giving METRO the purchasing advantage, 2) 3Com parts are already available under WSCA pricing making it easy for metro to purchase at a guaranteed 22% to 40% off the list price, and 3) the majority of METRO network consists of 3Com switches allowing the VCX to take advantage of key features available in the 3Com switches such as the Voice VLAN feature without the need to upgrade.

Note: Option C, though a higher equipment cost, has a much lower annual maintenance and installation cost than options A and B. In addition, of the RFP and is the most redundant and architecturally superior that options A and B. There is one IP web interface to manage the entire

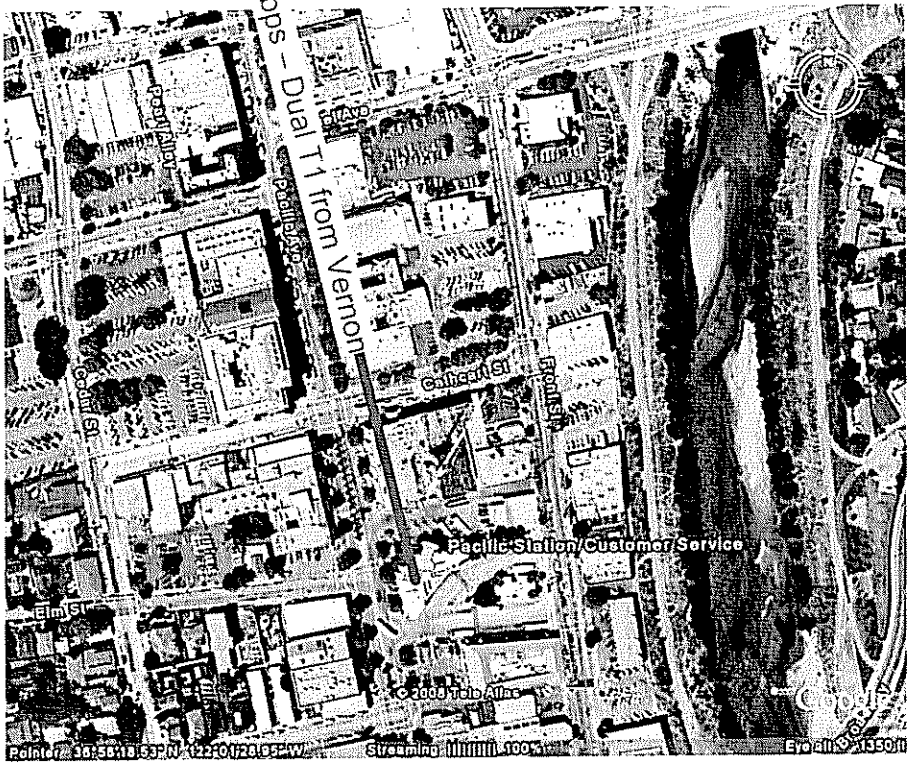
included another server to meet the requirement, 'not to use any old equipment', and will install the latest version of CallRex on the new server or MERTO may want to remove this item all together and use their existing server. We have included 5 more licenses to cover the Pacific Station agents. Depending on METRO's final design, a second server may be needed at Pacific Station or use the old unit for that. No additional licensing is needed for the second server. Please note that the existing phone system connected to the CallRex system is no longer supported by TellRex, according to TellRex.



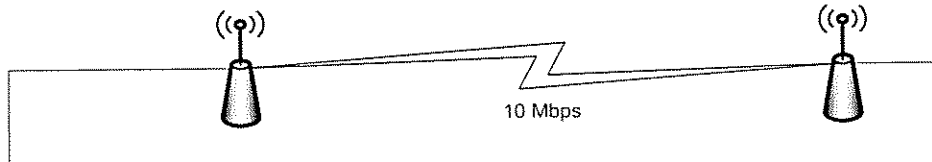
Vernon



ParaCruz approximately 3.75 mi from Vernon (non-line of site)

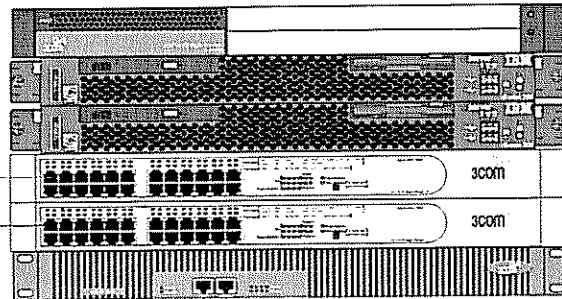


ParaCruz approximately 1.5 mi from Vernon (non-line of site)



1 Gbps Fiber

### Vernon / Encinal



- New 3Com V7122 Digital Gateway
- New 3Com VCX V7005
- New 3Com VCX V7005
- Existing 3Com Switch 4210 PWR
- Existing 3Com Switch 4210 PWR
- New 3Com Router 5242

44 Telephone Device Transition from Encinal  
4 Analog Terminal Adapter Transition from Encinal

3.08 Mbps Dual Bonded T1's  
3.08 Mbps Dual Bonded T1's

### Operations



- New 3Com VCX 6000
- Existing 3Com Switch 4210 PWR

22 Telephone Device  
1 Analog Terminal Adapter (fax)

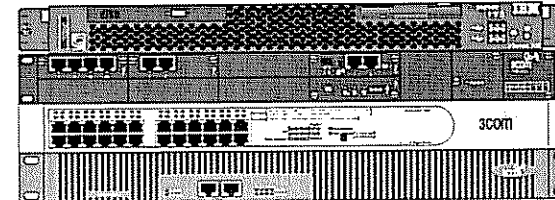
### Golf Maintenance Facility



- New 3Com VCX 6000
- Existing 3Com Switch 4210 PWR

16 Telephone Device  
1 Analog Terminal Adapter (fax)

### Pacific Station



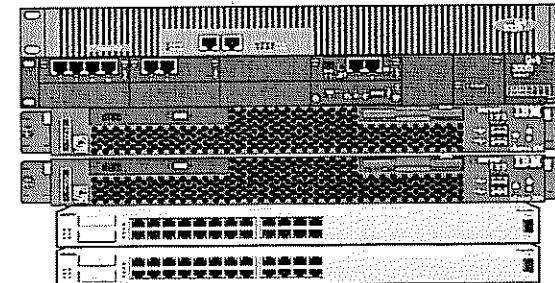
- New CallRex Call Recording
- New 3Com VCX Connect 100
- Existing 3Com Switch 4210 PWR
- New 3Com Router 5232

11 Telephone Device, 1 Analog Terminal Adapter (fax)

### VCX Cluster B

27 Telephone Devices  
2 Analog Terminal Adapter

### ParaCruz



- New 3Com Router 5232
- New 3Com VCX Connect 100
- New 3Com VCX Exchange ACD
- New CallRex Call Recording
- Existing Nortel 470-24T-PWR
- Existing Nortel 470-24T-PWR

16 Telephone Device, 1 Analog Terminal Adapter (fax)

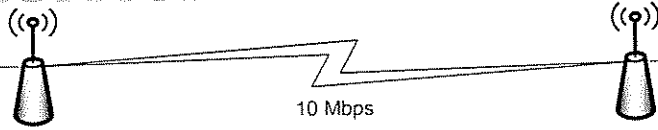
### Encinal



- Existing Adtran NetVanta 3430
- New 3Com Switch 4210 PWR
- New 3Com Switch 4210 PWR

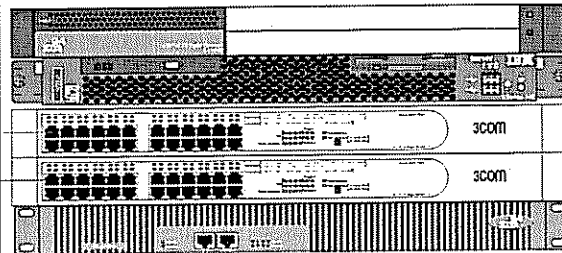
44 Telephone Device Transition to Vernon  
4 Analog Terminal Adapter Transition to Vernon





1 Gbps Fiber

### Vernon / Encinal



- New 3Com V7122 Digital Gateway
- New 3Com VCX Connect 200
- Existing 3Com Switch 4210 PWR
- Existing 3Com Switch 4210 PWR
- New 3Com Router 5242

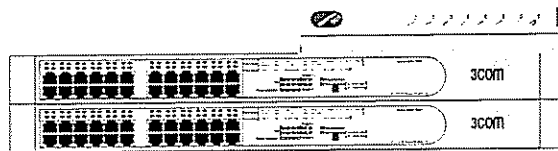
44 Telephone Device Transition from Encinal  
 4 Analog Terminal Adapter Transition from Encinal

### VCX Cluster A

83 Telephone Devices  
 6 Analog Terminal Adapter (fax)

3.08 Mbps Dual Bonded T1's  
 3.08 Mbps Dual Bonded T1's

### Encinal Transition



- Existing Adtran NetVanta 3430
- New 3Com Switch 4210 PWR
- New 3Com Switch 4210 PWR

44 Telephone Device Transition to Vernon  
 4 Analog Terminal Adapter Transition to Vernon

### Operations



- New 3Com VCX Connect 200
- Existing 3Com Switch 4210 PWR

22 Telephone Device  
 1 Analog Terminal Adapter (fax)

### VCX Cluster A

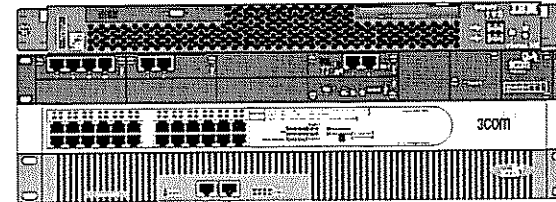
### Golf Maintenance Facility



- Existing 3Com Switch 4210 PWR

16 Telephone Device  
 1 Analog Terminal Adapter (fax)

### Pacific Station



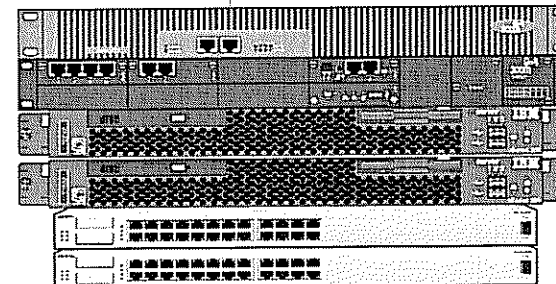
- New CallRex Call Recording
- New 3Com VCX Connect 100
- Existing 3Com Switch 4210 PWR
- New 3Com Router 5232

11 Telephone Device, 1 Analog Terminal Adapter (fax)

### VCX Cluster B

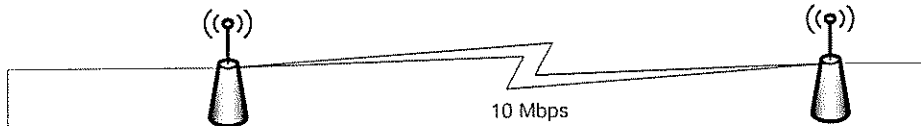
27 Telephone Devices  
 2 Analog Terminal Adapter

### ParaCruz



- New 3Com Router 5232
- New 3Com VCX Connect 100
- New 3Com VCX Exchange ACD
- New CallRex Call Recording
- Existing Nortel 470-24T-PWR
- Existing Nortel 470-24T-PWR

16 Telephone Device, 1 Analog Terminal Adapter (fax)

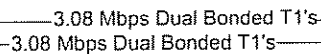


### Vernon / Encinal

- New 3Com VCX Connect 100  
Move from Encinal after transition
- New 3Com VCX Connect 100
- Existing 3Com Switch 4210 PWR
- Existing 3Com Switch 4210 PWR
- New 3Com Router 5242

44 Telephone Device Transition from Encinal  
4 Analog Terminal Adapter Transition from Encinal

**VCX Cluster A**  
44 Telephone Devices  
4 Analog Terminal Adapter



### Encinal Transition

- Existing Adtran NetVanta 3430
- New 3Com VCX Connect 100
- Existing 3Com Switch 4210 PWR
- Existing 3Com Switch 4210 PWR

44 Telephone Device Transition to Vernon  
4 Analog Terminal Adapter Transition to Vernon

- New 3Com VCX Connect 100
- Existing 3Com Switch 4210 PWR

22 Telephone Device  
1 Analog Terminal Adapter (fax)

**VCX Cluster C**, 38 Telephones, 2 ATA

### Golf Maintenance Facility

- New 3Com VCX Connect 100
- Existing 3Com Switch 4210 PWR

16 Telephone Device  
1 Analog Terminal Adapter (fax)

### Pacific Station

- New CallRex Call Recording
- New 3Com VCX Connect 100
- Existing 3Com Switch 4210 PWR
- New 3Com Router 5232

11 Telephone Device, 1 Analog Terminal Adapter (fax)

### VCX Cluster B

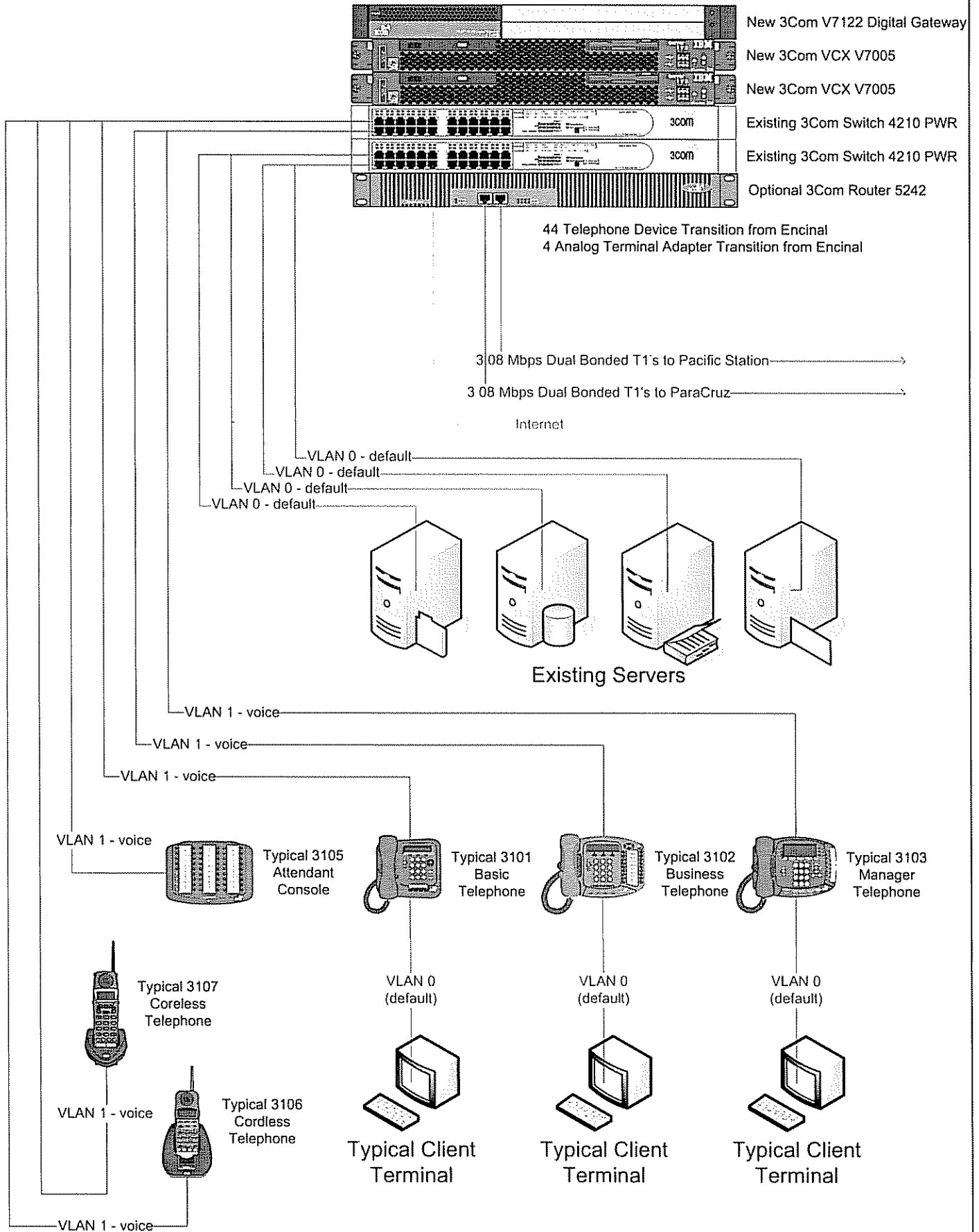
27 Telephone Devices  
2 Analog Terminal Adapter

### ParaCruz

- New 3Com Router 5232
- New 3Com VCX Connect 100
- New 3Com VCX Exchange ACD
- New CallRex Call Recording
- Existing Nortel 470-24T-PWR
- Existing Nortel 470-24T-PWR

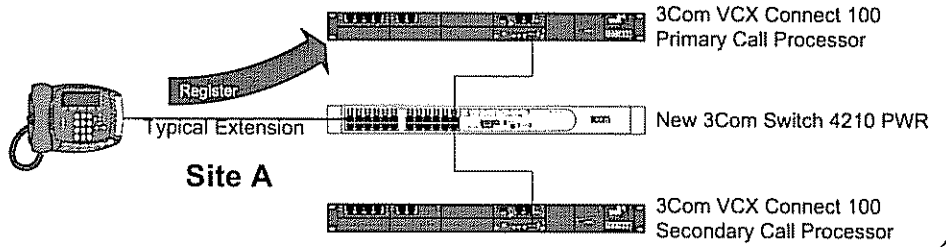
16 Telephone Device, 1 Analog Terminal Adapter (fax)

# Typical Site – Example: Vernon

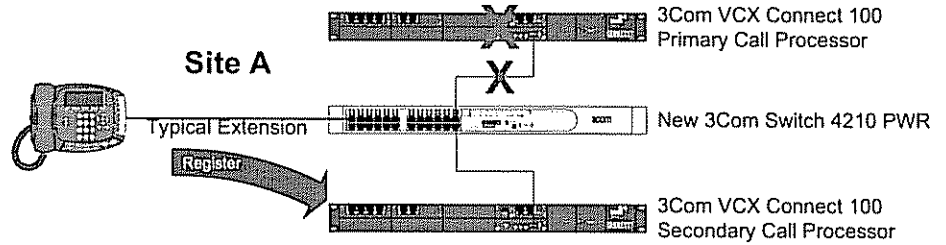


# Single Site VCX Connect 100 Cluster

**Non-failover (regular) Operation**

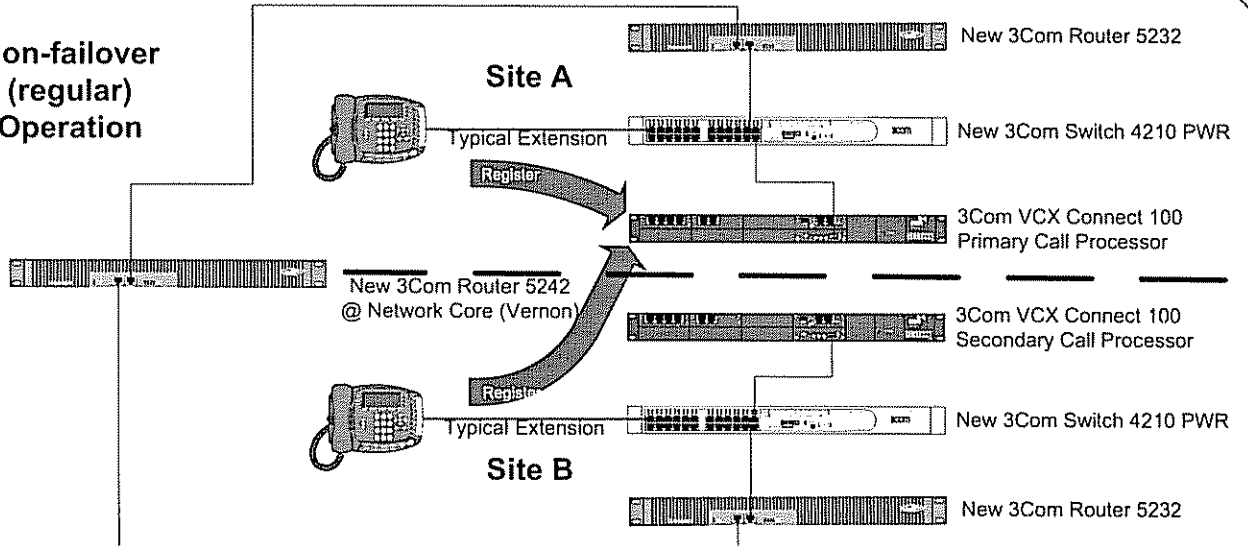


**Failover Operation**

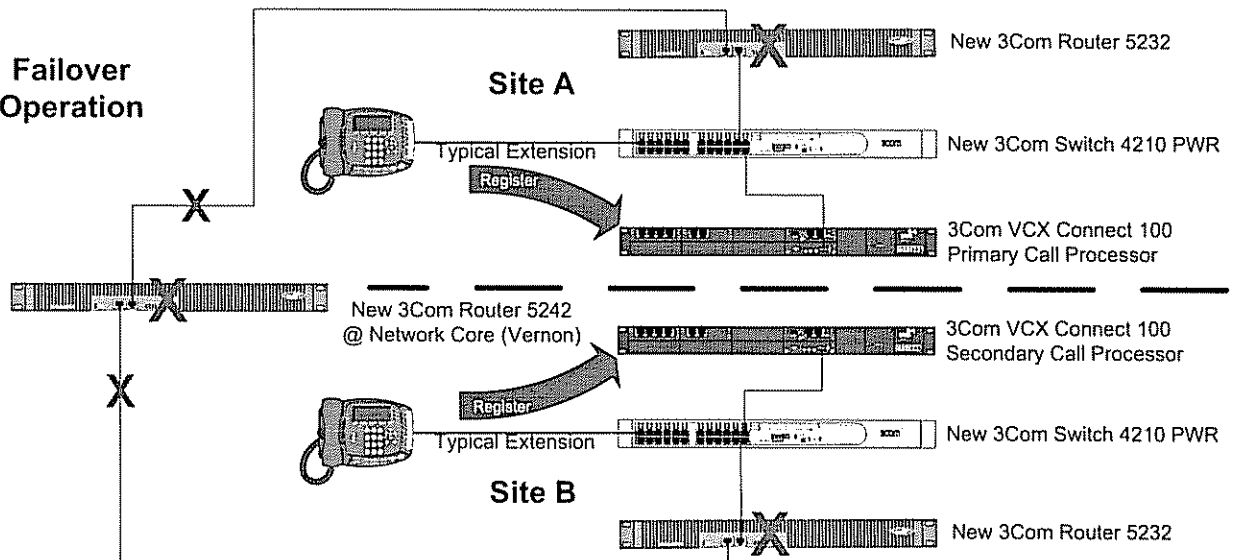


# Double Site VCX Connect 100 Cluster

**Non-failover (regular) Operation**

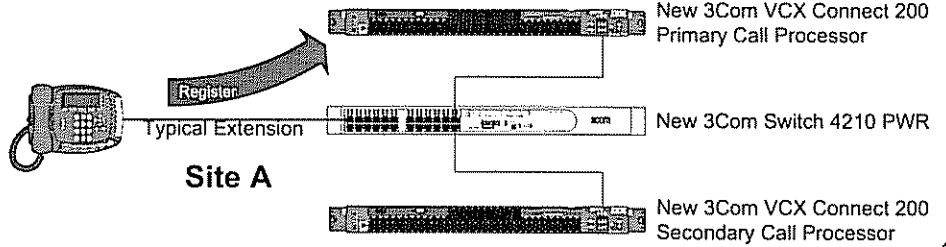


**Failover Operation**

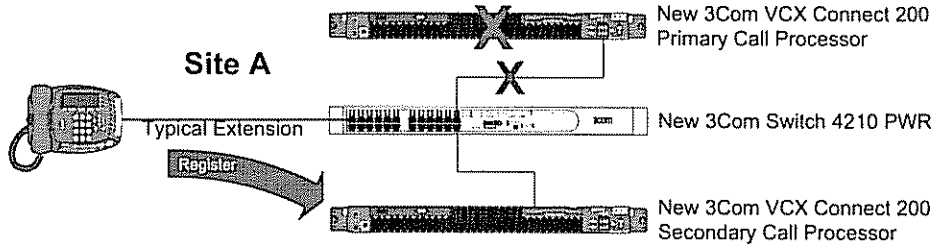


Single Site VCX Connect 200 Cluster

**Non-failover (regular) Operation**

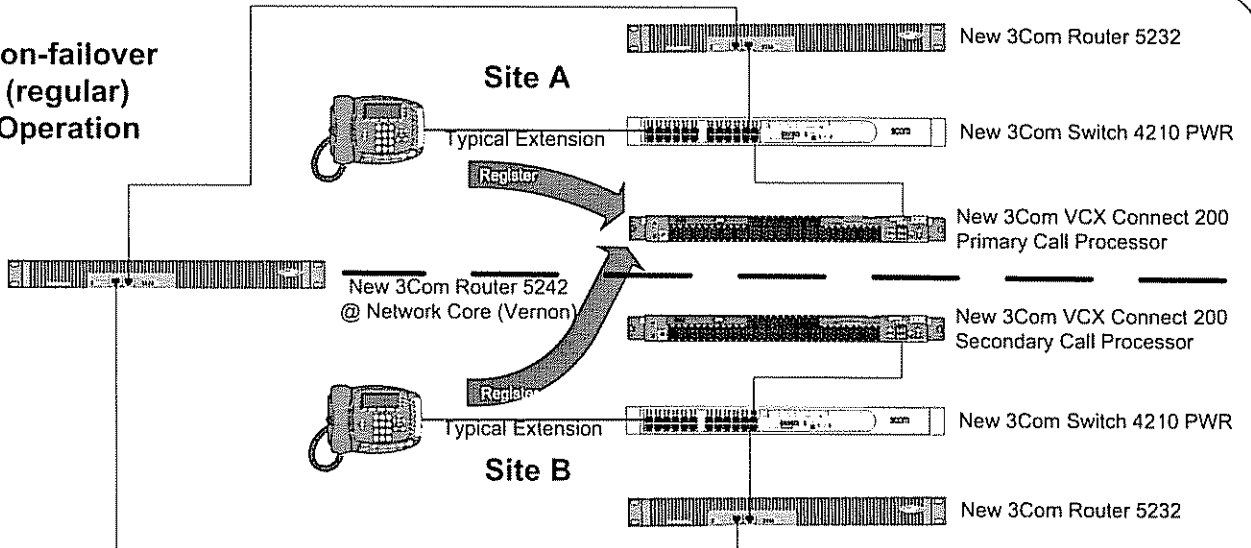


**Failover Operation**

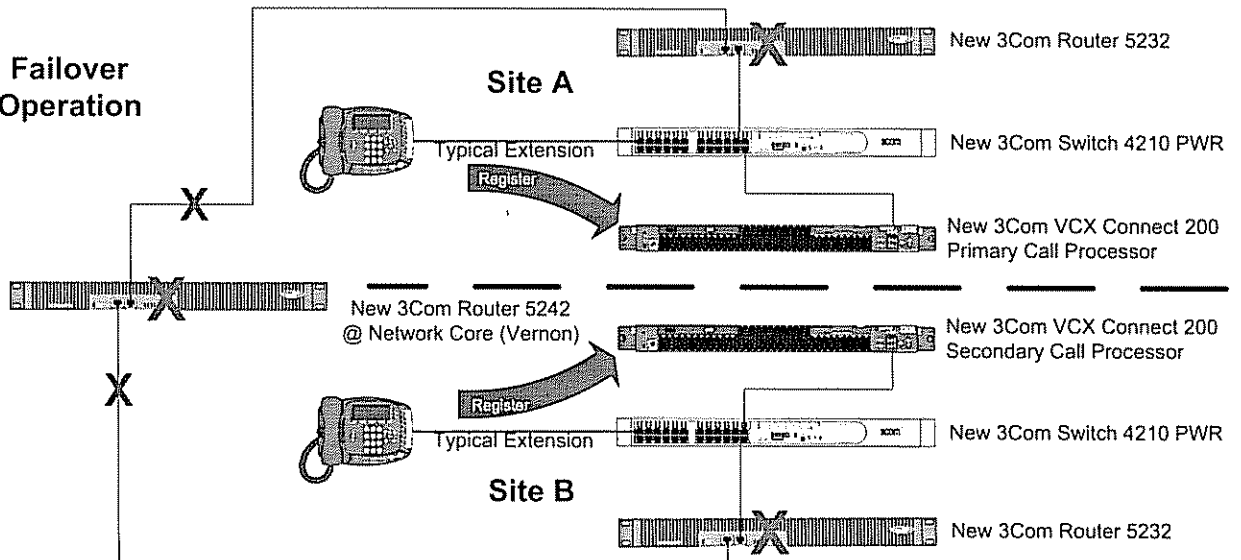


Double Site VCX Connect 200 Cluster

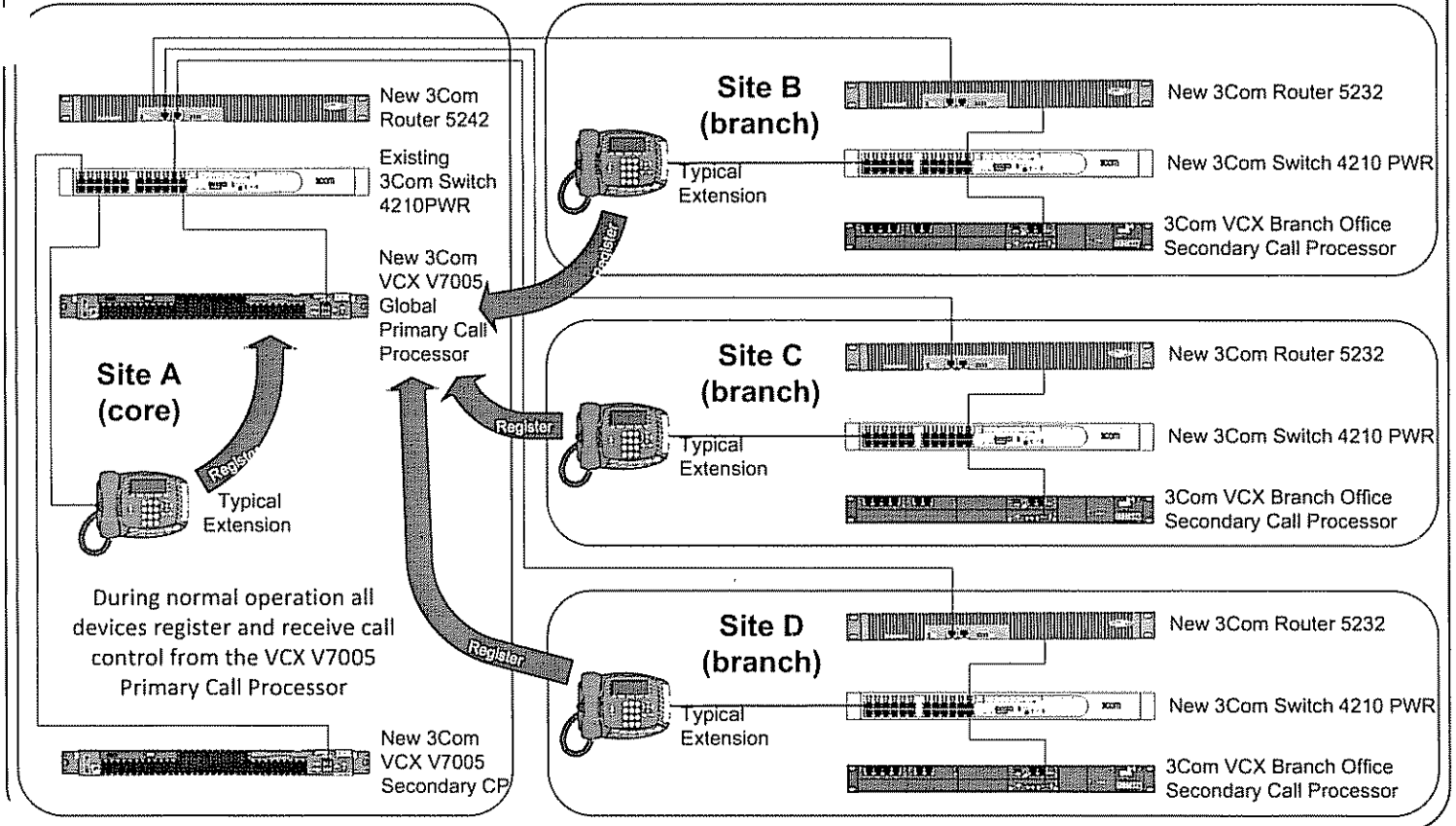
**Non-failover (regular) Operation**



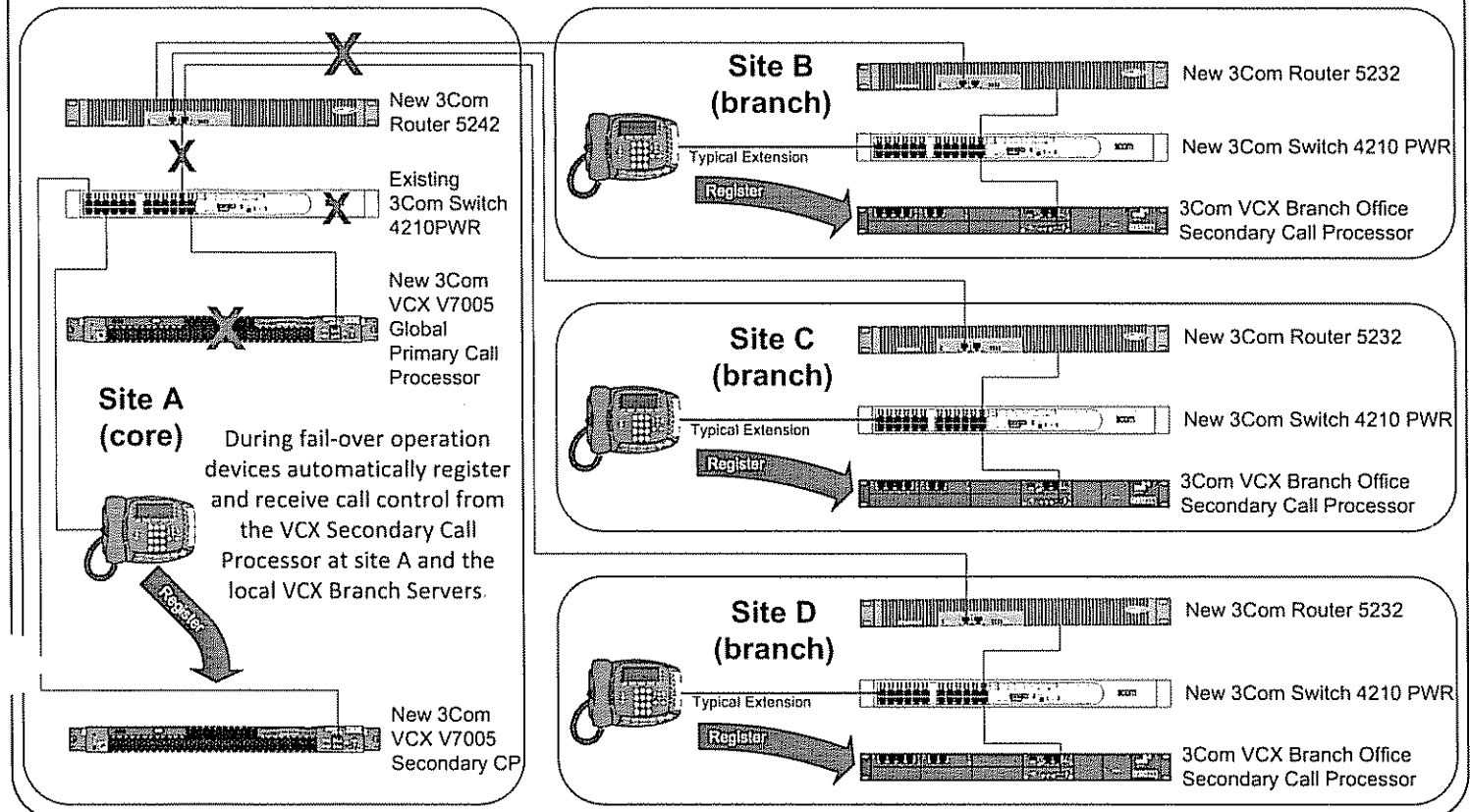
**Failover Operation**



## 3Com VCX V7000 Core & Branch Server - Regular Operation



## 3Com VCX V7000 Core & Branch Server – Fail-over Operation



## Proposed IP Address Assignment

LAN - VLAN assignments		IP Address Assignments				
		Vernon/Encinal	Golf Maintenance	Operations	ParaCruz	Pacific Station
VLAN 0	VLAN 0 (tagged) - default	{existing subnet}	{existing subnet}	{existing subnet}	{existing subnet}	{existing subnet}
	VLAN 0 (tagged) - default vlan gateway	{existing gateway}	{existing gateway}	{existing gateway}	{existing gateway}	{existing gateway}
Proposed VLAN 1 - voice VLAN	VLAN 1 (tagged) - voice vlan	10.10.10.0	10.10.11.0	10.10.12.0	10.10.14.0	10.10.15.0
	VLAN 1 (tagged) - voice vlan gateway	10.10.10.254	10.10.11.254	10.10.12.254	10.10.14.254	10.10.15.254
	VLAN 1 Primary Call Processor	10.10.10.1	10.10.11.1	10.10.12.1	10.10.14.1	10.10.15.1
	Secondary Call Processor	10.10.10.2				
	Telephone device IP Pool	10.10.10.11 - 199	10.10.11.11 - 199	10.10.12.11 - 199	10.10.14.11 - 199	10.10.15.11 - 199

## Proposed Site Numbering Plan

<b>Site</b>	<b>Extension Range</b>	<b>Voicemail Range</b>	<b>Primary Main Line Hunt Group</b>	<b>General Voicemail Boxes</b>	<b>User Extension Range</b>
Vernon / Encinal	100 - 299	100 - 299	100 & 200	199 & 299	101 - 198 & 201 - 298
Golf Maintenance	300 - 399	300 - 399	300	399	301 - 398
Operations	400 - 499	400 - 499	400	499	401 - 498
ParaCruz	500 - 599	500 - 599	500	599	501 - 598
Pacific Station	600 - 699	600 - 699	600	699	601 - 698



**Roxanne Harbor**  
831.454.8380  
roxanne@sjbglobal.net

#### **SUMMARY OF QUALIFICATIONS**

- Proven administrative, planning and organizational experience.
- Bottom line oriented with proven financial analysis and budget preparation experience.
- Adept at the identification of problem areas and implementation of corrective actions
- A team leader, providing motivation, training and support by example.
- Solid communication skills with individuals at all levels.

#### **PROFESSIONAL EXPERIENCE**

**IT CONSULTANT/PROJECT MANAGER** **June 08-Present**  
**San Jose Unified School District, San Jose, CA**

- Provide professional consulting and high performance solutions to Tech Services Department and District CBO regarding technology solutions and problem resolution.

**FREMONT UNIFIED SCHOOL DISTRICT, Fremont, CA** **June 02-Retired Sept 06**  
**Director MIS**

Planned, organized, and implemented operations and procedures to support administrative, instructional and financial networks. Supervised fourteen (14) support staff and 5-10 contract employees. Reported to Superintendent.

- Identified project tasks, established and monitored schedules, coordinated team meetings and prepared project reports
- Implemented switched networks at each of the 35 facilities in the district.
- Planned and implemented new student information system for 31,000-student population within 1-year time frame.
- Established, coordinated and directed a district technology committee consisting of district employees and community members to write a district-wide tech plan.
- Sat on Superintendent's Cabinet.
- Advised management at all sites on technological strategies, issues and purchasing decisions.
- Financially responsible for annual department budget of \$8 million

**ALUM ROCK UNION SCHOOL DISTRICT, San Jose, CA** **February 02-June 02**  
**IT Consultant** (February 2002-June 2002)

Supported the district with IT project implementation. Evaluated and recommended applications for various departments. Assisted with application procurement. Worked with IT staff to provide support with installations. Reported to Assistant Superintendent of Administrative Services.

**NETWORK MANAGEMENT CORPORATION, Sacramento, CA** **June 01-Nov 01**  
**Director of Operations** (June 2001-November 2001)

Evaluated network systems and provided professional consulting and high performance solutions to clients and strategic vendors. Prepared solutions for client proposals for the purpose of comparative analysis. Supervised fifteen (15) support staff. Reported to CEO.

- Conducted meetings and consultation with clients regarding technology solutions and problem resolution.
- Prepared quotes and estimates for network projects.
- Qualified all aspects of daily installation and configuration of business systems.

- Directed staff in the setup of networked systems and prepared implementation plans for technical staff from procurement to product operation.
- Documented all projects and procedures necessary to complete assigned tasks.
- Identified solutions on internal systems to improve workflow and business objectives.

**SEQUOIA UNION HIGH SCHOOL DISTRICT**, Redwood City, CA **Jan 97-June 01**

**Director Technology and Information Services** (January 1997-June 2001)

Planned, organized, and implemented operations and procedures to support administrative and instructional networks. Supervised thirteen (13) support staff and 3-5 contract employees.

Reported to Deputy Superintendent of Administrative Services

- Identified project tasks, established and monitored schedules, coordinated team meetings and prepared project reports.
- Effectively planned and implemented switched networks at each of the 7 facilities in the district within a six-month time frame on budget of \$500,000.
- Planned and implemented new student information system, purchasing, library and food service systems district-wide
- Established and directed a technology committee to write a district-wide tech plan.
- Assisted staff in developing district standards training curriculum. Instructor for various computer classes, including MS Office, Novell, and Internet applications.
- Advised management at all sites on technological strategies, issues and purchasing decisions.
- Financially responsible for annual department budget of \$6 million.

**BERRYESSA UNION SCHOOL DISTRICT**, San Jose, CA

**1993-1996**

**BELMONT SCHOOL DISTRICT\***, Belmont, CA

**1995-1996**

**Director MIS** (1993-1996)

Planned, organized, and implemented operations and procedures to support administrative and instructional networks. Supervised two (2) support staff and 5-7 contract employees. Reported to Superintendent.

- Planned and implemented networks at each of the 15 facilities in the district within a one-year time frame on budget of \$250,000. Responsible for \$4 million budget.
- Designed and installed a staff training center. Instructor for various computer classes.
- Developed specifications for IT department and Technology Center.
- Identified the need for regulated Internet use. Developed a telecommunications-use agreement for staff and students.
- Initiated a teacher lottery program to equitably distribute computers in classrooms.
- Recognized as having expertise in network infrastructure planning and implementation
- \*Contracted as MIS consultant to Belmont School District from January 1995 to June 1996. Responsible for network implementation

## **EDUCATION**

**BS Degree: Business Administration, Concentration: MIS, San José State University, 1994**

Phi Kappa Phi National Honor Society

Golden Key National Honor Society

Beta Gamma Sigma National Honor Society

San Jose State University Alumni Association

**Certificate: Network Management, University of California Santa Cruz Extension, 1996**

**Sean Brender**  
408.472.0031  
scan@sjbglobal.net

## **SUMMARY OF QUALIFICATIONS**

- Proven administrative, planning and organizational experience.
- Bottom line oriented with proven financial analysis and budget preparation experience.
- Adept at the identification of problem areas and implementation of corrective actions
- A team leader, providing motivation, training and support by example
- Solid communication skills with individuals at all levels.

## **PROFESSIONAL EXPERIENCE**

**SJB GlobalNET, inc., Palo Alto, CA** **May 2006-Present**  
**Voice Network Consultant, Palo Alto, CA**

- Supported the design, installation and management of IT projects and VoIP systems in large public entities.
- Provide professional consulting and high performance solutions to both public and private customers around the globe. Design, install, train, troubleshoot and manage high dollar IT projects for customers.

**PWT-IT Solutions, Santa Clara, CA** **Aug 2004- May 2006**  
**Voice Network Consultant**

- Supported the design, installation and management of IT projects and VoIP systems in large public entities.
- Designed and installed two of the largest VoIP installations of their time.
  - In June 2001, Franklin McKinley School District went on-line with the V3000 platform at 25 sites and 1800 users.

**Network Management Corporation, Sacramento CA** **May 2001-May 2005**  
**Voice Network Consultant**

- Supported the design, installation and management of IT projects and VoIP systems in large public entities.
- Designed and installed two of the largest VoIP installations of their time.
  - In August 2001 Berryessa Union School District went on-line with the first commercially sold 3Com NBX V5000 platform at 18 sites and 900 users, breaking the VoIP record of the time, 3 sites and 130 users.
  - In September of 2003, broke the VoIP installation record again with the installation of the V5000 platform at Rio Linda School district with 22 sites and 1200 users

**Sequoia Union High School District, Redwood City, CA** **May 1999-May 2001**  
**Equipment Repair Technician III**

- Supported the telecommunications system (NEC NEAX 2400 and NEAX 2000 platform)
- Installed Cat5 cable drops at the campuses
- Evaluated and troubleshoot network systems and desktop computers
- Manage vendor contracts for modernization using 'bond' funding to upgrade network infrastructure.



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## Product Obsolescence Policy

### FORMER 3COM PRODUCTS

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[Commworks](#)

All 3Com products provide a high degree of functionality even after the sale of those products is discontinued. An important part of the customer's investment protection is 3Com's prolonged serviceability of those products. 3Com is committed to meeting or exceeding the time frames set forth below and will use all reasonable efforts upon notification of obsolescence to do so. To obtain a service quote on a discontinued product contact your local 3Com representative.

A product is labeled "obsolete" when it can no longer be ordered from 3Com. Many products that are labeled obsolete are simply replaced with a newer revision level of the same product. However, some products are named obsolete when their technical capabilities no longer suit the needs of the marketplace (as indicated by order levels) and therefore no further revisions will be available. To encourage customers to take advantage of new products or technologies, upgrade or exchange promotions are sometimes offered when a given product is labeled obsolete.

Major commercial product obsolescence announcements are communicated to 3Com reseller partners at least 30 days before the effective date through normal vehicles such as newsletters. End-user customers can determine whether products have been declared obsolete by contacting 3Com technical support organizations or their nearest 3Com office. Customers with 3Com service contracts will be monitored regularly.

Product obsolescence has implications for the availability of technical support and other services. A "service availability period" is a period of time for which 3Com will support a given product with a specified service level after its obsolescence date. Service availability periods vary depending on the type of service in question. The table below indicates our standard guidelines for commercial products; these were established based on analysis of historic usage patterns and commercial feasibility. If resources are available beyond the periods indicated below, 3Com will continue to provide specific services on a case-by-case basis as long as it is commercially reasonable to do so. 3Com honors any existing government or commercial contracts which call for service availability periods that are different from those charted below.

### Service Availability Periods

Standalone Services	1 Year	2 Year	3 Year	4 Year	5 Year
Sustaining Engineering (hw/sw) *					
Training					
Software Telephone support					
Hardware Telephone support					
Spares **					
Repairs					
End User Service Contracts ***					
Guardian(SM)					
Express(SM)					

\* 3Com will maintain engineering expertise to develop code fixes and assist with complex problem isolation during this period. Bug fixes may or may not be developed, depending on the severity level and availability of alternate solutions.

\*\* In some cases, spares are available for three years or longer; it depends on availability. If customers anticipate needing spares available for longer than two years post-obsolescence, the most conservative approach would be to purchase them in advance and store them on site.

\*\*\* The date shown for service contracts refers to the last date service will be provided under a one-year contract. 3Com may elect to discontinue selling 12-month service contracts one year earlier.



DATA SHEET

Powerful and flexible network management providing enhanced features to manage large converged networks

OVERVIEW

3Com® Enterprise Management Suite (EMS) is a powerful and flexible network infrastructure management tool, providing enhanced features to help manage large converged networks. With its rich integration capabilities, EMS can be integrated with other network management systems to provide a single interface and console for configuration and change management.

3Com EMS delivers customizable network management capabilities that scale to meet the needs of the largest enterprises and advanced networks. For example, 3Com EMS includes Network Configuration and Change management (NCC) functionality, giving control over bulk configurations and scheduling. Use EMS for low touch device deployments, to create detailed audit trails of network changes, to perform firmware upgrades and to manage the software configuration of your 3Com devices. EMS is fully client-server and supports multiple distributed IT users with varying access levels and individualized network resource control. These capabilities save time, mistakes and frustration.

In addition, the 3Com Enterprise Management System provides asset, performance and fault information for 3Com devices and can be extended to support 3rd-party infrastructures using a rich set of interfaces.

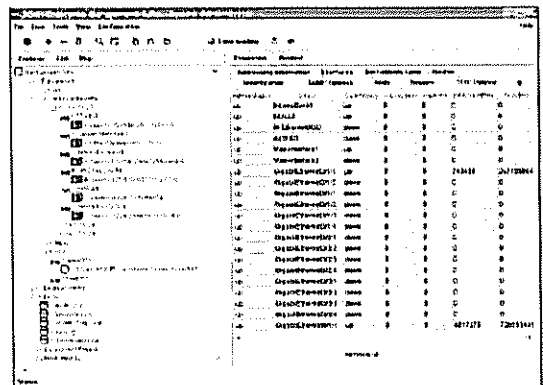
KEY BENEFITS

DELIVERS SCALABLE MANAGEMENT FOR DIVERSE NETWORKS

3Com Enterprise Management Suite delivers an extensive set of capabilities for managing large, heterogeneous networks—including LANs, WANs, wireless LANs (WLANs) and converged voice/data/video infrastructures. The platform can scale to provide management functions for multiple sites and thousands of devices from one central location. And it can be extended to support almost any device regardless of vendor.

CREATES A FRAMEWORK FOR INTEGRATING CRITICAL MANAGEMENT TECHNOLOGIES

More than simply a management toolset, 3Com EMS offers enterprises a strong framework for implementing a range of advanced management technologies. The system's client/server architecture allows for highly flexible management deployments that meet the requirements of complex network infrastructures and demanding business environments.



3Com Enterprise Management System: Display of Switch Interface Properties

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**KEY BENEFITS**  
(CONTINUED)**AUTOMATES BULK TASKS FOR GREATER PRODUCTIVITY**

3Com EMS delivers powerful configuration and control functions across the network, including the capability to customize scheduled bulk operations such as configuration backup and restore, software agent deployment, specific or general parameter changes, offline configurations and configuration roll-outs and roll-backs. Bulk deployment of new and existing 3Com devices can be easily accomplished by simply importing a spreadsheet file; EMS will search for the device and automatically upgrade its software and configuration.

**PROVIDES SYSTEMATIC NETWORK AUDITING**

3Com EMS helps speed troubleshooting by providing change and configuration information in addition to traditional fault reporting. The system allows administrators to compare device configurations for quick identification of unauthorized ad-hoc changes that could impair operations. It also enables regularly scheduled network configuration audits, so that IT can maintain firm centralized control.

**WORKS WITH A VARIETY OF OPEN MANAGEMENT PLATFORMS AND OPERATING SYSTEMS**

With an optional extension, 3Com EMS can integrate easily with the HP OpenView Network Node Manager open management platform. The software runs on Windows, Linux, Sun Solaris and IBM i5 operating systems. Management information can be forwarded to or accessed from a variety of interfaces and clients, including graphical and command-line interfaces, web interfaces and e-mail.

**FUNCTIONS IN A MULTIUSER, SECURE ENVIRONMENT**

Advanced multiuser access controls can assign individual identities to IT staff and assign or restrict their management roles. IT users in different locations may be given varying access levels and individualized network resource controls. Audit trails detail all network changes and identify who made them.

**OFFERS HIGH APPLICATION AVAILABILITY**

The 3Com Enterprise Management System provides server failover of the EMS application using active and standby EMS servers. In the event of the active EMS server going down, the standby server takes over operations, allowing clients to connect and carry out EMS operations as usual.

**ACHIEVE OPTIMAL RESULTS WITH 3COM PROFESSIONAL SERVICES SUPPORT**

The 3Com Enterprise Management System is offered together with a comprehensive selection of 3Com Professional Services, including implementation, phone support, training and product customization. These services help ensure that the powerful EMS software will achieve optimal results within the specific network environment of each 3Com customer.

## MANAGEMENT FEATURES AT A GLANCE

FEATURE	DESCRIPTION	KEY BENEFITS
Flexible Agent Distribution	<ul style="list-style-type: none"> <li>• Upgrade or baseline the software running on 3Com devices in one operation</li> <li>• Save time and effort</li> </ul>	<ul style="list-style-type: none"> <li>• Distribute software according to the precise needs and size of the network</li> </ul>
Device Administration	<ul style="list-style-type: none"> <li>• Back up the configuration of 3Com devices, add a backup to the baseline and restore from the baseline if necessary</li> <li>• Compare the device configuration with previous ones</li> <li>• Asset-manage network devices, including serial numbers, device settings, software/hardware versions and customer-specific attributes</li> </ul>	<ul style="list-style-type: none"> <li>• Automatically detect unauthorized changes on the network to prevent problems</li> <li>• Baseline the network devices to reduce downtime and replacement costs</li> <li>• Manage enterprise assets for greater control</li> </ul>
Bulk Configuration Tools	<ul style="list-style-type: none"> <li>• Use configuration file templates to deploy a configuration to multiple devices at the same time</li> <li>• Accommodate differences among managed devices using Device Tokens</li> <li>• Use templates to distribute configuration attributes to a group of devices or device types</li> <li>• Employ a telnet script editor to graphically create command line interface commands and execute them in bulk to any device type</li> </ul>	<ul style="list-style-type: none"> <li>• Increase efficiency and productivity by working in bulk with any device that uses textual backup file formats, MIB scalars, or a telnet interface</li> <li>• Seamlessly control enterprise network elements using a variety of optimized interfaces</li> </ul>
Controlled Multiuser Management	<ul style="list-style-type: none"> <li>• Limit IT users to seeing only the contents of the logical view assigned as their root view and/or administrative level, per administrative level, per device</li> <li>• Log all users' actions in the event log and identify the responsible user</li> </ul>	<ul style="list-style-type: none"> <li>• Control who accesses network elements</li> <li>• Increase productivity</li> <li>• Audit reporting of any changes made to the network</li> </ul>
Scheduled Operations	<ul style="list-style-type: none"> <li>• Run any object's operations at a defined time or over a specified interval</li> </ul>	<ul style="list-style-type: none"> <li>• Improve productivity and management efficiency</li> <li>• Reduce downtime by implementing changes when network is least busy</li> </ul>
Service-Oriented Architecture	<ul style="list-style-type: none"> <li>• Get an object-oriented view of all aspects of the network system</li> <li>• Gain the flexibility to customize the system to meet specific service needs</li> </ul>	<ul style="list-style-type: none"> <li>• Simplify network complexity</li> <li>• Improve operational efficiencies</li> </ul>
Data Collection and Reporting	<ul style="list-style-type: none"> <li>• Collect, compare and report any device attribute</li> <li>• Log events and send traps when collected data exceeds the compared trigger value</li> </ul>	<ul style="list-style-type: none"> <li>• Review performance in heterogeneous networks to improve operations</li> </ul>
Converged Network Support	<ul style="list-style-type: none"> <li>• Discover, monitor and configure a 3Com VCX™ IP telephony system using SNMP v3 and SFTP</li> <li>• Collect detailed performance statistics</li> <li>• Execute maintenance tasks such as restart and deploy music-on-hold files</li> </ul>	<ul style="list-style-type: none"> <li>• Configure and monitor devices on converged networks comprehensively and intuitively</li> </ul>
Open Management Support	<ul style="list-style-type: none"> <li>• Recognize and configure 3Com equipment in HP OpenView Network Node Manager platform with optional integration kit</li> </ul>	<ul style="list-style-type: none"> <li>• Integrate 3Com EMS with existing open management platforms to maintain familiar environments and reuse existing management infrastructure</li> </ul>
Flexible Interfacing and Reporting	<ul style="list-style-type: none"> <li>• Use a command-line interface to send or receive messages to and from other applications in use</li> <li>• Support enhanced scripting via Jython</li> <li>• Integrate 3Com EMS with other network and systems management platforms, such as inventory trouble-ticketing and service delivery systems</li> </ul>	<ul style="list-style-type: none"> <li>• Achieve an integrated management infrastructure that features ease of use and broad interoperability with a variety of management tools</li> </ul>
Events and Alarms	<ul style="list-style-type: none"> <li>• Keep track of events from a variety of sources, including user events, trap events, syslog messages and threshold messages</li> <li>• Execute actions on events such as pop-up menus, e-mails and device maintenance tools</li> </ul>	<ul style="list-style-type: none"> <li>• Review network history and automate actions for better oversight and control</li> </ul>
External Database Support	<ul style="list-style-type: none"> <li>• Integrate the management system with MySQL, Oracle and IBM DB2 databases</li> <li>• Free the system from data storage tasks and increase uptime</li> </ul>	<ul style="list-style-type: none"> <li>• Increase scalability and redundancy</li> <li>• Support very large network infrastructures</li> </ul>
3Com Quarantine Support	<ul style="list-style-type: none"> <li>• Works in conjunction with TippingPoint™ Intrusion Prevention Systems (IPS) and Security Management Systems (SMS)</li> </ul>	<ul style="list-style-type: none"> <li>• Block malicious and unwanted traffic, while allowing good traffic to pass unimpeded</li> </ul>
Secure Management Communications	<ul style="list-style-type: none"> <li>• Use SSH or SNMP v3 to encrypt management communications</li> </ul>	<ul style="list-style-type: none"> <li>• Enhances security when deploying new devices or implementing configuration changes on the network</li> </ul>

## SPECIFICATIONS

### WORKSTATION REQUIREMENTS

IBM-compatible PC: Pentium III 500 MHz with 1 Gb RAM and CD-ROM drive minimum; Pentium 4 1 GHz or higher recommended; 100 Mb of free disk space minimum. 500 Mb recommended

Sun Microsystems platform: Ultra 10 with 1 Gb RAM and CD-ROM drive minimum; Ultra 60 or higher with 1 Gb RAM recommended; 300 Mb of free disk space minimum. 500 Mb recommended; 10/100 network interface card required for both client and server workstations

### OPERATING SYSTEM REQUIREMENTS

Windows: Windows 2000 Server SP, 2003 Server, 2000 Professional SP4, or XP Professional SP1a and SP2; all Windows platforms with Sun Java 2. Runtime Environment 1.4.2. or Platform Standard Edition 5.0; all Windows platforms with IBM i5/OS V5R3, V5R4

Solaris: Solaris 8.0 or 9.0 with Sun Java 2. Runtime Environment 1.4.2. or Standard Edition 5.0; IBM i5/OS V5R3, V5R4

Linux: Suse 9.2. Redhat 8.0 (or later); 3Com EMS requires Kernel 2.2. X11R6 3.3x from XFree86. glibc 2.1

IBM: i5/OS V5R3, V5R4

### DATABASES

3Com EMS ships with Instant DB. 3Com recommends one of the following for midsize and large-scale deployments: Oracle version 8i, 9i, 9i or 10g; MySQL version 4 or 5; IBM DB2

### NETWORK MANAGEMENT PLATFORMS

3Com EMS can run without a network management platform.

HP OpenView: Network Node Manager version 6.4 and 7.0+, running on Windows 2000 or XP, or Solaris 8.0 or 9.0. is supported with the optional integration kit

### RELATED 3COM PROFESSIONAL SERVICES

**Start-up Solutions:** A group of product and service items offered as a solution to enable quick deployment of entry-level 3Com EMS systems

**Implementation Service:** A comprehensive plan to seamlessly implement a 3Com EMS system into the network

**Training Services:** 3Com University offers administrator and developer training courses devoted to 3Com EMS

**Software Application Support Service:** 24/7 telephone support for 3Com EMS and ongoing software upgrades

**Custom Scripting Service:** Integration of 3Com EMS with existing management infrastructure and field integration of 3Com and third-party devices

## ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
3Com Enterprise Management Suite v2.4 with license to manage 250 devices	3CR15600
3Com Enterprise Management Suite v2.4 with license to manage 1,000 devices	3CR15610
3Com Enterprise Management Suite v2.4 with license to manage 5,000 devices	3CR15620
3Com Enterprise Management Suite v2.4 with unlimited node license	3CR15630
3Com Integration Kit for HP OpenView Network Node Manager	3C15700

A trial version of 3Com Enterprise Management Suite is available; download the software from [www.3com.com/ems\\_trial](http://www.3com.com/ems_trial) for a 60-day evaluation period

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.

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3Com is publicly traded on NASDAQ under the symbol COMS

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SMB communications platforms that integrate SIP-based multimedia and unified messaging services

## OVERVIEW

3Com® VCX™ Connect solutions let organizations with up to 250 phone users economically replace their aging PBXs with an advanced, standards-based communications system that integrates IP telephony and unified messaging applications onto a single platform. Support of a full range of 3Com IP phones, including a multimedia softphone, ensures high-quality audio and easy access to powerful VCX Connect features.

An open standards approach enables a reduced cost of ownership and increases investment protection. Since Session Initiation Protocol (SIP) is used for signalling, organizations can either deploy 3Com IP phones or choose SIP-compatible devices and applications that best match their needs. Numerous VoIP gateway options facilitate migration from PSTN to IP-based communications, allowing the continued use of legacy PBXs as needed to minimize business disruptions and align implementations with budget considerations. VCX Connect systems also support optional redundancy on critical components to increase resilience and further ensure business continuity.

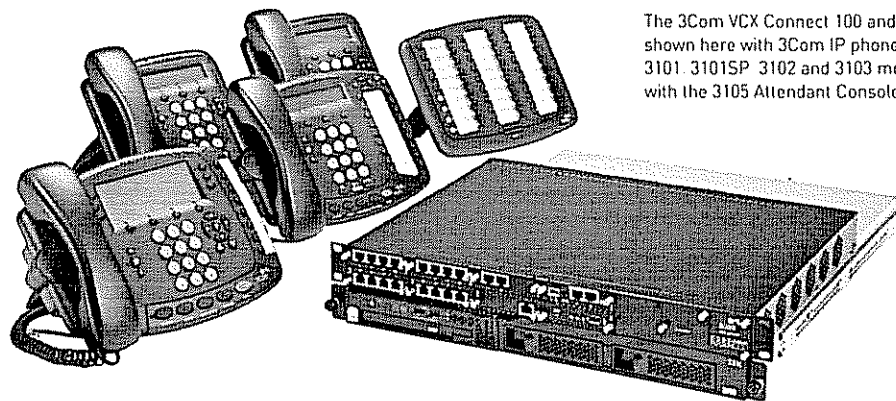
## KEY BENEFITS

### USE ADVANCED TELEPHONY CAPABILITIES WITH EASE

As organizations replace traditional phone systems, they need to ensure that the capabilities of their new system can be easily learned and used. Though there are a variety of 3Com IP phone options, all models offer similar and familiar operation that requires little or no change in user behavior. Many features are available at the touch of a button, while other less-used features can be invoked through a simple menu system. The integrated voicemail system of a VCX Connect solution includes extensive help resources—first-time users can be coached through mailbox set-up and receive prompts about other system capabilities. More practiced communicators can easily reply or forward voice mails to increase their message handling efficiency and productivity.

### INTEGRATE COMMUNICATIONS

Standard VCX Connect features allow calls to be made using multimedia devices such as SIP-based video phones or software applications such as the 3Com Convergence Center Client that offers a rich, integrated set of communications capabilities—including instant messaging, voice, video



The 3Com VCX Connect 100 and 200 platform are shown here with 3Com IP phones, including the 3101, 3101SP, 3102 and 3103 models, as well as with the 3105 Attendant Console.

## KEY BENEFITS (CONTINUED)

and desktop sharing—to improve collaboration and enhance productivity. Without additional costs, the Client can be used in conjunction with any licensed 3Com IP phone.

Unified messaging, also a standard feature of a VCX Connect system, offers voicemail/email integration so that users can efficiently retrieve, review and respond to messages. Workers can access voicemail messages whenever they check their email box. In addition, they can receive faxes as email attachments, unifying all messages into a single inbox.

### PAY AS YOU GROW

VCX Connect comes complete with 25 user licenses for both phones and unified messaging. Increasing the number of users up to the maximum supported by the system involves simply purchasing additional licenses. VCX Connect 100 systems support up to 100 users and VCX Connect 200, up to 250 users. Though most users will prefer a 3Com desktop phone, mobile workers may only need a softphone installed on their laptop. In addition, PSTN connectivity is supported by a modular range of VoIP gateways that allows expansion in increments as few as two additional analog channels or, where required, an additional T1/E1 module for 24/30 additional channels.

### ENSURE HIGH AVAILABILITY

VCX Connect systems offer a variety of options for ensuring resiliency. Optional redundant power supplies and redundant disks (RAID) ensure business continuity in the event of a VCX Connect component failure. Additionally, both VCX Connect 100 and VCX Connect 200 platforms can be supplemented with a backup server providing full application redundancy. In this type of configuration, the secondary server can also be located at a different site for full geographic redundancy. Because the servers continually communicate configuration changes with each other, should the worst happen, the secondary server can immediately and seamlessly manage all VCX system services. Similarly, since 3Com phones and gateways are automatically configured with the information required to locate and use the backup server, highly available communications across the organization is assured.

### SIMPLIFY DEPLOYMENT AND USE WITH OPEN STANDARDS

Support of the SIP standard lets VCX Connect systems integrate with multiple devices and applications to create a unified communications environment. This budget- and resource-stretching flexibility is an extension of 3Com's early commitment to standards-based technology—the company was the first to market a SIP-based IP PBX. And since becoming a founding member of the SIP Forum in 2000, 3Com has continued to promote open standards, enthusiastically supporting interoperability with third-party vendors through the 3Com Open Network™ Program. Information on Program membership and tested third-party solutions is available at [www.open.3Com.com](http://www.open.3Com.com).

### ENJOY MEDIA-RICH COLLABORATION

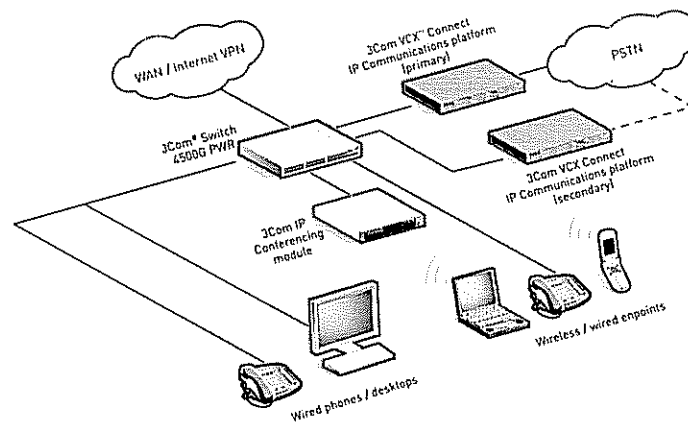
VCX Connect solutions can be enhanced with the optional 3Com VCX IP Conferencing and Presence modules that enable remote collaboration with any combination of voice, video and desktop sharing services. When combined with the powerful capabilities of the 3Com Convergence Client, they can be used to view a colleague's online availability status and for quick click-to-IM or click-to-call contact—all from a user's PC. The Client also lets users dial contacts from their desktop phone using information

## KEY BENEFITS (CONTINUED)

stored on their PC. And with the addition of an inexpensive webcam, the system transforms a PC into a personal video conferencing terminal, further enriching communications.

## FEATURE HIGHLIGHTS

- › Support for standard PBX features and of advanced multimedia communications
- › Optional secondary server for geographic redundancy
- › Hotdesk and/or softphone functions for mobile workers or remote workers at branch offices
- › 25 licenses for telephony and voice mail included with each VCX Connect platform
- › Collaboration using voice, video and instant messaging via the 3Com Convergence Client
- › Optional application modules that support conferencing, telecommuter mobility and presence
- › Support for SIP-based endpoints and applications
- › Access to a comprehensive set of legacy PBX features for use of retained analog phones
- › Fax delivery to email
- › Interoperability tested with many third-party SIP devices and applications
- › Single-line and multi-line phone support and bridged extensions for executives and administrators
- › Smooth, incremental migration to IP communications using digital and analog gateways
- › Multiple phone appearances to an extension
- › Support of hard and soft operator consoles
- › Use of 3Com Enterprise Management Suite (EMS) to report computed Mean Opinion Scores (MOS)
- › Usable with a UPS for UPS monitoring and a graceful shutdown in the event of an extended power failure
- › Simple addition, deletion and amendment of users via XML files
- › Option of multiple system login levels to support a division of system responsibilities—administrators handling user administration may be different than those who are managing dial plans and routing



3Com VCX Connect solutions provide advanced telephony, messaging and optional multimedia communications services with application redundancy and the cost savings needed to compete in today's market environments

**SPECIFICATIONS**

**VCX CONNECT 100**

Communications server supporting up to 100 users with IP telephony and unified messaging software

Integrated auto-attendant (AA) software; up to 12 simultaneous AA. music-on-hold or voicemail ports supported

Modular chassis with server, four (4) FXO analog ports and four (4) FXS analog ports as standard

Options for up to four (4) additional line cards:

- four-port FXO card
- four-port FXS card
- T1/E1 cards – one- or two-span (maximum of two T1 or E1 spans per chassis)

Redundancy options:

- Power supply
- RAID disk
- Secondary server (redundant power supply and RAID disk are also options for the secondary server)

**Dimensions (length, width, height)**

14 x 19 x 1.75 in;  
35.6 x 48.3 x 4.5 cm

**Weight**

7.26 kg

**Power**

120-240 VAC/140W

**VCX CONNECT 200**

Communications server supporting up to 250 users with IP telephony and unified messaging software

Integrated auto-attendant (AA) software; up to 60 simultaneous AA. music-on-hold or voicemail ports supported

Redundancy options:

- RAID disk
- Secondary server (with option of redundant RAID disk on this server)

Gateways can be selected from VCX analog FXS and FXO models and from T1/E1 options

**Dimensions (length, width, height)**

22 x 19 x 1.75 in;  
56 x 48.3 x 4.5 cm

**Weight**

17.25 kg

**Power**

120-240 VAC/350W

**UNIFIED MESSAGING SYSTEM**

Protocols  
· IMAP4, POP3, SMTP and VPIM

Voicemail language prompts  
· English (US and UK), French (Parisian and Canadian), Italian, Spanish (Castilian and LAT)

Codec support

- Either G 711 or G 729

**VCX CONNECT FAMILY SUPPORTS:**

3Com 3101, 3101SP, 3102 and 3103 IP Phones and 3Com 3105 Attendant Console

3Com Convergence Client (software client with presence, instant messaging, desktop sharing, voice and video)

Phone LCD languages: Chinese, English (US and UK), French (Parisian and Canadian), Italian, Portuguese and Spanish (Castilian and LAT)

Analog phones using 3Com Analog Media FXS gateways

3Com IP Conferencing Module

3Com Presence Module

3Com IP Telecommuting Module

iQNet VistaPoint Console (Windows OS)

CDR reporting software (Windows XP-based)

Other applications such as contact centers, call recording solutions, etc are available from partners in the 3Com|ON program; details at [www.open.3com.com](http://www.open.3com.com)

**ORDERING INFORMATION**

**PRODUCT DESCRIPTION**

**3COM SKU**

<b>Application Platforms</b>	
VCX Connect 100 (included 25 user licenses for IP communications and IP messaging)	3CRC100A
VCX Connect 100 optional redundant secondary server	3CRC101A
VCX Connect 200 (included 25 user licenses for IP communications and IP messaging)	3CRC200A
VCX Connect 200 optional redundant secondary server	3CRC201A
<b>Optional Components</b>	
VCX Connect 100 (four (4) port FXS add-on module)	3CRVG52002-07
VCX Connect 100 (four (4) port FXO add-on module)	3CRVG52001-07
VCX Connect 100 (one (1) span T1/E1 add-on module)	3CRVG71226-07
VCX Connect 100 (two (2) span T1/E1 add-on module)	3CRVG71227-07
VCX Connect 100 (redundant hard disk RAID1 (40 GB))	3COVG60006-06
VCX Connect 100 (redundant power supply module)	3COVG60005-06
VCX Connect 200 (redundant hard disk RAID1 (160 GB))	3COVH701996B

3Com Corporation Corporate Headquarters 350 Campus Drive Marlborough MA 01752-3064

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SMB communications platforms that integrate SIP-based multimedia and unified messaging services

## OVERVIEW

3Com® VCX™ Connect solutions let organizations with up to 250 phone users economically replace their aging PBXs with an advanced, standards-based communications system that integrates IP telephony and unified messaging applications onto a single platform. Support of a full range of 3Com IP phones, including a multimedia softphone, ensures high-quality audio and easy access to powerful VCX Connect features.

An open standards approach enables a reduced cost of ownership and increases investment protection. Since Session Initiation Protocol (SIP) is used for signalling, organizations can either deploy 3Com IP phones or choose SIP-compatible devices and applications that best match their needs. Numerous VoIP gateway options facilitate migration from PSTN to IP-based communications, allowing the continued use of legacy PBXs as needed to minimize business disruptions and align implementations with budget considerations. VCX Connect systems also support optional redundancy on critical components to increase resilience and further ensure business continuity.

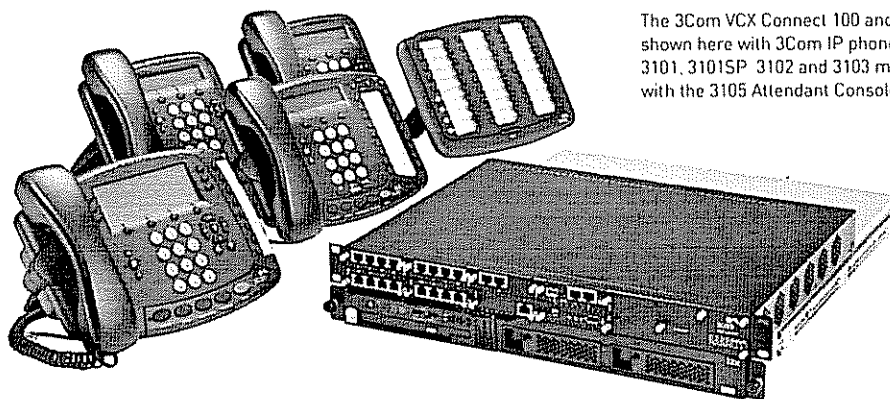
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### INTEGRATE COMMUNICATIONS

Standard VCX Connect features allow calls to be made using multimedia devices such as SIP-based video phones or software applications such as the 3Com Convergence Center Client that offers a rich, integrated set of communications capabilities—including instant messaging, voice, video



The 3Com VCX Connect 100 and 200 platform are shown here with 3Com IP phones, including the 3101, 3101SP, 3102 and 3103 models, as well as with the 3105 Attendant Console.

**KEY BENEFITS**

(CONTINUED)

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**ENSURE HIGH AVAILABILITY**

VCX Connect systems offer a variety of options for ensuring resiliency. Optional redundant power supplies and redundant disks (RAID) ensure business continuity in the event of a VCX Connect component failure. Additionally, both VCX Connect 100 and VCX Connect 200 platforms can be supplemented with a backup server providing full application redundancy. In this type of configuration, the secondary server can also be located at a different site for full geographic redundancy. Because the servers continually communicate configuration changes with each other, should the worst happen, the secondary server can immediately and seamlessly manage all VCX system services. Similarly, since 3Com phones and gateways are automatically configured with the information required to locate and use the backup server, highly available communications across the organization is assured.

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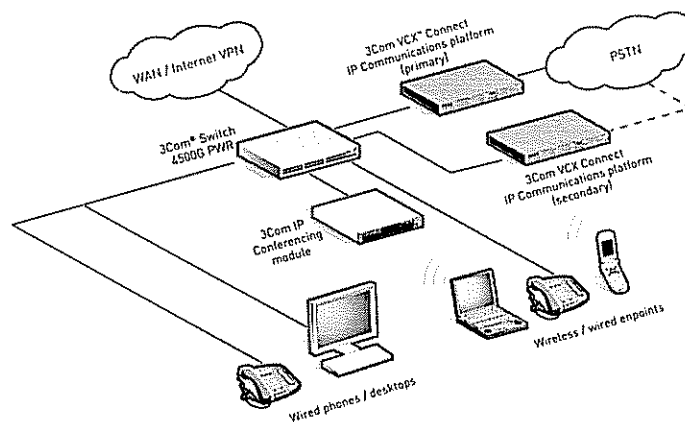
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## KEY BENEFITS (CONTINUED)

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- Four-port FXS card
- T1/E1 cards – one- or two-span (maximum of two T1 or E1 spans per chassis)

Redundancy options:

- Power supply
- RAID disk
- Secondary server (redundant power supply and RAID disk are also options for the secondary server)

**Dimensions (length, width, height)**

14 x 19 x 1.75 in;  
35.6 x 48.3 x 4.5 cm

**Weight**

7.26 kg

**Power**

120-240 VAC/140W

**VCX CONNECT 200**

Communications server supporting up to 250 users with IP telephony and unified messaging software

Integrated auto-attendant (AA) software; up to 60 simultaneous AA, music-on-hold or voicemail ports supported

Redundancy options:

- RAID disk
- Secondary server (with option of redundant RAID disk on this server)

Gateways can be selected from VCX analog FXS and FXO models and from T1/E1 options

**Dimensions (length, width, height)**

22 x 19 x 1.75 in;  
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**UNIFIED MESSAGING SYSTEM**

Protocols

· IMAP4, POP3, SMTP and VPIM

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- English (US and UK), French (Parisian and Canadian), Italian, Spanish (Castilian and LAT)

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3Com Presence Module

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CDR reporting software (Windows XP-based)

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**ORDERING INFORMATION**

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<b>Application Platforms</b>	
VCX Connect 100 (included 25 user licenses for IP communications and IP messaging)	3CRC100A
VCX Connect 100 optional redundant secondary server	3CRC101A
VCX Connect 200 (included 25 user licenses for IP communications and IP messaging)	3CRC200A
VCX Connect 200 optional redundant secondary server	3CRC201A
<b>Optional Components</b>	
VCX Connect 100 four (4) port FXS add-on module	3CRVG52002-07
VCX Connect 100 four (4) port FXO add-on module	3CRVG52001-07
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VCX Connect 100 redundant hard disk RAID1 (40 GB)	3C0VG60006-06
VCX Connect 100 redundant power supply module	3C0VG60005-06
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Cost-effective solution for delivering advanced IP communications by enabling interoperability between a converged network and legacy equipment

**OVERVIEW**

3Com® VoIP gateways help enterprises migrate to IP communications using an economical overlay strategy that aligns financial considerations with performance needs and lays the foundation for a successful deployment of Session Initiation Protocol (SIP)-based applications. The gateways enable interoperability between legacy equipment and applications—including PBXs, the public switched telephone network (PSTN), analog phones and fax machines—and a converged IP network. 3Com digital gateways provide all necessary functions and protocol support for handling voice calls between traditional circuit-switched phone networks and an IP network. 3Com analog gateways, including both FXS and FXO models, let analog phones and other legacy analog devices use 3Com SIP-based IP telephony features.

**KEY BENEFITS**

**MAINTAIN UNIVERSAL CONNECTIVITY**

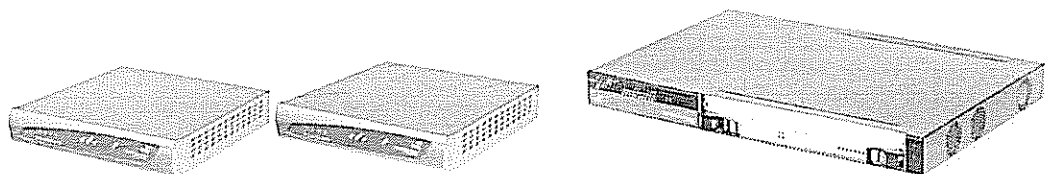
With 3Com VoIP gateways, organizations can retain PBXs and analog devices for operational or budgetary reasons while they implement IP telephony in a phased overlay. Employees can continue to use familiar equipment and interfaces, including dialing plans, email systems, fax machines and modems. The SIP-compliant gateways may be positioned between the IP network and any brand of PBX to deliver calls or applications such as the SIP-based conferencing and call center capabilities of the 3Com Convergence Applications Suite.

**IMPLEMENT REMOTE SITE SURVIVABILITY**

In environments where remote branch sites are dependent on a single wide-area IP network connection to the 3Com IP Telephony Module, a local analog gateway enables incoming and outgoing calls to the PSTN. This capability provides telephony survivability and business continuity for the remote site even if its IP connection has been compromised.

**REDUCE TELEPHONY COSTS**

As part of a converged communications solution, the gateways let enterprises reduce PSTN costs by implementing least-cost routing features delivered by the 3Com IP telephony platform. To minimize long distance calling charges, calls can be routed to the most cost-effective gateway. Plus, remote sites can retain PSTN connections for supporting local Direct Inward Dialing (DID or DDI) numbers, and for receiving the lowest local call tariffs from their communications service provider.



The 3Com VoIP analog gateways (FXS and FXO devices shown on the left) and digital gateway (shown on the right) help enterprises economically and easily migrate to advanced IP-based platforms and applications.

## FEATURE HIGHLIGHTS

Enable voice and fax calls from legacy PBX systems and PSTN services to be connected to SIP-based phones and applications

Support consolidation of PSTN connections and optimize use of toll-bypass

Use SIP signaling, allowing communications with 3Com VoIP applications

Dynamically support the latest compression algorithms to optimize bandwidth management

Implement echo control and a dynamic programmable jitter buffer for high voice quality

Allow analog phones or fax machines to connect to 3Com VoIP systems (FXS analog gateways)

Allow calls from the 3Com VoIP systems to analog PBXs or PSTN lines (FXO analog gateways)

Scale to handle up to 480 simultaneous voice calls in a single gateway; modular and fixed digital gateway models support from one to 16 T1/E1 lines and are able to use a variety of PRI and CAS protocols

Easily expand traffic capacity via modular digital gateway

## SPECIFICATIONS

## ENCLOSURES

## Analog Gateways

Desktop or half-width 19-inch rack-mount unit for 4-port and 8-port gateways, full-width 19-inch rack-mount unit for 24-port gateways; all 1U high

## Digital Gateways

19-inch rack-mount unit; 1U high

## INTERFACES

## FXS Analog Gateways

Support for 4, 8 or 24 analog phone loop-start FXS ports; 4- and 8-port gateways use RJ11 connectors. 24-port gateways use single Telco connector (50-pin); Life Line connected to the unused pins on port 4 with relay to an analog line. even if the gateway is powered off

## FXO Analog Gateways

Support for 4 or 8 analog FXO ports using RJ11 connectors

## Modular Digital Gateways

Support for 1/2/4 T1/E1 digital span

modules; to enable support of 3Com VoIP applications. upgradeable with CPU module

## Fixed Configuration Digital Gateways

Support for 4/8/16 T1/E1 digital spans; for LAN redundancy, 2 10/100BASE-T connections to the IP network

## SIP FUNCTIONALITY

SIP (RFC 3261) support by performing a SIP User Agent (UA) role

## VOICE ENCODING

G 711, G 723 1, G 726, G 727 and G 729A codecs

## FAX SUPPORT

T 38 with round-trip delay up to 9 seconds

## SIGNALING PROTOCOLS (DIGITAL GATEWAYS)

PRI or CAS including MFC/R2, E&M immediate start, E&M delay dial/start, loop start, ground start

## ORDERING INFORMATION

## PRODUCT DESCRIPTION

## 3COM SKU

## Analog Gateways

V7111 Analog Media Gateway (FXS) 2 Channels	3CRVG71115-07
V7111 Analog Media Gateway (FXS) 4 Channels	3CRVG71110-07
V7111 Analog Media Gateway (FXS) 8 Channels	3CRVG71111-07
V7111 Analog Media Gateway (FXS) 24 Channels	3CRVG71112-07
V7111 Analog Media Gateway (FXO) 4 Channels	3CRVG71113-07
V7111 Analog Media Gateway (FXO) 8 Channels	3CRVG71114-07
V7111 Analog (2 FXS, 2 FXO) Media Gateways	3CRVG71116-07
V7111 Analog (4 FXS, 4 FXO) Media Gateways	3CRVG71117-07

## Digital Gateways and Power Module

V6100 Digital Gateway Chassis (maximum four spans)*	3CRVG71225-07
V6100 Digital Single-Span Module	3CRVG71226-07
V6100 Digital Two-Span Module	3CRVG71227-07
V6100 Digital Four-Span Module	3CRVG71228-07
V6100 Redundant Power Supply Module (optional)	3C0VG60005-06
VoIP Gateway - Single Span	3CRVG71220-07
VoIP Gateway - Two Span	3CRVG71221-07
VoIP Gateway - Four Span	3CRVG71222-07
VoIP Gateway - Eight Span	3CRVG71223-07
VoIP Gateway - Sixteen Span	3CRVG71224-07

\*Upgradeable to the V6100 Integrated Branch Communications Platform

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.

3Com Corporation, Corporate Headquarters, 350 Campus Drive, Marlborough, MA 01752-3064

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An exceptionally affordable option for gaining access to high-performance, productivity enhancing IP telephony services

## OVERVIEW

The 3Com® 3100 Entry Phone offers **economical converged communications with outstanding audio quality**. Its **compact form factor and easy operation** provide organizations with a perfect solution for common areas and other business environments that require a simple connection to the IP telephony system. The phone is ideal for manufacturing floors, warehouses, office lobbies and visitor workspaces where a cost-effective replacement to a traditional analog phone is needed.

**Sharp acoustics and ergonomics-inspired design encourage collaboration and increased productivity.**

For **easy and cost-effective deployment**, the 3100 model supports Power over Ethernet and can also utilize a standard Ethernet connection—no separate voice cable run is needed. Self-locating capabilities save time and service-call expenses, lowering total cost of ownership. Moving a phone involves simply plugging it into a network port at a new location. All personal settings, directory entries and voice mail travel with the phone.

**Browser-based management eases configuration tasks, and intuitive, web-based support makes advanced features easier to master.** What's more, customization capabilities let users do many set-up procedures themselves.

## KEY FEATURES

- › Outstanding value
- › Four fixed feature buttons
- › Wideband audio-ready
- › Large message-waiting LED
- › One 10/100 uplink port
- › Power over Ethernet support (IEEE 802.3af)

Visit [www.3com.com/ip\\_phones](http://www.3com.com/ip_phones) for additional information



Full-featured and easy-to-use phones ideal for organizations seeking advanced and affordable IP telephony services

## OVERVIEW

The 3Com® 3101 Basic Phone and 3101 Basic Phone with Speaker offer **excellent call handling functionality with simple operation in a compact device** particularly suited for users in environments such as classrooms, manufacturing floors, warehouses and other common areas

**Sharp acoustics and ergonomics-inspired design encourage collaboration and help increase productivity** Both 3101 models deliver high-quality audio, but the 3101 Basic Phone with Speaker also provides a half-duplex, two-way speakerphone for convenient hands-free telephony services

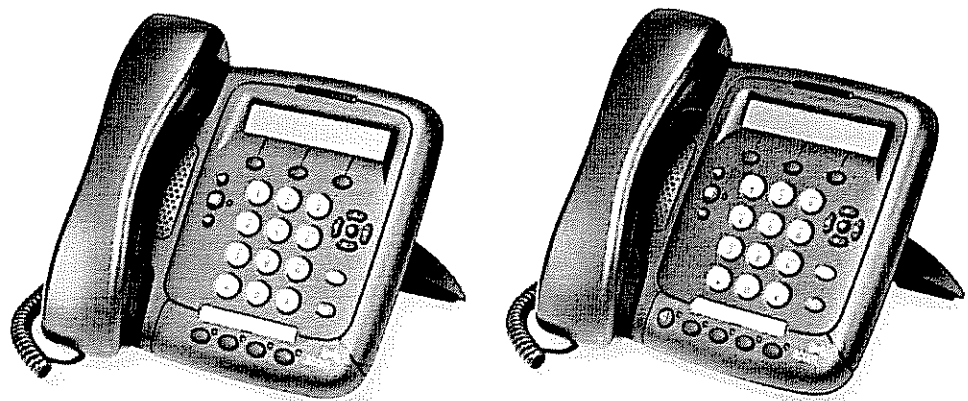
Both 3101 phones enable **quick access to frequently used functions**. Three softkeys and a cursor-controlled, two-line display allow instant, intuitive directory and call log access. A large message-waiting lamp and clearly marked Hold and Message buttons offer enhanced visibility and workflow

**Self-locating capabilities save time and service-call expenses**, lowering total cost of ownership. Moving a phone involves simply plugging it into a network port at a new location. All personal settings, directory entries and voice mail travel with the phone. Browser-based management eases configuration tasks, and web-based support makes advanced features easier to master. What's more, customization capabilities let users do many set-up procedures themselves

## KEY FEATURES

- › Up to four programmable buttons with lights
- › Five fixed feature buttons
- › Wideband audio-ready
- › Large message-waiting LED
- › Two switched 10/100 uplink ports
- › Two-line, pixel-based LCD display with four-way cursor control and three softkeys
- › Choice of listen-only or half-duplex speakerphone model
- › Distinctive Hold and Message buttons
- › Power over Ethernet support (IEEE 802.3af)

Visit [www.3com.com/ip\\_phones](http://www.3com.com/ip_phones) for additional information



DATA SHEET

A full-featured phone, ideally suited for demanding business environments staffed by public-facing employees and for conference rooms where high-quality telephony services are required

**OVERVIEW**

Both **easy-to-use and full-featured**, the 3Com® 3102 Business Phone is well suited for demanding office activity. The five most commonly used feature buttons—Speaker, Redial, Conference, Transfer and Hold—can be localized with a removable faceplate available in English, French, German, Italian or Spanish, for smooth adaptation to a multinational business environment.

Sharp sound and **ergonomics-inspired design encourage collaboration** and help increase productivity. Thousands of hours of research in acoustic design, hardware engineering and audio tuning give this third-generation multiline phone **superior voice quality**.

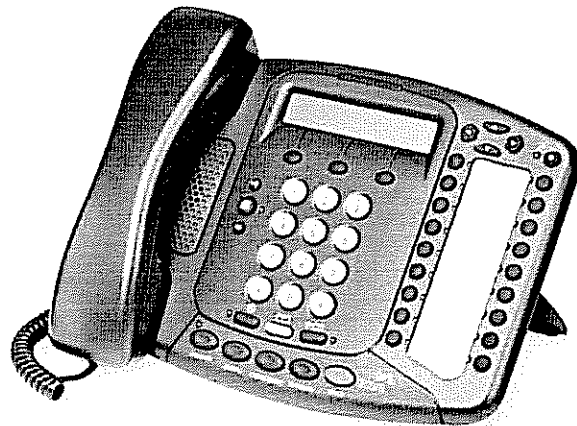
**Self-locating capabilities save time and service-call expenses**, lowering total cost of ownership. Moving a phone involves simply plugging it into a network port at a new location. All personal settings, directory entries and voice mail travel with the phone.

**Browser-based management eases configuration tasks**, and web-based support makes advanced features easier to master. What's more, customization capabilities let users do many set-up procedures themselves.

**KEY FEATURES**

- › 18 programmable buttons with lights
- › 10 fixed feature buttons
- › Wideband audio-ready
- › Large message-waiting LED
- › Two switched 10/100 uplink ports
- › Two-line, pixel-based LCD display with four-way cursor control and three softkeys
- › Full-duplex speakerphone
- › Oversize buttons for most-used features
- › Replaceable faceplate for localization
- › Power over Ethernet support (IEEE 802.3af)

Visit [www.3com.com/ip\\_phones](http://www.3com.com/ip_phones) for additional information





## DATA SHEET

Advanced functionality and Gigabit performance for managers requiring exceptionally responsive IP telephony services

### OVERVIEW

The first **Gigabit telephone** to be offered by 3Com, the 3103 Manager Phone gives business professionals—managers, executives and conference participants—a **full complement of productivity-enhancing features** and an exceptionally informative and responsive user interface.

**Sharp acoustics and ergonomics-inspired design encourage collaboration** and help increase productivity. A unidirectional microphone in the full-duplex speakerphone enhances hands-free conversations. Wideband audio technology design enables high-clarity audio handset and headset attachments.

For **optimum performance and easy access to a wealth of call information**, this multiline phone provides a large 320x120-pixel display augmented by 10 softkeys and a four-way cursor control. Users can access features such as account codes or zone paging via the large display or one of the eight programmable feature buttons.

The 3Com® 3103 model also provides two switched 10/100/1000 ports that allow **Gigabit-speed network connectivity** for other desktop digital devices.

**Self-locating capabilities save time and service-call expenses**, lowering total cost of ownership. Moving a phone involves simply plugging it into a network port at a new location. All personal settings, directory entries and voice mail travel with the phone. Browser-based management eases configuration tasks, and web-based support makes advanced features easier to master. What's more, customization capabilities let users do many set-up procedures themselves.

### KEY FEATURES

- › Two switched 10/100/1000 uplink ports (Gigabit)
- › Eight programmable buttons with lights
- › 10 fixed feature buttons
- › Wideband audio-ready
- › Large message-waiting LED
- › Large display with four-way cursor control and 10 softkeys
- › Full-duplex speakerphone
- › Oversize buttons for most-used features
- › Replaceable faceplate for localization
- › Power over Ethernet support (IEEE 802.3af)

Visit [www.3com.com/ip\\_phones](http://www.3com.com/ip_phones) for additional information.



Advanced IP telephony services for workers who need to be free to roam as they conduct business

## OVERVIEW

The 3Com® 3106 Cordless Phone is designed for users such as mobile office workers, classroom staff, and warehouse and stock room employees, who need the **freedom to roam while conversing over an organization's IP-based network**. Unlike a cell phone, this 900-MHz cordless phone offers **full access to NBX® IP telephony system capabilities**.

Four programmable and eight fixed feature keys make **invoking frequently used features fast and simple**. The two-line LCD display enables additional access to features and calling information.

The **proven, spread-spectrum technology** in the 3106 Cordless Phone will not interfere with IEEE 802.11 wireless network radio signals. For **flexible deployment** as many as 10 phones may operate in the immediate area up to 1,000 feet (305 meters) from the base unit. And each phone is able to handle up to four lines, connecting to the network through a 10/100 port in the base unit.

**Self-locating capabilities save time and service-call expenses**, lowering total cost of ownership. Moving a phone simply involves plugging the base unit into a network port at a new location. All personal settings, directory entries and voice mail travel with the phone. Browser-based management eases configuration tasks, and web-based support makes advanced features easier to master. What's more, customization capabilities let users do many set-up procedures themselves.

## KEY FEATURES

- > Four programmable buttons with lights
- > Eight fixed-feature keys
- > One 10/100 uplink port (in base unit)
- > Two-line LCD display
- > Battery charging cradle
- > Compact, stylish handset
- > No interference with IEEE 802.11 wireless networks
- > Up to 10 phones can function in one geographical area—a maximum of 13 phones (3106 and 3107 models) without causing interference

Visit [www.3com.com/ip\\_phones](http://www.3com.com/ip_phones) for additional information



**ORDERING INFORMATION**

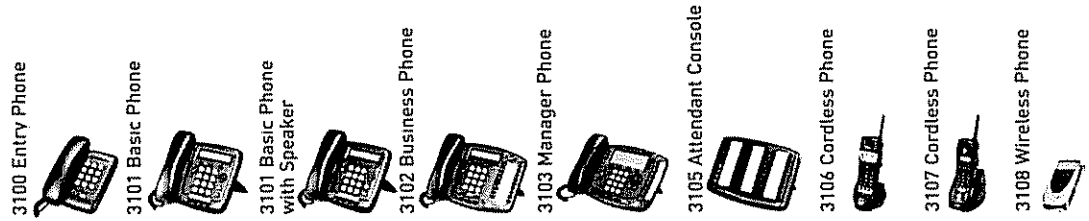
**PRODUCT DESCRIPTION**

**3COM SKU**

3Com 3101 Basic Phone	3C10401B
3Com 3101 Basic Phone with Speaker	3C10401SPKRB

\*Phone licenses are required to operate all 3Com IP phones on NBX or VCX platforms.

**3COM IP PHONES PORTFOLIO AT A GLANCE**



	3100 Entry Phone	3101 Basic Phone	3101 Basic Phone with Speaker	3102 Business Phone	3103 Manager Phone	3105 Attendant Console	3106 Cordless Phone	3107 Cordless Phone	3108 Wireless Phone
Max system (line) appearances	1	4 (NBX*); 2 (VCX*)	4 (NBX); 2 (VCX)	18	12	50	4	4	1
Programmable lighted buttons	No	4 (NBX); 2 (VCX)	4 (NBX); 2 (VCX)	18	8	50 / 100 with Shift Button	4	4	No
Fixed feature buttons	4	5	6	10	10	4	8	9	No
Display softkeys	No	3	3	3	10	No	No	No	No
Four-way cursor control	No	Yes	Yes	Yes	Yes	No	No	No	Yes
Display size	No	160 x 33 pixels	160 x 33 pixels	160 x 33 pixels	320 x 120 pixels	No	2 lines	2 lines	color 1.8 in TFT
Ethernet ports	1 (10/100)	2 (10/100)	2 (10/100)	2 (10/100)	2 (10/100/1000) (Gigabit)	1 (10/100)	1 (10/100)	1 (10/100)	No
PoE support (802.3af)	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Speakerphone	No	Listen-only	Half duplex	Full duplex	Full duplex	No	No	No	No
Definable ring tones	No	9	9	9	9	No	No	No	Yes
Headset jack	No	No	No	Yes	Yes	No	Yes	Yes	Yes
Codecs G.711, ADPCM, G.729 A/B	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes <sup>1</sup>
Wideband Audio (G.722) handset	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Wideband Audio (G.722) speakerphone	No	No	No	Yes	Yes	No	No	No	No
Adaptive jitter buffer	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
QoS: IP-ToS, 802.1p	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
TAPI support	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
DHCP, Option 184	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Desk or wall mountable	Yes	Yes	Yes	Yes	Yes	Yes	Yes - base unit	Yes - base unit	No
Removable faceplate for localization	No	No	No	Yes	Yes	No	No	No	No
Browser-based administration	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Platform support	NBX	NBX, VCX	NBX, VCX	NBX, VCX	NBX, VCX	NBX, VCX	NBX	NBX	NBX

<sup>1</sup> ADPCM not supported on the 3108 Wireless Phone

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.

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 3Com is publicly traded on NASDAQ under the symbol COMS

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**Sequoia Union High School District, Redwood City, CA**  
**Equipment Repair Technician II**

**June 1997-May 1999**

- Supported the telecommunications system (NEC NEAX 2400 and NEAX 2000 platform).
- Installed Cat5 cable drops at the campuses.
- Evaluated and troubleshoot network systems and desktop computers.
- Manage vendor contracts for modernization using 'bond' funding to upgrade network infrastructure.

**Sequoia Union High School District, Redwood City, CA**  
**Equipment Repair Technician I**

**May 1996-May 2007**

- Repaired electronic equipment such as film projectors, sound systems, monitors, printers, and anything else that 'plugged in'.
- Trained staff in the use of Micro computers, telephones and office equipment.
- Managed customer expectations of technology and the IT department.
- Installed Cat5 cable drops at the campuses.
- Evaluated and troubleshoot network systems and desktop computers.

**Carlmont High School,**  
**Sequoia Union High School District, Redwood City, CA**  
**Technology Support Assistant**

**Jan 2005-May 1996**

- Assisted teaching staff with technology needs in the classroom.
- Trained staff in the use of Micro computers, telephones and office equipment.
- Assisted the administration with student management during lunch periods and after school.
- Provided Audio/Visual services for the school.
- Managed student computer labs.

DATA SHEET

Fast and reliable call handling for organizations needing a highly professional response to incoming calls

OVERVIEW

The 3Com® 3105 Attendant Console helps organizations make a good first impression by providing attendants, receptionists, workgroup administrators, and other first-contact workers with the tools needed to **handle inbound calls efficiently**

**Ergonomics-inspired design encourages collaboration and increased productivity** The console is equipped with 50 programmable buttons, each of which can invoke a second feature with a touch of the illuminated Shift key. Four additional buttons are reserved for frequently used features such as zone paging, call park, and transfer to voice mail.

When used with a 3Com Basic, Business, or Manager Phone, the console can indicate the phone status of up to 100 staff members—**attendants can quickly perform tasks** such as transferring calls and accessing direct line appearances.

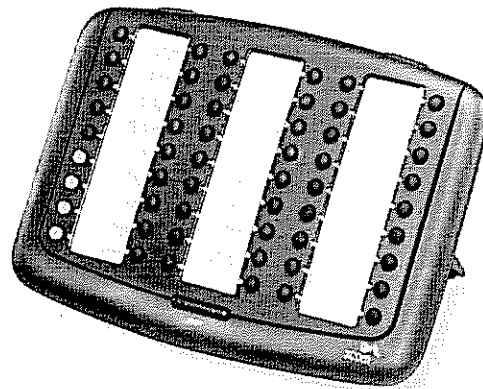
For **easy scalability**, multiple consoles may be connected in parallel to service larger locations. And for **location flexibility**, the console also supports IEEE 802.3af Power over Ethernet.

**Self-locating capabilities save time and service-call expenses**, lowering total cost of ownership. Moving a phone involves simply plugging it into a network port at a new location. All personal settings, directory entries, and voice mail travel with the phone. Browser-based management eases configuration tasks, and web-based support makes advanced features easier to master. What's more, customization capabilities let users do many set-up procedures themselves.

KEY FEATURES

- › 50 programmable keys with LEDs
- › 100 functions available by toggling Shift key
- › Four preprogrammed feature keys
- › Direct Station Selection and Busy Lamp Field (DSS/BLF) functions
- › Concurrent use of multiple consoles
- › 10/100 uplink port
- › Power over Ethernet support (IEEE 802.3af)

Visit [www.3com.com/ip\\_phones](http://www.3com.com/ip_phones) for additional information.



Durable cordless connectivity for workers who need to roam freely as they conduct business on their IP telephony network

## OVERVIEW

The 3Com® 3107 Cordless Phone is designed for use in warehouses, manufacturing floors, office and classroom buildings and open work areas where users need a durable phone that lets them range widely (up to 1,000 feet/305 meters from the base unit) while still being able to take advantage of an organization's IP-based voice/data network

Unlike a cell phone, this 900-MHz cordless phone offers full access to NBX® IP telephony system capabilities. Four programmable and nine fixed feature keys make invoking frequently used features fast and simple. The two-line LCD display enables additional access to features and calling information

The proven, spread-spectrum technology of the 3107 Cordless Phone will not interfere with IEEE 802.11 wireless network radio signals. For deployment flexibility, up to three phones—each able to handle up to four lines—may operate in the immediate area, connecting to the network through a 10/100 port in the base unit.

Self-locating capabilities save time and service-call expenses, lowering total cost of ownership. Moving a phone simply involves plugging the base unit into a network port at a new location. All personal settings, directory entries and voice mail travel with the phone. Browser-based management eases configuration tasks, and web-based support makes advanced features easier to master. What's more, customization capabilities let users do many set-up procedures themselves

## KEY FEATURES

- › Four programmable buttons with lights
- › Nine fixed feature keys
- › One 10/100 uplink port (in base unit)
- › Two-line LCD display
- › Battery charging cradle with extra battery charging slot
- › Rugged handset with added battery life
- › No interference with IEEE 802.11 wireless networks
- › Up to three phones can function in one geographical area—a maximum of 13 phones (3106 and 3107 models) without causing interference

Visit [www.3com.com/ip\\_phones](http://www.3com.com/ip_phones) for additional information



A full-featured IEEE 802.11 wireless phone for seamless roaming throughout a work site or campus environment

**OVERVIEW AND KEY BENEFITS**

The 3Com® 3108 Wireless Phone is designed to handle the increasing mobility requirements of managers, executives and power users, ensuring that important communications get the attention they need. Using Session Initiation Protocol (SIP) connectivity, the 3Com NBX® IP telephony solution provides the phone with call control, advanced features and applications for delivering robust capabilities and secure voice connectivity over a standards-based IEEE 802.11b/g wireless network

**NAVIGATE WITH EASE TO STAY WELL-CONNECTED**

The 3108 phone's keypad and intuitive four-way cursor control let users originate and receive calls, invoke features and retrieve voice messages efficiently. A crisp 1.8" (4.57 cm) color display enhances menu navigation. Additionally, a sleek, flip-phone design allows convenient pocket or belt-clip carrying

**DEPLOY WITH COST-EFFECTIVE STANDARDS-BASED SOLUTIONS**

The 3108 phone is not only SIP-compliant, but also utilizes a standards-based managed wireless network—including wireless switches and managed access points (MAPs)—to ensure no-hassle implementations.

**ENSURE SEAMLESS CONNECTIVITY**

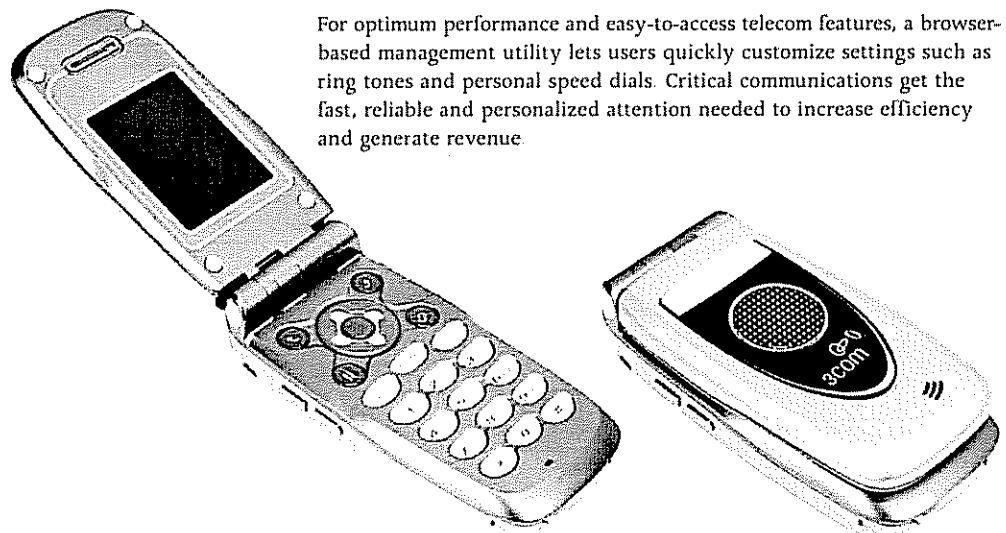
Wireless network MAPs hand-off and re-register devices across multiple APs to ensure seamless roaming. Users can move throughout a building or campus environment without losing their connections. The phone's self-locating capabilities further expedite initiating and maintaining critical communications

**ENJOY RELIABLE, SECURE COMMUNICATIONS**

Wireless Protected Access 2 (WPA2™) and advanced encryption standard (AES) that encodes conversations with 128-, 192- and 256-bit keys ensure privacy and safeguard information.

**OPTIMIZE PERFORMANCE WITH EASILY CUSTOMIZED SETTINGS**

For optimum performance and easy-to-access telecom features, a browser-based management utility lets users quickly customize settings such as ring tones and personal speed dials. Critical communications get the fast, reliable and personalized attention needed to increase efficiency and generate revenue.



The 3Com 3108 Wireless Phone shown here flipped open and closed, is designed for ease of use and interoperability with a standards-based network infrastructure



# 3Com® eXchange Call Center for VCX™ Solutions

## DATA SHEET

Feature-rich call center solution for 3Com VCX Enterprise and VCX Connect systems

### OVERVIEW

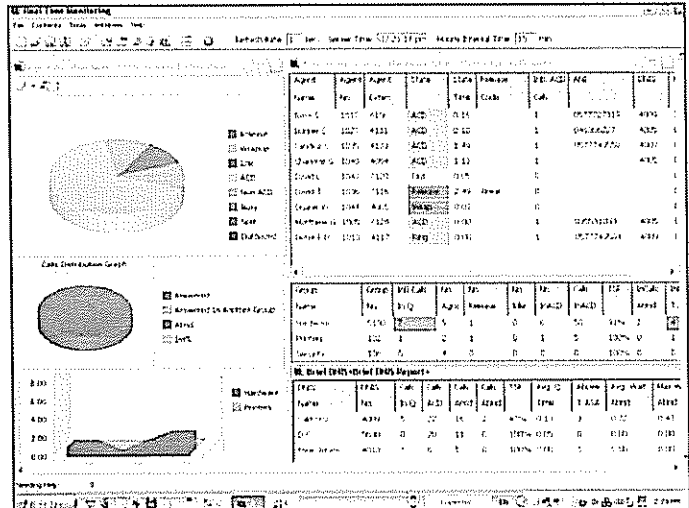
The 3Com® eXchange Call Center for VCX™ solutions offers sophisticated call handling capabilities to help businesses take control of their day-to-day operations and the strategic direction of their call center. The call center software not only improves visibility of vital key statistics, but also protects and maximizes revenue—reducing the number of dropped calls in queue, decreasing average wait times and letting supervisors fine-tune staffing to align it with the demands of inbound traffic. The application empowers agents by providing timely access to relevant information so they can respond more quickly to customer requests. And as customer calls are answered faster by skilled, well-informed agents, organizations can promote customer loyalty.

The base package includes the **eXchange Engine** for establishing call-routing rules, **eXchange Administration** for creating call center profiles and parameters and **eXchange Visor** for supervising the center and generating management information. 3Com **eXchange Agent** is an easy-to-use agent desktop tool that also enables connection to the optional **eXchange Agent Board** and **eXchange Wall Board** that provide agents with further detail on mission critical call center operations.

### KEY BENEFITS

**IMPROVE CUSTOMER INTERACTIONS AND SATISFACTION.** For fast response to customer needs, inbound calls are efficiently routed to waiting agents using any combination of three algorithms (terminal, circular and longest idle). To ensure that all responses are from qualified, knowledgeable agents, callers are routed to one of up to 256 ACD groups that organize agents around the needs of the business—by department, workgroup, specialties (e.g., language, skills). Position-in-queue announcements further help customers manage any unavoidable response delays and reduce the number of dropped calls.

**INCREASE AGENT PRODUCTIVITY.** Call center workers have an intuitive, on-screen toolbar with the Windows-based 3Com eXchange Agent that can be customized by an administrator to include most frequently used features. Because minimal screen space is required by the application, agents can simultaneously view multiple PC applications, including



Real-time graphical views give supervisors up-to-the-second call center operations data

## KEY BENEFITS

(CONTINUED)

tools such as CRM that are native to the call center. Agents can also easily continue performing logins/logouts and release and resume functions directly from their PC desktops. Optional 3Com Agent Board software enables real-time messages to be displayed on a PC screen to let agents gather vital statistics without looking away from their computer monitors.

**IMPROVE CALL CENTER OPERATIONS.** 3Com eXchange Administration software provides multiple management levels and access rights to help supervisors monitor and control call center performance. Graphical, real-time displays of critical information, such as agent/group states, hold times and queue management statistics and powerful reporting functions—including an extensive suite of predefined and custom reports—support timely decision-making.

**LOWER COST, INCREASE REVENUE PER AGENT.** Using supervisory monitoring as a training tool, agents can be taught as they work. Relevant learning experiences decrease training time and increase effectiveness. In addition, statistics culled from real-time data produce actionable intelligence, helping managers better deploy agents, removing or adding them to a shift as needed. Hold times are also reduced leading to increased call completions, and by extension, higher captured revenue.

## FEATURE HIGHLIGHTS

Feature	Description
Position-in-queue announcements	Callers are informed of their position in queue so they can better handle delays or consider contact options.
Wall board integration	Support for third-party wallboards optimizes an organization's infrastructure investment.
DNIS, ANI and Caller ID recognition	Identification of inbound call information increases the efficiency of agent responses.
Wrap-up codes	Tracking and reason codes for post-call reporting ensure customer requests are handled fast and well.
Real-time monitoring and reporting	Up-to-the-second information lets supervisors fine-tune call center operations.
Workforce management integration	The flexibility to use eXchange in combination with a variety of management tools such as Blue Pumpkin and EDS supports existing business solutions.
In-queue announcements	The option to play at timed intervals as many as 20 messages for waiting callers gives organizations opportunities to enhance their customer relationships.

## SPECIFICATIONS

### PLATFORMS

eXchange Call Center software runs on Windows 2000/3 servers with:

- › VCX Enterprise 7.1 14c or later solutions
- › VCX Connect solutions

### INTERFACES

SIP-based integration.  
No media licenses required.

### CAPACITY

ACD groups—maximum 256  
DNIS—maximum 256  
Call attempts per hour—2,000  
Calls per hour—2,000

## ORDERING

PRODUCT DESCRIPTION	3COM SKU
3Com eXchange Call Center Base Package (includes eXchange Engine, Administration, one Visor and 10 Agent modules)	3C10380VCX
Additional Agent Inbound Voice License (set of five)	3C10381VCX
3Com eXchange Visor License (when more than one Visor is required)	3C10382VCX
3Com eXchange Visor Monitor-Only License	3C10383VCX
3Com eXchange Agent Board License	3C10384VCX
3Com eXchange Wall Board License	3C10385VCX
3Com Formula Editor License (increased control of reporting functions via the addition of calculated columns to eXchange Visor reports)	3C10386VCX
3Com Workforce Management Connectivity License (for integration with compatible third-party workforce management packages)	3C10387VCX
3Com eXchange for NBX® to 3Com eXchange for VCX Upgrade License	3C10388VCX

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.

3Com Corporation, Corporate Headquarters, 350 Campus Drive, Marlborough, MA 01752-3064  
3Com is publicly traded on NASDAQ under the symbol COMS.

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401063-002 11/07



# Castelle Network Fax Servers

**FaxPress™, FaxPress Premier™ and FaxPress Enterprise™**

## Castelle and 3Com: Leveraging existing data networks to offer a completely integrated unified messaging system

More and more organizations are investing in the next generation of Voice over IP business telephone systems, such as the 3Com NBX & VCX, but are still looking for that next generation fax solution. Castelle's FaxPress family of fax servers offer an ideal fax solution for IP PBX systems like 3Com's NBX & VCX telephony solutions. What the 3Com NBX & VCX does for IP telephony, Castelle fax servers do for network faxing, leveraging existing data networks to offer the most advanced, up-to-date fax system available today.

3Com's NBX & VCX systems and Castelle network fax servers offer organizations converged voice, data and fax communications on a single data network. 3Com's NBX & VCX and Castelle's fax servers work together to extend the corporate phone and fax systems to offsite telecommuters, contractors, and consultants, giving even small companies many of the features and advantages of a large call center. The 3Com NBX & VCX can combine voice, data, and video from the public switched telephone network, Internet, Ethernet and other data networks, and then distribute this information over LANs, WANs and wireless networks to the phones, pagers, e-mail, and cellular phones of mobile professionals anywhere in the world. Add faxing to the mix with a Castelle FaxPress, and the result is a completely integrated, unified messaging system.

Traditional PBX systems can't compare to 3Com's NBX, and conventional fax machines and fax software can't compare to Castelle fax servers. 3Com's IP phones and Castelle's fax servers operate a lot like a network appliances or PCs. Extension numbers, voice mail, and personal settings move with the phone. Moves, adds, and changes become as simple as moving a PC or other network appliance, eliminates expensive phone service calls.

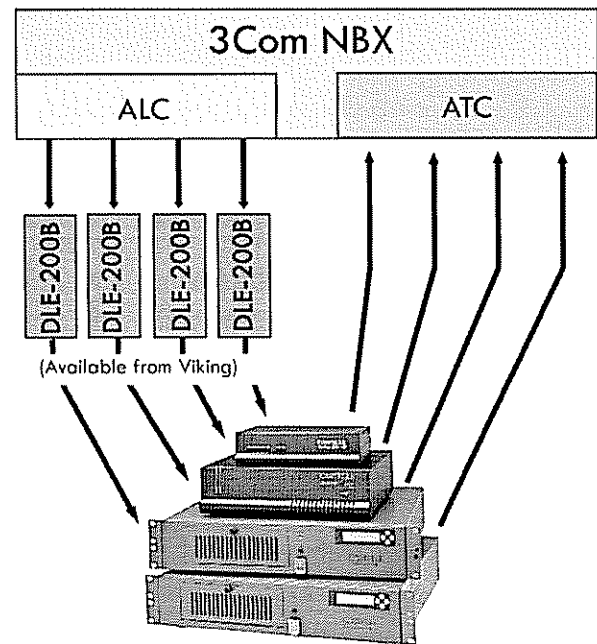
Integration of FaxPress with the 3Com NBX couldn't be more straightforward. The FaxPress fax server is configured to use the NBX system's analog line card for incoming fax calls, and

the system's analog terminal cards, plus a C.O. simulator, for outbound fax calls. With the 3Com VCX, the calls are received to the unified messaging component with the 3Com VCX, and sent via email using the FaxPress.

## Castelle's Network Fax Solution

Castelle network fax servers are a complete hardware and software solution designed to provide an unlimited number of users the ability to send and receive faxes directly from applications, various email environments and over the internet. FaxPress, FaxPress Premier and FaxPress Enterprise save time for the user by eliminating the multi-step, multi-location process of sending and receiving faxes. Production fax tools for receiving, archiving and sending faxes are included with all Castelle fax servers. Other key benefits include increased security of inbound faxes, improved logging of fax delivery, enhanced accounting of fax usage and higher quality of outbound documents.

Integration of your FaxPress with 3Com's NBX PBX

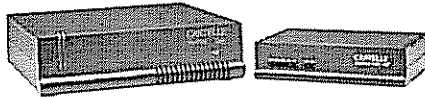


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CASTELLE®

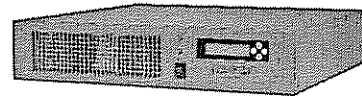
## Castelle Network Fax Servers



**FaxPress™**

- 1 to 8 analog lines
- Ethernet 10/100Base-T
- FaxPress client/server software
- Email gateways included

<u>FaxPress:</u>	<u>Part Numbers</u>
FP 2500 1-line	66298601-286
FP 2500 2-line	66298601-094
FP 5000 4-line	66298601-048
FP 5000 8-line	66298601-047



**FaxPress Premier™**

- 4 to 16 analog lines
- Ethernet 10/100Base-T
- FaxPress Plus client/server software
- Email gateways embedded
- Internal disk drive
- Secure web browser interface\*

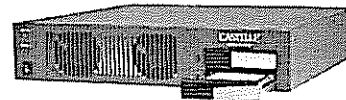
<u>FaxPress Premier:</u>	<u>Part Numbers</u>
FPP Analog 4-line	66298601-241
FPP Analog 8-line	66298601-197
FPP Analog 12-line	66298601-209
FPP Analog 16-line	66298601-210



**FaxPress Enterprise™**

- Digital T1 support
- Ethernet 10/100Base-T
- FaxPress Plus client/server software
- Email gateways embedded
- Internal disk drive
- Secure web browser interface\*

<u>FaxPress Enterprise:</u>	<u>Part Numbers</u>
FPE Fractional T1 8-channel	66298601-294
FP Enterprise T1 24-channel	66298601-295
FP Enterprise T1 48-channel	66298601-296
FP Enterprise T1 72-channel	66298601-297



**FaxPress Enterprise Redundant™**

- Digital T1 support
- Dual power supplies
- Dual fans
- Dual disk drives
- RAID controller for disk mirroring
- Redundant Ethernet 100/1 GB
- FaxPress Plus client/server software
- Secure web browser interface\*
- Configurable for dual fax modems and automatic failover

<u>FP Enterprise Redundant:</u>	<u>Part Numbers</u>
FPE Redundant Fractional T1	66298601-313
FPE Redundant Dual Frac. T1	66298601-314
FPE Redundant T1 24-channel	66298601-315
FPE Redundant T1 48-channel	66298601-316
FPE Redundant T1 72-channel	66298601-317

\* Web interface tested for full interoperability with MS Windows, Linux, MacOS, and standard Unix web browsers.





*For Immediate Release*

**CallRex™ Call Recording Software Achieves Interoperability Validation with  
3Com® VCX™ IP Telephony Platform**

*Innovative On-Demand Call Recording & Monitoring Solution Enhances Support for 3Com Products*

Kirkland, WA – September 15, 2008 - Telrex, provider of the award-winning CallRex™ suite of IP call recording and call center optimization solutions, today announced interoperability validation of on-demand recording with CallRex Professional IP call recording and monitoring software with the 3Com® VCX™ IP telephony system. Comprehensive testing was completed in the 3Com Open Network™ Solutions lab to validate on-demand recording features from CallRex.

CallRex software has been certified on various 3Com platforms, like the VCX and NBX, since 2003. Certification has also been achieved for the NBX version 6, VCX™ Enterprise, VCX for IBM System i VCX Connect 200, and VCX Connect 100 line of IP telephony platforms. CallRex also supports 3Com Asterisk installations.

“Telrex is proud to provide innovative call recording solutions on 3Com IP telephony platforms like the VCX,” said Robert Kapela, president of Telrex. “3Com customers can benefit from affordable and reliable call recording and monitoring solutions when they utilize CallRex software.”

Call recording has become a standard business application that facilitates dispute resolution, limits legal liability, improves employee productivity and morale, and enhances security. CallRex’s Look Back call recording feature enables employees to record the entire call at any point in the conversation, capturing valuable customer experience information that can be archived and utilized for dispute resolution, training, or to meet legal requirements.

Telrex is a premium member of the 3Com|ON Partner Program. Through the 3Com|ON Program, Telrex works closely with 3Com to provide their combined solutions to value-added resellers and business customers worldwide.

For more information contact Telrex at +1 425.827.6156 or visit [www.telrex.com](http://www.telrex.com).

**About Telrex**

Telrex provides IP call recording and call center optimization software. CallRex supports IP telephony systems, VoIP softswitches and unified communications solutions from 3Com, Digium/Asterisk, Mitel, Inter-Tel, Cisco, Avaya, Microsoft OCS, ShoreTel, BroadSoft, Sylantro, Genband, Vertical, Pingtel, Switchvox, Fonality, TalkSwitch, and more.

CallRex API enables custom integration of the CallRex platform with business and communications applications. Telrex offers its award-winning CallRex suite of software through value added resellers worldwide. Learn more at [www.telrex.com](http://www.telrex.com) or call 425.827.6156 x2.

**Contact Information:**

Jill Majors, Telrex  
phone: 425 827 6156 x131 or [jmajors@telrex.com](mailto:jmajors@telrex.com)

###



## VistaPoint Enterprise™



© Galen Rowell/Mountainlight.com

# Presence-Based Software Solutions for 3Com VCX™ IP Telephony Platforms

### *Enterprise-Scaled Solutions:*

- *PC Attendant Console*
- *Outlook Plug-in*
- *Desktop Companion*
- *Corp Directory and DeskBar*
- *SalesForce.com Interface*
- *MS Dynamics CRM Interface*
- *TAPI Gateway*

**iQ's Attendant Console Software** is the perfect solution for Operators, Executive Assistants, Department Secretaries, Supervisors, or anyone who needs to monitor extension activity and provide professional call coverage for their organization.

**Outlook Plug-in** - Runs inside MS Outlook to provide presence and call control with click-to-dial. Can be deployed in Citrix environments.

**Desktop Companion** - A scaled-down version of our Console. Provides an affordable solution for deploying presence and call control to the desktop without the need for operator-specific features found in our Console.

**Corporate Directory** - Browser-based module that integrates with your Active Directory to display status of user's VCX phone. This module includes a Deskbar utility that provides quick employee lookup.

**salesforce.com and MS CRM integration** - Provides users with click-to-dial and record retrieval using either the Console or Desktop Companion.

**TAPI Gateway** - Provides support for TAPI-based applications that need to control the desktop phone using TAPI commands such as make call.



## Presence-Based Solutions for 3Com VcX IP Telephony Platforms

Presence-based applications make it possible for employees to quickly see the current status of an individual's VCX phone and simultaneously check their Calendar and Status Note for availability.

In addition to presence monitoring, the VistaPoint suite of applications were designed to deliver powerful call processing to the desktop. These applications are perfect for organizations needing to provide their employees with the tools needed to improve employee-employee communications and customer-enhanced service and assistance.

See extensions that have been forwarded

See who's phone is busy

Drag and Drop calls into agent queues/hunt groups

View Status Note

Color shows status of phone

Dragging and dropping a caller onto this cell will transfer the caller to Jim's cell phone.

Custom Cells can contain helpful information

**Aggregated Presence** – iQ's presence engine automatically collects the current status of an individual's telephone, IM service and Calendar. This information is then displayed inside "Cells" that identify the person by name, extension number, and department. These Cells also display any Status Notes inserted by the individual or a Console user.

4030	4049	1402
Raj Dali Checking Fwd: All 4049 Off site training today	Ray Ryan Manager Will be in meetings and conference calls until ...	Scott Johnson Teller In the office all day

**91(209) 795-4414**

**Branch Information**

**342 Gill Street  
Arnold, CA 95223  
Phone: 209-795-4414**

**Mailing Address:  
PO Box 612  
Arnold, CA 95223**

**Emergency Contact:  
Janet at home: 209-362-0098**

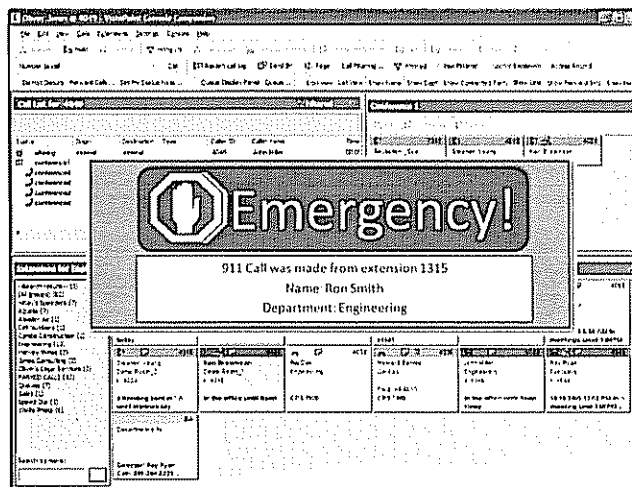
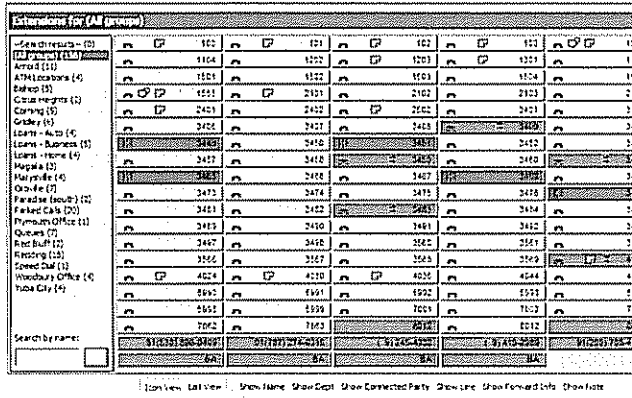
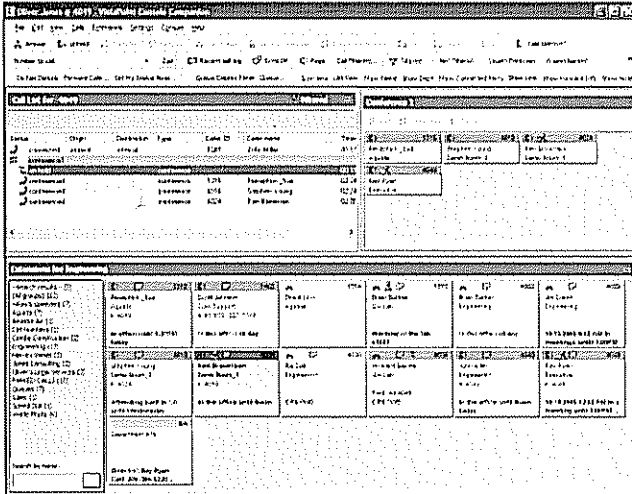
**Hours: 9:00 AM - 5:00PM Mon-Fri  
Drive Up: 8:30 - 5:00PM  
ATM: Yes  
Safe Deposit Boxes: Yes**

Administrators can arrange Cells into groups based on their department, job function, or location. Cells are automatically created for each monitored extension. Speed dial Cells can be created for mobile phones, queues, and extensions you do not want monitored but need to transfer calls to.

The color of each Cell will change based on the state of the phone providing users with a bird's-eye view of a person's availability at that moment in time.

Within each group, Cells can be sized to display the information desired. Info Cells can contain responses to frequently asked questions to include branch office contacts or addresses. Simply click on any cell to display the entire contents of that cell.

# VistaPoint Enterprise Attendant Console for 3Com VCX Systems



The Console "Switchboard" is a software application designed to work with any multi-line VCX telephone. Console users can move between the telephone, keyboard, and mouse to quickly answer and redirect calls.

Console Companion enables users to handle high call volumes efficiently by providing real-time presence information about every VCX phone. A Busy Lamp Field (BLF) provides users with the current status of every phone on the VCX

iQ's Console Software application is an add-on option for the VCX system, which requires a license for each user. Any combination of up to 600 iQ Consoles and/or other VistaPoint desktop applications can be deployed across your enterprise of one or more VCX systems. As shown below, a suite of fully integrated presence-based applications is available for organizations to deploy with their VCX system to improve employee productivity and customer service.

## Console Features Include:

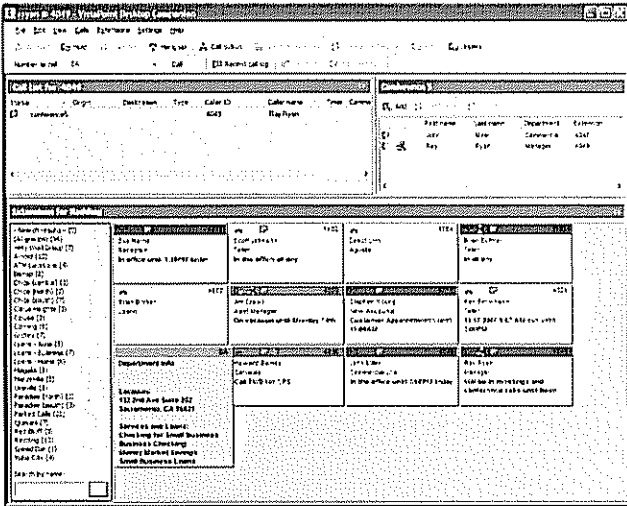
- Calling Party Information
- Drag and Drop Call Processing
- Enterprise-Wide Busy Lamp Field
- Tag Call with Comments
- Quickly Setup Conference Calls
- Call Pickup of any Ringing Extension
- Log In/Out Hunt Groups
- Works Across Multiple VCX Systems
- Supports Serial Calls
- Camp On to Busy Extensions
- Modify any Extension's DND, Call Fwd and Status Note
- Undock BLF onto another Monitor
- Emergency Call Notification
- Group Page (multiple extensions)

The Attendant Console can be installed as...

- Stand-Alone Console
- Multiple Operators with Hunt Groups
- Centralized Attendant Services (CAS)
- Tenant Applications

**Note Regarding Privacy** – iQ's presence technology includes a presence policy manager that provides administrators with the ability to restrict and limit who sees whom. This not only protects the privacy of certain individuals but also makes it deployable in tenanting applications where multiple companies are sharing a VCX system such as Executive Suites or tenant-based installations. See Aggregated Presence for details on how BLF Cells are placed into BLF Groups.

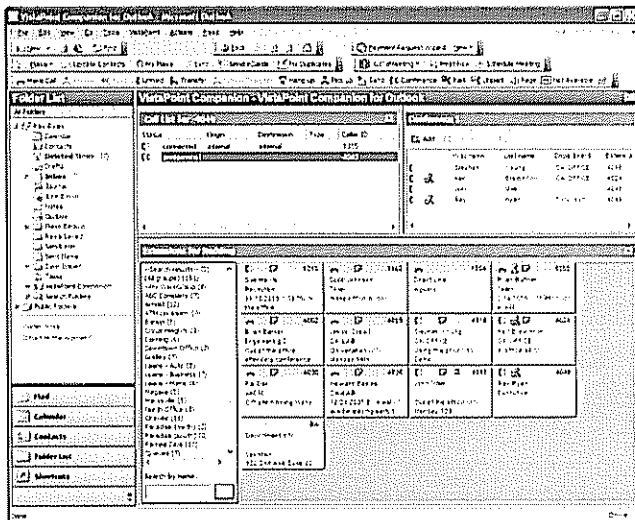
# VistaPoint Enterprise Desktop Applications



The Desktop Companion is a scaled-down version of our Attendant Console and also works with any VCX telephone. It provides users with powerful call processing features and device control.

## Desktop Companion Features Include:

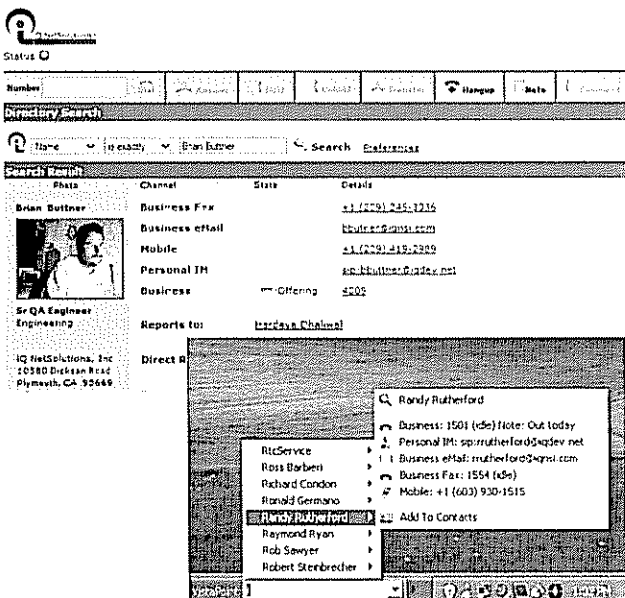
- Insert and Edit your Status Note
- Drag and Drop Call Processing
- Enterprise-wide BLF
- Send / Receive IMs from Operators
- Setup Conference calls
- Call Pickup of any Ringing Extension
- Works across Multiple VCX systems
- Competitively Priced



The Outlook Plug-in works with any VCX telephone and provides users with many of the features our Console offers as well as these:

## Outlook Plug-In Features Include:

- Place Calls from within Contacts (click to dial)
- Display Caller's Record using CallerID
- Create Personal BLF "Workgroups"
- Place your VCX Phone into DND
- Modify your Call Forwarding Parameters
- Quickly Setup Conference Calls
- Directed Call Pickup of Ringing Extensions
- Call Processing Toolbar
- Insert / Edit Status Note

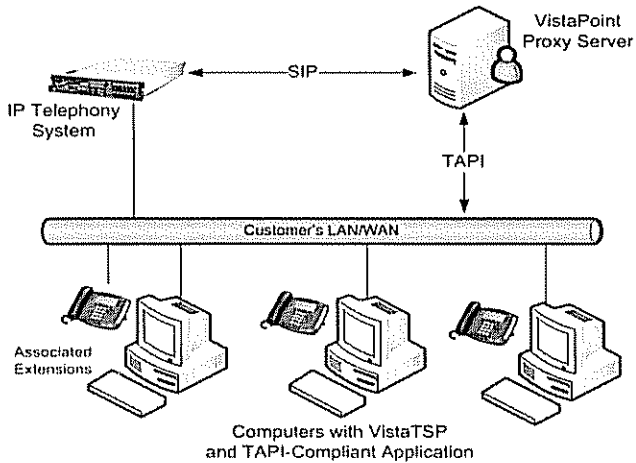


The Corporate Directory and complimentary Deskbar provides users with a quick and easy way to search contacts using name or telephone number in the company's Active Directory and instantly dial their extension.

## Enterprise Directory and Deskbar:

- Active Directory and LDAP Compatible
- Displays Current Status of Person's Phone
- Call Processing Toolbar
- Update your Status Note
- Search any Record
- Call Log
- Create Personal Phone Book
- Administrator Defines Information to be

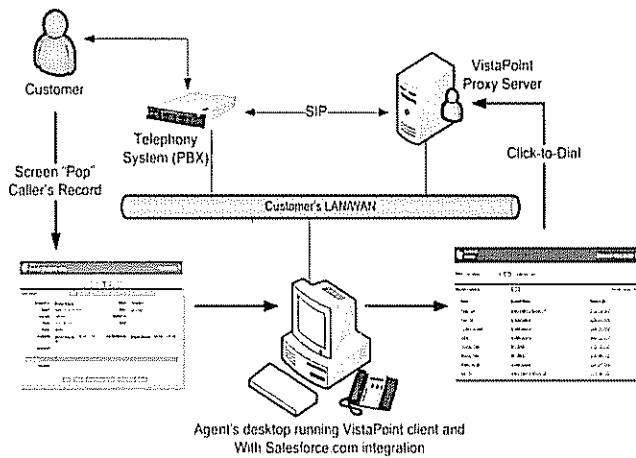
# VistaPoint Enterprise Deployment Options and Add-On Modules



**TAPI/SIP Gateway** - Organizations that are planning to migrate to the VCX IP Telephony system can continue to use their TAPI-based applications. It provides users with powerful call processing features and device control.

## TAPI Gateway Features:

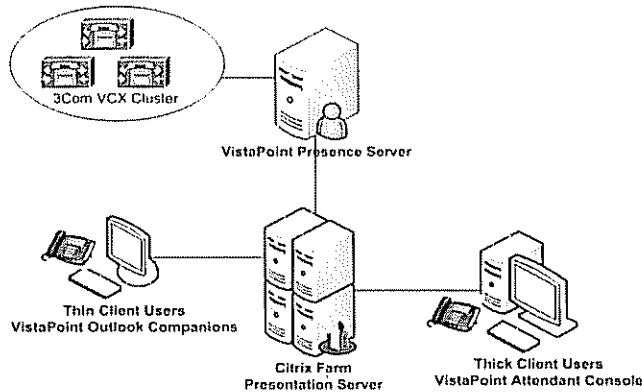
- Proxy service for hundreds of TAPI users
- Supports most TAPI applications
- Answer Call, Make Call, Disconnect Call



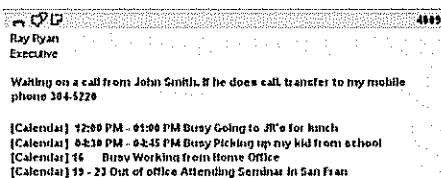
**CRM and Salesforce.com Integration Module** enhances the performance of service and support personnel by providing agents with click-to-dial and automatic display of caller's record to reduce call time and improve customer service. iQ's CRM and Salesforce.com interfaces can reduce the average inbound and outbound call times by 20-30 seconds.

## Features Include:

- Click-to-Dial from within contact's record
- Automatically display Caller's Record using CallerID



**Citrix Deployments.** VistaPoint Enterprise is fully compatible with Citrix. We do however recommend that you install our Console software on a thick client so that peak periods of call processing are not affected by network delays.



**Calendar Integration.** Client applications such as the Console Companion can be provided with access to employee calendars.

### VistaPoint Server Requirements:

- VistaPoint Enterprise Server Software
- Windows Compatible Server Meeting these Specifications
  - Windows XP Pro (max ten VP clients)
  - Windows 2000/2003 Standard, Adv, or Ent)
  - VMWare virtual server
- Processor: 2.5 GHz or higher
- Memory: 2GB memory
- Hard Drive: 100 GB free space
- 1GB Mbps Ethernet NIC
- Connected to same LAN as the VCX
- Logged on with Administrator Access Rights
- Assigned a Static IP Address
- Access to the Internet or e-mail (for licensing)
- Connects using ports 8001 and 8002

NOTE: Contact Support@iqnsi.com for installs on 64 bit platforms.

### Also Recommended:

- Battery Back-up (UPS)
- Fault-Tolerant Sower Supply
- Anti-Virus Software

NOTE: In deployments where a single Console is needed, both the server and client software can reside on the same desktop computer running Windows XP Pro or Windows 2000 Server OS.

### VistaPoint Client Requirements:

- VistaPoint Server Software Bundle
- VistaPoint Client Software (max 600 per server)
- Windows XP Pro or Vista OS
- Pentium processor or equivalent
- Memory: 1GB+ memory
- Hard Drive: 100 MB free space
- 100+ Mbps Ethernet NIC
- TCP/IP connection to iQ's server
- Monitor, mouse, keyboard
- Graphics card 1024x768 resolution/16-bit color

### Compatible with:

- VCX ver7.1.14c or higher
- 3Com IP Telephony on IBM System i

### Languages Supported:

- English, German, Spanish, French



### iQ NetSolutions CA, Inc.

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Enables centralized visibility, management and control of the wireless environment

## OVERVIEW

This comprehensive wireless network management software package contains all of the features you need to successfully plan, configure, deploy and manage an enterprise-class wireless LAN (WLAN). As an integral part of the 3Com® Wireless LAN Mobility System, the 3Com Wireless Switch Manager software works with 3Com wireless LAN controllers and switches to centrally manage and control 3Com managed access points (MAPs) for those networks demanding complex deployments, with multiple offices or with highly secure WLAN requirements.

## KEY BENEFITS

### OFFERS CUSTOMIZED, AUTOMATED SITE PLANNING AND PRE-CONFIGURATION

Wireless LAN pre-deployment planning and configuring are automated and dramatically simplified with 3Com's Wireless LAN Switch Manager. The planning portion of this powerful application lets you import site floor plans in a variety of file formats and automatically configure your site for capacity and coverage using the built-in Virtual Site Survey. The Virtual Site Survey automatically accounts for a large variety of common RF obstacles ranging from doors, walls, ceilings and third-party access points to reinforced concrete walls or other architectural obstacles. Additionally, custom RF attenuators can be created to add to the extensive library of common building objects.

A recommended configuration of the wireless LAN is automatically determined based on your site's specific plan results. Managed access point locations are automatically placed into the site plan, managed access point power levels are determined and optimized and RF channels are automatically assigned. You can then print out a work order showing exactly where to install the 3Com Mobility System equipment, thus greatly simplifying deployment efforts and reducing costs. This powerful wireless LAN planning tool can test "what-if" scenarios to ensure precise modeling of the Mobility System while reducing the time, cost and complexities associated with pre-deployment planning and configuration.

### SIMPLIFIES CONFIGURATION, VERIFICATION AND DEPLOYMENT OF THE WLAN MOBILITY SYSTEM

The Wireless LAN Manager goes beyond just planning your installation to completely verifying and deploying the plan. Configuration templates are quickly replicated and verified. With a single click, the network is setup as configurations are pushed to multiple wireless LAN switches, controllers and MAPs via secure HTTP to set up the wireless LAN Mobility System.

Additionally, the system can be used to track configuration changes, initiate system-wide upgrades, manage software images and archive past revisions all from a centralized management location. This substantially reduces the frequent errors and inefficiencies associated with manual wireless LAN deployments, saving additional time and money.



## KEY BENEFITS (CONTINUED)

### DELIVERS COMPREHENSIVE CONTROL OF THE RF ENVIRONMENT

Once installation is complete, the Wireless LAN Switch Manager enables simple and accurate operation of the entire wireless LAN. RF sweeps can be conducted on a schedule, continuous or on-demand basis enabling you to stay aware of all activities occurring in the air space. This RF monitoring detects and locates rogue access points, ad-hoc networks or other RF interferers. Additionally, the software can automatically adjust MAP power to eliminate coverage gaps and further optimize RF performance. The Wireless LAN Switch Manager provides the control to monitor and record real-time data enabling dynamic tuning and balancing of the wireless LAN with precision.

### PROVIDES ENHANCED SECURITY AND SEAMLESS MOBILITY

Building on the strong wireless security features of AES, TKIP and WEP encryption combined with WPA and IEEE 802.1X authentication, 3Com Wireless Switch Manager can fully manage, secure and track on a per-user or per-group basis all services on the wireless network. With this Identity-Based Networking capability, IT managers can have confidence in the enhanced security of their wireless LAN networks through improved user group authenticated access control, consistently enforced roaming policies and monitored bandwidth usage. The result is seamless user mobility and freedom to connect securely and roam.

The Wireless LAN Switch Manager helps ensure the wireless LAN stays secure. Collected user and network statistics provides the increased ability to evaluate a mobile community by monitoring who's connected, where they are, where they've been and what services they've used.

## FEATURES

### CUSTOMIZED, AUTOMATED SITE PLANNING TOOLS

Eliminates time-consuming site surveys and MAP layout guesswork> Based on your specific building layout, the optimal quantity and placement of MAPs can be determined to optimize network performance

Customized to your building requirements> Import your building's blueprints from popular 3D graphics programs

Planning tool factors-in effect of common RF attenuators> Apply attenuation effects of common building structures, based on included extensive library of standard building obstacles. Built-in formulas automatically determine optimal MAP location and number, eliminating countless hours of trial and error

Automatic coverage and capacity planning> Take the guesswork out of coverage and capacity planning before deployment with integrated algorithms designed to optimize the performance of applications and hardware

Determine equipment placement effects> Test alternate scenarios virtually without manually moving equipment

Provides accurate placement diagrams> Convert design plans into accurate site plans and work orders, greatly reducing the chance for installation errors

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## FEATURES

(CONTINUED)

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### EASY CONFIGURATION, VERIFICATION and DEPLOYMENT

Automatically create MAP configuration files> Convert design plans into configuration data for MAPs, including individual RF power-levels and radio channel assignments

One-step system-wide configuration> Centralized deployment reduces configuration time and errors. One click sends all selected individual configurations to each MAP, eliminating the need to manually configure each MAP

Centralized configuration management> Supports configuration version archives for accurate consolidated historical information. Provides for easy centralized upgrades that can be deployed with a click, with the ability to verify and synchronize configurations as needed. Archives allow for easy network rollbacks

Location independence> Wireless controller and MAPs operate as an integrated infrastructure even in distributed remote networks, making it easy to expand or modify the WLAN as needed. Overlays any Layer 2 or Layer 3 wired topology, with no hardware or backbone changes for cost-effective installation

Flexible, scalable architecture support> As needed, easily add additional MAPs. Controllers or Switches utilizing the distributed configuration mechanism.

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### COMPREHENSIVE CONTROL OF RF ENVIRONMENT

Continuous, scheduled, or on-demand RF sweeps> Run sweeps as needed to detect and locate rogue APs, users and ad-hoc networks. Verify your current RF coverage and topology with integrated mapping tools. Adjust individual MAP gain as needed

Locate users on floor plan> Locate users, track roaming history and control individuals bandwidth utilization as needed

---

### STRONG, EFFECTIVE MANAGEMENT

Extensive system-level statistics> Provides Ethernet statistics, including errors and traffic, down to packet size, radio statistics and user session statistics, preserved as users roam across multiple MAPs, all with easy viewing tables and graphs for quick identification of trends

Fault and event viewer for controllers, switches and MAPs> Powerful and flexible filtering to drill down on specific events, plus event correlation evaluations

Automatic alerts for configuration changes> Wizard interface prompts for resolution of conflicts

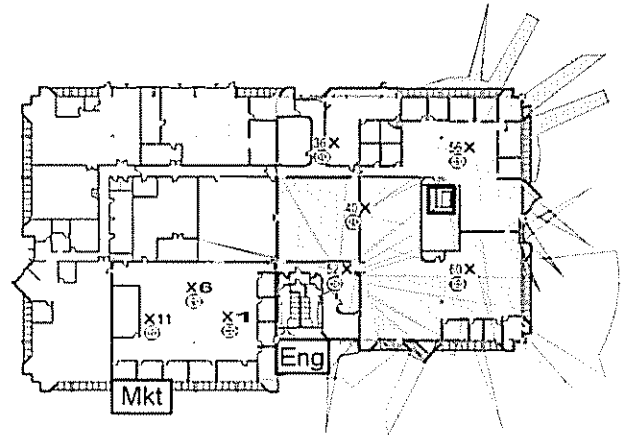
Secure location-independent management> Enables IT staff to securely manage the WLAN from anywhere. Integrates with enterprise management tools such as 3Com Network Director and HP OpenView. Secure management through Web browser via SSL or HTTPS, or command line interface via SSHv2 or Telnet

Centralized policy management> Create user or group policies that allow or deny network access in different parts of the network for secure seamless roaming. Helps ensure that only authorized users access the network

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## KEY APPLICATIONS

The 3Com Wireless Switch Manager graphical user interface provides real-time MAP RF coverage and capacity information, as well as prospective RF coverage when in planning mode



## SPECIFICATIONS

### SYSTEM REQUIREMENTS

Workstation: IBM-compatible PC with network adapter card and Internet connection (2.4 GHz Pentium 4 or higher minimum)  
 Memory: 1 Gb min  
 Hard disk free space: 1 Gb min  
 Monitor: SVGA monitor, 256 colors, 1024 x 768 24-bit color min (1600x1200 24-bit color recommended)

### OPERATING SYSTEMS

Windows XP Professional (SP1 or greater)  
 Windows 2000 Professional (SP4 or greater)  
 SUSE Linux 9.1  
 Red Hat WS 3

### CONTROLLER/SWITCH SUPPORT

Up to 10 WX4400 controllers, WX2200 controllers, WX1200 switches and/or WXR100 switches in any combination  
 Support can be increased by purchasing an upgrade license (see Ordering Information)

### PACKAGE CONTENTS

3Com Wireless Switch Manager software license  
 Getting Started Guide  
 Administrator's Guide  
 Release Notes  
 Warranty booklet

### WARRANTY AND OTHER SERVICES

Limited Software Warranty for 90 days  
 90 days free telephone technical support  
 Refer to [www.3com.com/warranty](http://www.3com.com/warranty) for details

## ORDERING INFORMATION

### PRODUCT DESCRIPTION

3Com Wireless LAN Switch Manager  
*[supports up to 10 3Com wireless LAN controllers and/or switches]*  
 3Com Wireless LAN Switch Manager Upgrade<sup>1</sup>

### 3COM SKU

3CWXM10A  
 3CWXMUPA

### 3Com Wireless LAN Controller and Switches

3Com Wireless LAN Controller WX4400	3CRWX440095A
3Com Wireless LAN Controller WX2200	3CRWX220095A
3Com Wireless LAN Switch WX1200	3CRWX120695A
3Com WXR100 Remote Office Wireless LAN Switch	3CRWXR10095A

### 3Com Wireless LAN Managed Access Points

3Com Wireless LAN Managed Access Point 3750	3CRWX375075A
3Com Wireless LAN Managed Access Point 2750	3CRWX275075A

### 3Com Global Services

3Com Wireless LAN Site Survey, Network Health Check  
 Installation Services and Express<sup>SM</sup> Maintenance [www.3com.com/services\\_quote](http://www.3com.com/services_quote)  
 3Com University Courses [www.3com.com/3comu](http://www.3com.com/3comu)

<sup>1</sup> Upgrades 3CWXM10A to support a suggested limit of 64 wireless switches and/or controllers.

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.

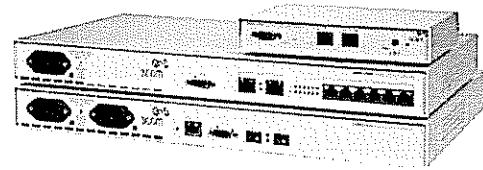
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# 3COM® WIRELESS LAN MOBILITY SYSTEM

Enterprise-class wireless mobility system offering secure roaming with centralized device management, RF management and rogue detection



from top: 3Com WXR100 Remote Office Wireless LAN Switch, Wireless LAN Switch WX1200 and Wireless LAN Controllers WX2200

## OVERVIEW

Ideal for demanding, complex deployments with multiple offices or with highly secure LAN requirements, the 3Com® Wireless LAN Mobility system centrally manages and controls 3Com or third-party wireless LAN Managed Access Points (MAPs). The system features the 3Com Wireless LAN Controller WX2200, 3Com Wireless LAN Switch WX1200, 3Com Remote Office Wireless LAN Switch WXR100 and 3Com Wireless LAN Switch Manager software.

## KEY BENEFITS

### DELIVERS CONTROL: A REQUIREMENT FOR SEAMLESS SECURITY AND MOBILITY

Because wireless clients are mobile, 3Com uses innovative Identity-Based Networking to deliver their network services. Multiple controllers and switches are grouped into a Network and Mobility Domain for securely sharing user databases across a network infrastructure, including remote offices.

Through this information exchange, the Mobility System is able to enforce consistent network-wide access and security policies as users roam the network. Users are free from dependency on port or device connections. A user's location and security access details are quickly transferred between switches and/or controllers. Users gain seamless security and session integrity and interoperability with voice-over-Wi-Fi (VoWiFi) phones, without the need for re-authentication or IT intervention. Guest Access application allows non-IT staff, such as front desk personnel, to easily provide temporary secured-wireless access to guest visitors.

### CENTRALIZES MANAGEMENT

The 3Com Wireless Switch Manager eliminates the time-consuming task of individually configuring each device. Simple and centralized setup makes initial deployment and

long term management easier. Accessed from anywhere on the network, the Wireless Switch Manager software lets administrators change parameters of hundreds of managed access points or dozens of wireless switches with just a few keystrokes.

### ENHANCES STANDARDS-BASED SECURITY

The centralized security management of the 3Com Wireless LAN Mobility System can significantly enhance protection. The exchange of user-based information within the Network and Mobility Domain adds an additional level of control — beyond the existing 3Com foundation of IEEE 802.11i Wi-Fi® Protected Access 2 (WPA2™), Advanced Encryption Standard (AES), Temporal Key Interchange Protocol (TKIP), Wired Equivalent Privacy (WEP) encryption and IEEE 802.1X authentication — for user and group access to network resources. Sharing user-specific security policies between WLAN controllers and switches enables consistent enforcement of user and group attributes as the user roams across the WLAN.

### INTELLIGENT SWITCHING

An integral component of the 3Com Wireless LAN Mobility System, the 3Com AP 3850 and AP 3950 with intelligent

## KEY BENEFITS (CONTINUED)

switching offers both centralized and distributed data forwarding. It automatically determines the best alternative based on the requirements of the underlying application, allowing it to support the most demanding wireless applications indoors and outdoors, including VoWiFi and video distribution.

### PROVIDES ENTERPRISE-WIDE FLEXIBILITY

The 3Com Mobility System can be deployed on any existing Layer 2 or Layer 3 LAN topology with no backbone or hardware reconfiguration required. Wireless controllers or switches and associated MAPs can reside anywhere in the network, separated by Layer 2/Layer 3 devices. The system can operate as an integrated infrastructure, making it easy to scale or change as business needs dictate.

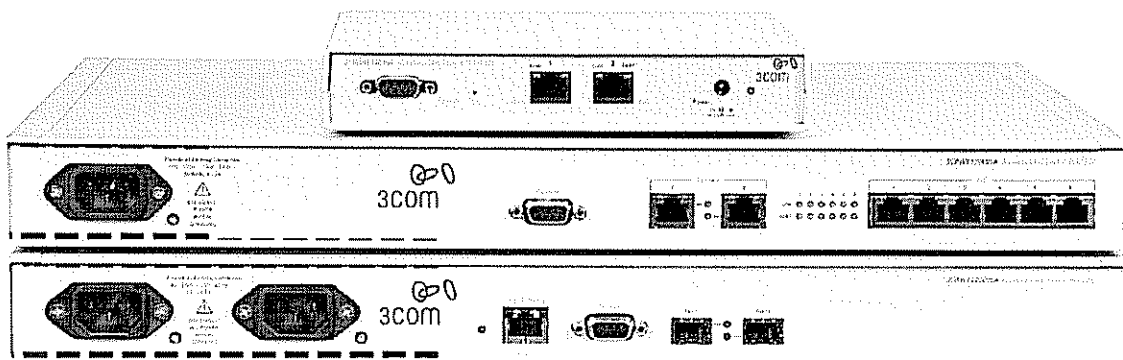
The WX2200 controller comes configured to support 24 MAPs and is expandable in increments of 24 MAPs with support of up to 192 active and 768 configured MAPs per controller. The WX1200 switch supports up to 12 active and 48 configured MAPs and the WXR100 switch supports up to three active and 16 configured MAPs. All three devices can be mixed and matched together within a scalable network domain to enable management and control of over 32,768 switches and controllers with almost 4 million access points distributed over large geographic territories.

3Com wireless controllers and switches already support future wireless LAN capabilities such as wireless IP telephony (VoWiFi) and can be kept current with developing standard releases by downloadable firmware upgrades.

### FLEXIBLE EXTENDED WIRELESS NETWORK

In addition to traditional access point functionality, the AP 3850 and AP 3950 can also serve as an IEEE 802.11s mesh AP, mesh point, mesh portal, or WDS bridge to other AP 3850/3950s, extending the reach of enterprise WLANs. The MAP supports this in either point-to-point or point-to-multipoint topologies, allowing maximum flexibility within a mesh or bridged environment.

The AP 3850/3950 can be configured with one radio for client services and the other for mesh service. The AP can also be used in a dedicated bridging mode, to provide seamless connectivity between buildings without the expense of laying new cable.



# FEATURES

## MOBILITY ARCHITECTURE

### Network and Mobility Domains

Groups of 3Com wireless controllers and/or switches share user information and authorizations as users roam, supporting uninterrupted mobility and enforcing security across the entire wireless network

### Distributed Forwarding

Optimize traffic flow, reducing latency and improving performance.

### Topology Independence

By providing a Layer 2 path for Layer 3 traffic, 3Com wireless controllers, switches and MAPs operate as an integrated infrastructure separated by L2/L3 devices even in distributed remote networks, making it easy to expand or modify the WLAN as needed

### Fast Roaming

Quick handoff of user information and authorizations within the Network and Mobility Domain enables seamless roaming with session integrity and mobility robust enough to support voice traffic

### Multiple Per-User Queues

Class-based traffic queuing at the MAP helps ensure that voice and other real-time applications receive the class of service and quality of service they need over the WLAN

### Pay-as-You-Grow Scalability

Upgrade licenses in 24-MAP increments increase support to a total of 192 MAPs per controller for flexible expansion (WX2200 only).

### PoE Support

The WX1200 switch supplies six ports of power to MAPs over Ethernet cabling for installation flexibility; the WXR100 switch provides one uplink port and one port for PoE data and power to a MAP

## CLUSTERING

### Maximize Connectivity and Environmental Flexibility

Part of the 3Com Wireless LAN Mobility System, the system provides "always-on" reliability, through controller clustering. If any 3Com wireless controller fails in the cluster, failover to another controller is seamless and client connections are maintained. Data flow continues without any service disruptions to voice and real-time video applications

## ENCRYPTION

### Enterprise-Class Encryption

WPA2, AES, TKIP and WEP encryption performed at the MAP help protect and secure all communications

### Per-User Encryption Assignment

Different security policies are enforced on a per-user or per-group basis for flexible, in-depth security control and management

## AAA SECURITY

### Local or RADIUS Server IEEE 802.1X Authentication

Centralized authentication control and management of all network users helps ensure that only authorized users access the network

### Virtual Private Group Support

IT staff can assign policies that control per-user or per-group network access throughout the WLAN for secure seamless roaming and to keep user traffic separate and secure

### Mobility Profile

IT staff can dynamically apply access permissions based on attributes returned by the AAA server indicating which MAP or LAN authentication ports a user or group can use

### AAA Integration and RADIUS Offloading

Wireless controllers and switches can shoulder back-end encryption key generation and authentication tasks, reducing the processing load and increasing the scale and efficiency of central AAA RADIUS servers while reducing AAA traffic over the WLAN.

### User, MAC and VLAN "Globbing"

IT staff can assign AAA policies to user, subnet, or device groups for convenient, efficient, cost-effective WLAN administration.

### Bonded Authentication

By bonding IEEE 802.1X machine authentication with 802.1X user authentication, only trusted users and client devices are allowed access to the network

### Time-of-Day/Day-of-Week/Location Access

IT staff are able to control and restrict network resource access based on building location and/or on an hourly, daily, or weekly basis

### Location Policy Enforcement

IT staff can add or override AAA-defined access permissions based on user location, providing a choice of centralized or location-specific policy implementation

## RF SECURITY AND CONTROL

### SentrySweep Rogue AP Detection

Scheduled or on-demand RF scans identify unauthorized APs and ad-hoc networks and alert the central IT staff; dedicated APs can continually sweep the airspace for 24x7 protection in environments that require higher security

### Dual-Band RF Scans

A single AP radio can sweep both IEEE 802.11a and 802.11b/g frequency bands and associated channels while the WLAN stays up and running. The AP 3950 can also scan the 2.4GHz and 5GHz 802.11n bands

### Real-time RF Monitoring and Control

RF scans measure signal strength and usage; software tools dynamically adjust traffic loads, power, RF footprint, or channel assignments to maximize coverage with capacity

### Managed Access Point Control

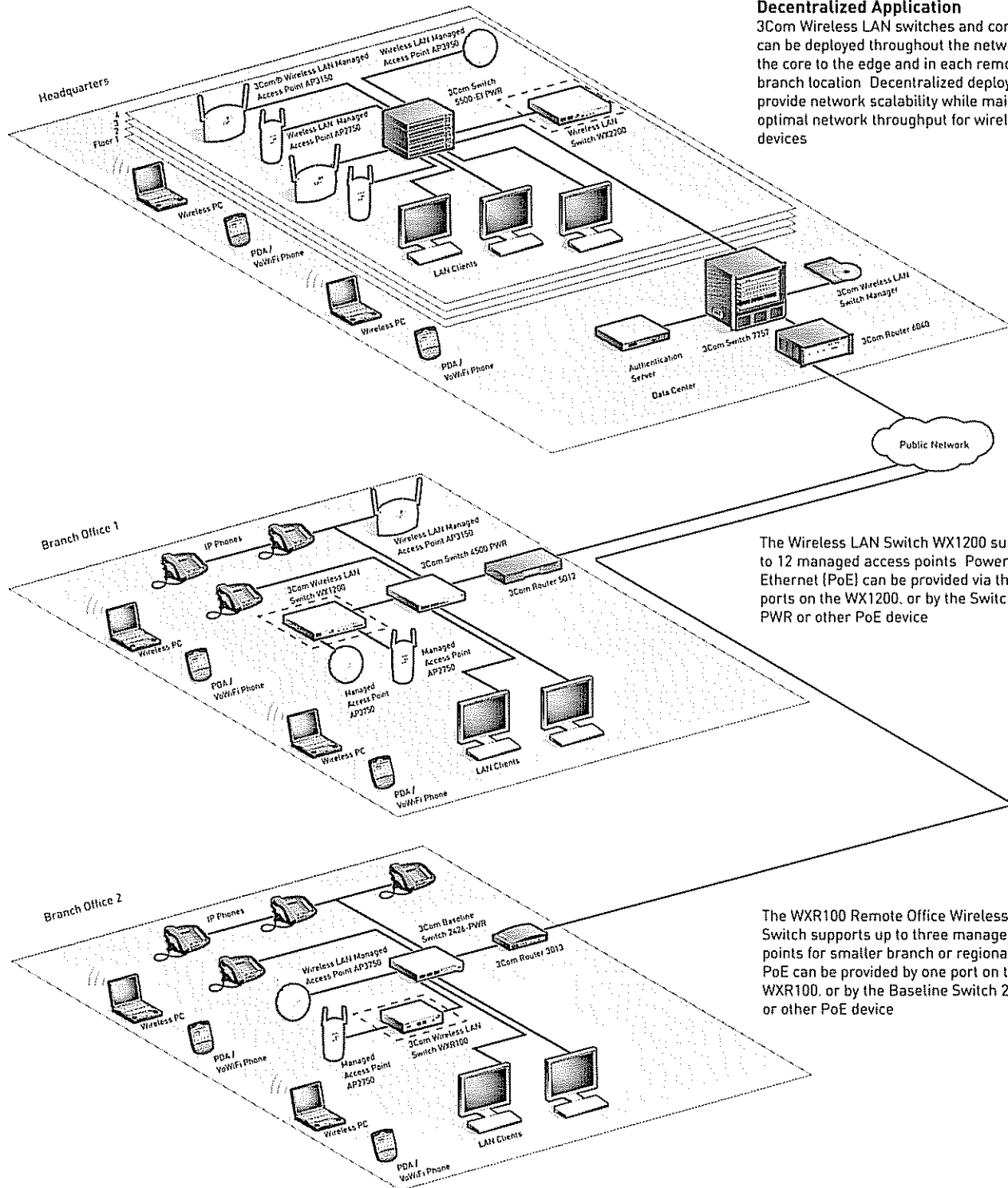
Centrally maintained and distributed MAP settings eliminate the need to individually configure each device. The MAPs also enables granular bandwidth management on a per user or SSID basis and load balancing features that vastly improve network performance and end user experience

## CENTRAL CONTROL AND MANAGEMENT

### Identity-Based Networking

Provides all services based on user identity so things like virtual private group membership, Access Control Lists (ACLs), authentication, roaming policies and history, location tracking, bandwidth usage and other authorizations all stay with users as they roam; also tells the IT manager who's connected, where they are, where they've been, what services they're using and what services they've used

## DECENTRALIZED DEPLOYMENT



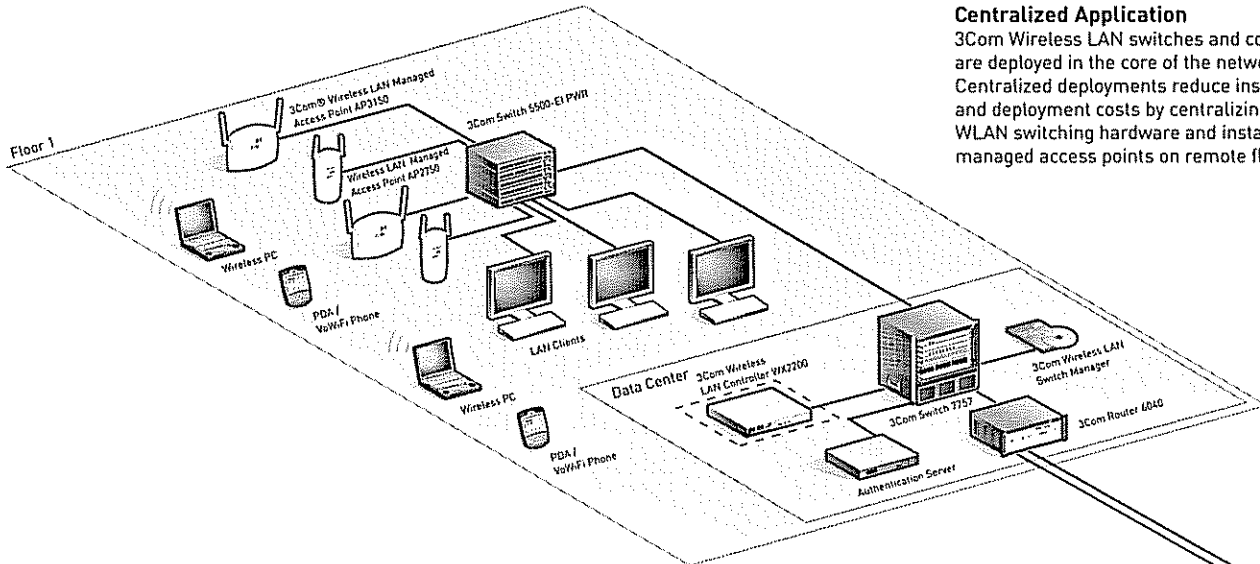
### Decentralized Application

3Com Wireless LAN switches and controllers can be deployed throughout the network, from the core to the edge and in each remote branch location. Decentralized deployments provide network scalability while maintaining optimal network throughput for wireless devices.

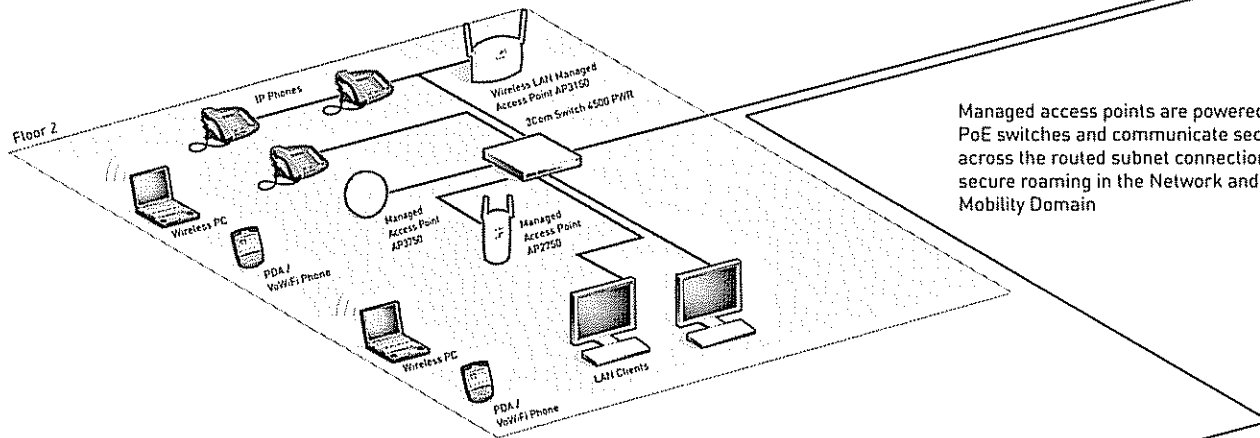
The Wireless LAN Switch WX1200 supports up to 12 managed access points. Power over Ethernet (PoE) can be provided via the six ports on the WX1200, or by the Switch 4500 PWR or other PoE device.

The WXR100 Remote Office Wireless LAN Switch supports up to three managed access points for smaller branch or regional offices. PoE can be provided by one port on the WXR100, or by the Baseline Switch 2426-PWR or other PoE device.

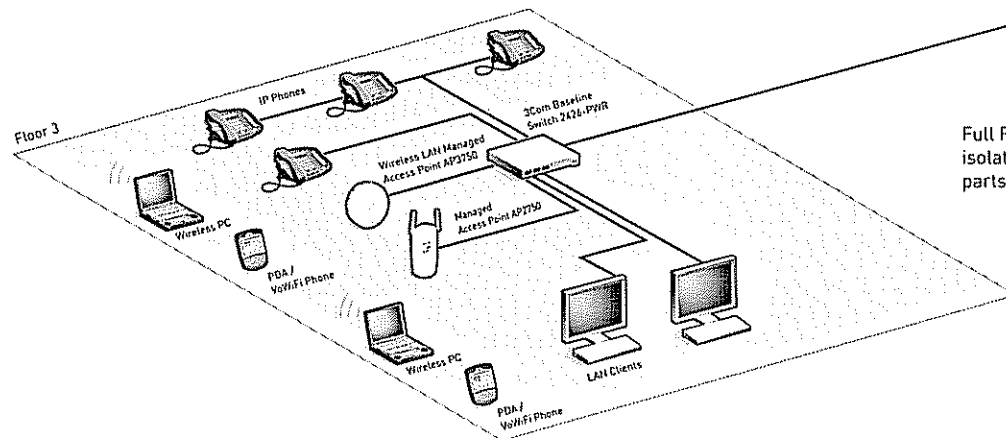
# CENTRALIZED DEPLOYMENT



**Centralized Application**  
 3Com Wireless LAN switches and controllers are deployed in the core of the network only. Centralized deployments reduce installation and deployment costs by centralizing core WLAN switching hardware and installing only managed access points on remote floors.



Managed access points are powered locally by PoE switches and communicate securely across the routed subnet connection providing secure roaming in the Network and Mobility Domain.



Full RF management, rogue detection and isolation capabilities are extended to all parts of the wireless network.



# SPECIFICATIONS

## TOTAL PORTS

### 3Com Wireless LAN Controller WX2200

Two SFP ports will accommodate 1000 Mbps SFPs (purchased separately); RJ-45 management and serial console ports

### 3Com Wireless LAN Switch WX1200

Six 10BASE-T/100BASE-TX integrated PoE ports, two 10BASE-T/100BASE-TX ports, auto-negotiation on all ports; serial console port

### 3Com WXR100 Remote Office Wireless LAN Switch

Two 10BASE-T/100BASE-TX integrated ports (one PoE, one uplink), auto-negotiation on both ports; serial console port, reset port

## MAP SUPPORT

### Wireless LAN Controller WX2200

Ships with support for up to 24 MAPs per controller depending on the capacity and coverage requirements of the wireless installation. MAP support can be increased by purchasing individual 24-MAP upgrade licenses; seven 24-MAP licenses support a total of 192 MAPs per controller

### Wireless LAN Switch WX1200

Ships with support for up to 12 MAPs per switch

### WXR100 Remote Office Wireless LAN Switch:

Ships with support for up to 3 MAPs per switch

## AGGREGATE SWITCHING CAPACITY

### Wireless LAN Controller WX2200

2.0 Gbps max

### Wireless LAN Switch WX1200

200 Mbps max

### WXR100 Remote Office Wireless LAN Switch

45 Mbps max

## POWER

### Wireless LAN Controller WX2200

Power supply: 50 W max (x2 power supplies)

Operating voltage: 100-240 VAC, 50-60 Hz

Amperage draw: 1.0 A at 120 V; 0.5 A at 230 V; max

### Wireless LAN Switch WX1200

Power supply: 200 W max

Operating voltage: 90-132/180-264 VAC, 47-63 Hz

Amperage draw: 4.0 A at 120 V; 2.0 A at 230 V; max

Power over Ethernet voltage output: 48 VDC, 15.4 W per port

### WXR100 Remote Office Wireless LAN Switch

Power supply: 40 W max

Operating voltage: 100-240 VAC, 47-63 Hz

Amperage draw: 0.8 A at 115 V, 0.4 A at 230 V; max

Power over Ethernet voltage output: 48 VDC, 15.3 W per port

## LEDS

### Wireless LAN Controller WX2200

Port status and traffic, management, power

### Wireless LAN Switch WX1200

Link status (10 Mbps and 100 Mbps), MAP/ PoE, power

### WXR100 Remote Office Wireless LAN Switch

Link status (10 Mbps and 100 Mbps), MAP/ PoE, power

## DIMENSIONS AND WEIGHT

### Wireless LAN Controller WX2200

Height: 4.4 cm (1.7 in), or 1U

Width: 44.1 cm (17.4 in)

Depth: 30.74 cm (12.1 in)

Weight: 5.0 kg (11.0 lbs)

### Wireless LAN Switch WX1200

Height: 4.4 cm (1.7 in), or 1U

Width: 44.1 cm (17.4 in)

Depth: 25.6 cm (10.8 in)

Weight: 3.8 kg (8.4 lbs)

### WXR100 Remote Office Wireless LAN Switch

Height: 3.2 cm (1.26 in)

Width: 19.0 cm (7.5 in)

Depth: 14.6 cm (5.75 in)

Weight: 0.7 kg (24.7 ounces)

## Environmental Ranges

Operating temperature: -10 to 50°C (14 to 122 °F)

Storage temperature: -20 to 70°C (-4 to 158 °F)

Humidity: 10 to 95% non-condensing

## MTBF

### Wireless LAN Controller WX2200

24 years (206,000 hours)

### Wireless LAN Switch WX1200

35 years (314,000 hours)

### WXR100 Remote Office Wireless LAN Switch

118 years (1,040,000 hours)

## REGULATORY/AGENCY APPROVALS

### Safety

UL 60950 2000 +ZB & ZC deviations

EN 60950 1999 and all national deviations

CSA 22.2 No. #60950 3rd Edition, 1995

UL 60950 3rd edition

NOM-119 SCFI

AS/NZS 60950 2000

### EMC/EMI

EN 55024 1998

EN 61000 (4-2 to 4-6 and 4-11)

EN 61000-3-2 1195+A14

ICES-003 Class A

FCC Part 15 Class A

EN 55022 1998 Class A

VCCI Class A

CISPR 22 Class A

Korean EMI Class A

## SPECIFICATIONS (CONTINUED)

### Management

Web interface management of WX2200, WX1200 and WXR100 remotely over HTTPS secure connection

Command line interface access via local console or remotely via SSH v2 or Telnet on all models

Local Ethernet management (WX2200)

SNMP MIB II

3Com Wireless LAN Switch Manager (separately ordered recommended product); interoperates with 3Com Network Director and HP OpenView

### Security and AAA

RFC 2246 Transport Layer Security (TLS)

RFC 2284 EAP

RFC 2315 PKCS #7: Cryptographic Message Syntax. Version 1.5

RFC 2548 Microsoft RADIUS VSAs

RFC 2716 PPP EAP-TLS Authentication Protocol

RFC 2759 Microsoft PPP CHAP Extensions. Version 2

RFC 2865 RADIUS Authentication

RFC 2866 RADIUS Accounting

RFC 2869 RADIUS Extensions

RFC 2986 PKCS #10: Certification Request Syntax Specification Version 1.7

RFC 3580 IEEE 802.1X RADIUS Guidelines

### Security Standards

IEEE 802.1X

IEEE 802.11d

IEEE 802.11h

IEEE 802.11i

### Encryption

WPA™ and WPA2

AES (CCMP): 128-bit (FIPS-197)

WEP 40/64 and 104/128-bit; TKIP: RC4 40-bit

SSL and TLS: RC4 128-bit and RSA 1024-bit and 2048-bit

### Power over Ethernet

IEEE 802.3af

### General Networking

RFC 1122 Host requirements

RFC 1393 Traceroute

RFC 1519 CIDR

RFC 1591 DNS (client)

RFC 1769 SNTP

RFC 768 UDP

RFC 783 TFTP

RFC 791 IP

RFC 792 ICMP

RFC 793 TCP

RFC 826 ARP

IEEE 802.1D (Spanning Tree)

IEEE 802.1Q (VLAN tagging)

IEEE 802.3ad (static config)

RFC 2131 DHCP

### Management and Control

RFC 854 Telnet (server and client) SSHv2 – Secure Shell v2

RFC 1157 SNMP v1/v2c

RFC 1213 MIB-II

RFC 1866 HTML

RFC 1907 SNMP v2

RFC 2068 HTTP

RFC 2660 HTTPS

RFC 3164 Syslog

### IP Multicast

RFC 1112 IGMP v1

RFC 2236 IGMP v2

### Quality of Service

RFC 2472 DiffServ Precedence

RFC 2597 DiffServ Assured Forwarding

RFC 2598 DiffServ Expedited Forwarding

WiFi Multimedia (WMM®)

### Package Contents

Wireless LAN Controller WX2200, Wireless LAN Switch WX1200, or WXR100 Remote Office Wireless LAN Switch

Rack mounting kit (WX2200 and WX1200 only)

DB-9 serial console cable

User guide and CD-ROM with user documentation

Warranty booklet

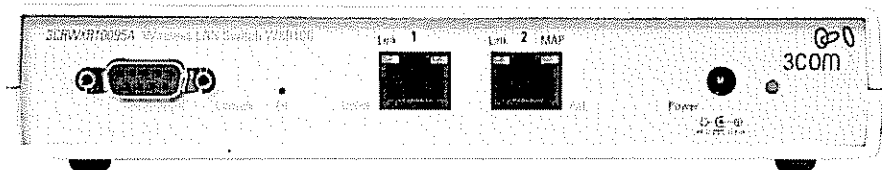
### Warranty and Other Services

One Year Limited Hardware Warranty

Limited Software Warranty for 90 days

90 days of telephone technical support

Refer to [www.3com.com/warranty](http://www.3com.com/warranty) for details



## ORDERING INFORMATION

### PRODUCT DESCRIPTION

3Com Wireless LAN Controller WX2200 <sup>1,2</sup>	3CRWX220095A
3Com Wireless LAN Switch WX1200 <sup>1,2</sup>	3CRWX120695A
3Com WXR100 Remote Office Wireless LAN Switch <sup>1,2</sup>	3CRWXR10095A

### Options for Wireless LAN Controllers WX2200

3Com Wireless LAN Controller 24 MAP License Upgrade <sup>3</sup>	3CWX4400L24A
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-T SFP	3CSFP93
3Com 1000BASE-LH SFP	3CSFP97

### Wireless LAN Controllers and MAP License Upgrade Bundles

3Com Wireless LAN Controller WX2200 with 48-MAP License <sup>1,2</sup>	3CRBWX220095A4B
3Com Wireless LAN Controller WX2200 with 72-MAP License <sup>1,2</sup>	3CRBWX220095A72
3Com Wireless LAN Controller WX2200 with 96-MAP License <sup>1,2</sup>	3CRBWX220095A96
3Com Wireless LAN Controller WX2200 with 120-MAP License <sup>1,2</sup>	3CRBWX220095A120

### 3Com Wireless LAN Switch Manager

3Com Wireless LAN Switch Manager <sup>2</sup>	3CWXM10A
(supports up to 10 3Com wireless LAN controllers and/or switches)	
3Com Wireless LAN Switch Manager Upgrade <sup>4</sup>	3CWXMUPA

### 3Com Wireless LAN Managed Access Points

3Com Wireless LAN Managed Dual Radio 802.11n Access Point 3950 <sup>1,5</sup>	3CRWX395075A
3Com Wireless LAN Managed Access Point 3850 <sup>1,5</sup>	3CRWX385075A
3Com Wireless LAN Managed Access Point 3750 <sup>1,5</sup>	3CRWX375075A
3Com Wireless LAN Managed Access Point 3150 <sup>1,5</sup>	3CRWX315075A
3Com Wireless LAN Managed Access Point 2750 <sup>1,5</sup>	3CRWX275075A

### PRODUCT DESCRIPTION

Options for Wireless LAN Controller WX4400 <sup>6</sup>	3COM SKU
3Com Wireless LAN Controller 24 MAP License Upgrade <sup>7</sup>	3CWX4400L24A
3Com Wireless LAN Controller WX4400 Spare Power Supply	3CWX4400RPSA
3Com 1000BASE-SX GBIC	3CGBIC91
3Com 1000BASE-LX GBIC	3CGBIC92

### 3Com Global Services

3Com Wireless LAN Site Survey, Network Health Check, Installation Services and Express <sup>SM</sup> Maintenance	www.3com.com/services_quote
3Com University Courses	www.3com.com/3comu

1 Not available in all countries; please check local reseller or 3Com office for local availability

2 Software upgrades are only available to customers with 3Com maintenance agreements

3 Up to seven additional 24-MAP licenses can be purchased per WX 2200 wireless controller, supporting a total of up to 192 MAPs per wireless controller.

4 Upgrades 3CWXM10A to support up to 1 000 wireless controller WXR100s or 128 WX2200s

5 Operates only with a 3Com Wireless LAN Controller WX4400, Wireless LAN Controller WX2200, Wireless LAN Switch WX1200 or WXR100 Remote Office Wireless LAN Switch

6 The 3Com Wireless LAN Controller WX4400 is no longer being sold, but some options are still available, and the product is still supported via software upgrades

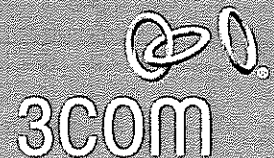
7 Up to four additional 24-MAP licenses can be purchased per WX4400 wireless controller supporting a total of up to 120 MAPs per wireless controller

Visit [www.3com.com](http://www.3com.com) for more information about 3Com solutions.

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3950-01-1175



Strengthen wireless security and mobility while consolidating user and RF management from network edge to core

## OVERVIEW

3Com® wireless LAN Managed Access Points (MAPs) deliver secure, reliable connectivity for WLAN users. An integral component of the 3Com Wireless LAN Mobility System, the 3Com MAP 3750, MAP 3150 and MAP 2750 encrypt transmissions to protect data privacy. Fully controlled by a WLAN switch or controller, they contain no local data store for sensitive data, eliminating the chance of information being compromised due to hacking or theft. The end result helps reduce capital expenses and ongoing administrative costs—all while keeping the wireless LAN secure.

## KEY BENEFITS

### SIMPLIFY CONFIGURATION, CONTROL AND OPTIMIZATION

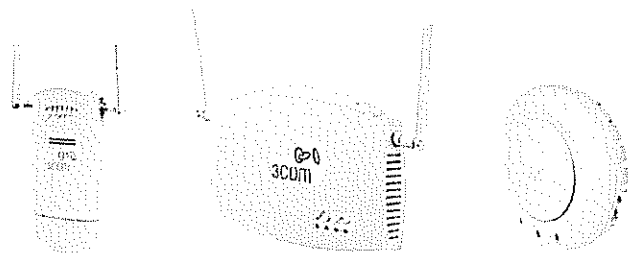
With remote management, the arduous process of initially configuring and deploying access points (APs) is vastly simplified because configuration settings are centrally distributed for consistency and accuracy. And for easier long-term management, any added MAPs inherit configuration settings from their wireless switch or controller. Automated network controls at the wireless switch improve MAP coverage and service by optimizing RF gain, assigning radio channels, balancing traffic loads and monitoring the RF environment.

### DELIVER SECURITY AND SEAMLESS MOBILITY

Local traffic encryption distributes the encryption processing across the network rather than relying on one central device. Continuous, on-demand, or scheduled RF scans can be used to locate users and identify and isolate potentially harmful rogue APs or other vulnerabilities. 3Com wireless switches and controllers integrate with backend Authorization/Authentication/Accounting (AAA) servers, consistently enforcing user and group access policies across the wireless LAN to provide secure session integrity as users roam throughout the network. No re-association or IT intervention is required.

### EASE NETWORK INTEGRATION THROUGH FLEXIBLE DEPLOYMENTS

For operational flexibility, the MAP 2750, 3150 and 3750 can be linked directly or indirectly to a 3Com WLAN switch or controller through existing wired networks, even across Layer 3 boundaries. For additional installation flexibility, the 3Com WLAN switch can also supply the MAPs with power, as well as data, directly over standard Ethernet cabling. The MAP 3150 and 3750 support both IEEE 802.11a and 802.11g users simultaneously; administrators can mix and match radio bands to meet different coverage and bandwidth needs.



From left: 3Com Wireless LAN Managed Access Points 2750, 3150 and 3750

**KEY BENEFITS**

(CONTINUED)

**BOOST RELIABILITY AND RESILIENCY**

The MAP 3750 offers dual Ethernet ports with Power over Ethernet (PoE) support. With automatic failover capability for both data and electrical power, the MAP 3750 adds a level of redundancy for demanding environments and increases network uptime.

**FEATURES****STANDARDS-BASED, HIGH-SPEED ARCHITECTURE**

**Dual-band operation**› The software-configurable dual-mode radio on the MAP 2750 operates in 802.11a or 802.11b/g bands. The MAP 3150 and 3750 radios support IEEE 802.11a and 802.11b/g simultaneously for user flexibility.

**High-speed wireless performance**› IEEE 802.11a offers speeds up to 54 Mbps at distances up to 50 meters (164 feet); IEEE 802.11g offers speeds up to 54 Mbps at distances up to 100 meters (328 feet).

**Diversity radio antennas**› For excellent performance and coverage in high multi-path environments, the MAP 2750 and 3150 ship with external dual-band omnidirectional antennas; the MAP 3750 has integrated (internal) omnidirectional antennas.

**SECURITY**

**Strong, multiple encryption**› IEEE 802.11i WPA2 Advanced Encryption Standard (AES), WPA dynamic Temporal Key Integrity Protocol (TKIP) and Wi-Fi Equivalent Privacy (WEP) packet encryption help ensure strong data security.

**Virtual private group support**› Administrators can independently encrypt and isolate subnets or VLANs using the same SSID.

**RF multi-band sweeps**› Scans of the RF environment search for rogue access points, ad-hoc users and sources of RF interference.

**Theft- and hacker-safe**› No local data store of sensitive network data means that if a MAP is stolen, no secure information goes with it.

**INSTALLATION EASE AND FLEXIBILITY**

**Simple installation**› No pre-staging or pre-configuration is required for new MAPs; replacement MAPs inherit configuration information from their WLAN switch or controller.

**Flexible deployment topologies**› MAPs can be directly and/or remotely connected to their WLAN switch and/or controller, offering a wide variety of flexible deployment scenarios.

**PoE support**› Both data and power are supplied by a 3Com wireless switch or any 802.11af-compliant device over Ethernet cabling, eliminating the need for power adapters, power cords, or AC outlets.

**Dual-mode external antenna options**› A variety of external dual-mode antennas are supported for flexible installing options.

**RESILIENCY**

**PoE and data port redundancy**› If the MAP loses either the LAN or PoE connection on either port, it will automatically failover to the other port, increasing network uptime (MAP 3750 only).

**COMPREHENSIVE MANAGEMENT AND CONTROL**

**Automated transmit power and radio channel assignment**› Transmit power settings and radio channel assignments can be set to optimize the RF cell size and to support international requirements.

**Remote management**› Channel number, power level, SSIDs and security settings are all handled by the wireless LAN switch or controller for additional security; MAPs are not operational in stand-alone mode.

SPECIFICATIONS	MAP 2750	MAP 3150	MAP 3750
<b>SYSTEM REQUIREMENTS</b>	3Com Wireless LAN Controller WX4400. Wireless LAN Controller WX2200. Wireless LAN Switch WX1200, or WXR100 Remote Office Wireless LAN Switch; 3Com Wireless LAN Switch Manager (recommended)		
<b>TOTAL PORTS</b>	1	1	2
10BASE-T/100BASE-TX IEEE 802.3af-compatible PoE port with auto-negotiation			
<b>MEDIA INTERFACES</b>	RJ-45; IEEE 802.11a, 802.11b, 802.11g		
<b>DATA RATES</b>	54, 48, 36, 24, 18, 12, 9, 6 Mbps; Orthogonal Frequency Division Multiplexing (OFDM), with automatic fallback		
IEEE 802.11a/g	11, 5.5, 2, 1 Mbps; Complementary Code Keying (CCK), with automatic fallback		
IEEE 802.11b			
<b>FREQUENCY BAND</b>	5.15-5.825 GHz		
IEEE 802.11a	2.4 GHz		
IEEE 802.11b/g	CSMA/CA		
<b>MEDIA ACCESS PROTOCOL</b>	CSMA/CA		
<b>OPERATING CHANNELS</b>	Channel availability depends on local country regulations. Wireless LAN system administrator must choose correct country of operation. Channels are then automatically configured to comply with specified country's regulations.		
<b>OPERATING RANGE</b>	up to 50 meters (164 ft) transmit and receive		
IEEE 802.11a:	up to 100 meters (328 ft) transmit and receive		
IEEE 802.11b/g			
<b>DIVERSITY ANTENNAS</b>	Two external dual-band 2.4-2.48/5.15-5.825 GHz, 2dBi omni-directional antennas. Two internal (integrated) dual-band 2.4-2.48/5.15-5.825 GHz, 2dBi omnidirectional antennas. Additional optional antennas are also available on the 3750.		
<b>TRANSMIT POWER SETTINGS</b>	Power settings for the US, in accordance with FCC regulations, are shown first below. In Europe, the Middle East, and many other countries the output power level is further restricted and these limits are shown between the {} symbols. The product will not exceed these output limits whenever such regulatory restrictions apply.		
<b>IEEE 802.11a</b>			
6 to 24 Mbps	≥20 dBm {18 dBm}	≥18 dBm	≥20 dBm {18 dBm}
24 to 36 Mbps	≥19 dBm {18 dBm}	≥18 dBm	≥19 dBm {18 dBm}
48 to 54 Mbps	≥16 dBm {16 dBm}	≥16 dBm	≥16 dBm {16 dBm}
<b>IEEE 802.11b/g</b>			
1 to 24 Mbps	≥19 dBm {18 dBm}	≥18 dBm	≥20 dBm {18 dBm}
36 Mbps	≥19 dBm {18 dBm}	≥18 dBm	≥17 dBm {17 dBm}
48 to 54 Mbps	≥19 dBm {18 dBm}	≥16 dBm	≥17 dBm {17 dBm}
<b>RECEIVE SENSITIVITY</b>			
<b>IEEE 802.11a</b>			
6 Mbps	≤-87 dBm	≤-87 dBm	≤-86 dBm
12 Mbps	≤-84 dBm	≤-84 dBm	≤-84 dBm
24 Mbps	≤-79 dBm	≤-79 dBm	≤-78 dBm
36 Mbps	≤-75 dBm	≤-75 dBm	≤-75 dBm
48 Mbps	≤-72 dBm	≤-72 dBm	≤-69 dBm
54 Mbps	≤-71 dBm	≤-71 dBm	≤-67 dBm
<b>IEEE 802.11b/g</b>			
1 Mbps	≤-95 dBm	≤-95 dBm	≤-93 dBm
2 Mbps	≤-92 dBm	≤-92 dBm	≤-90 dBm
5.5 Mbps	≤-91 dBm	≤-91 dBm	≤-88 dBm
6 Mbps	≤-89 dBm	≤-89 dBm	≤-88 dBm
11 Mbps	≤-88 dBm	≤-88 dBm	≤-85 dBm
12 Mbps	≤-86 dBm	≤-86 dBm	≤-86 dBm
24 Mbps	≤-81 dBm	≤-81 dBm	≤-80 dBm
36 Mbps	≤-77 dBm	≤-77 dBm	≤-77 dBm
48 Mbps	≤-73 dBm	≤-73 dBm	≤-72 dBm
54 Mbps	≤-72 dBm	≤-72 dBm	≤-71 dBm
<b>ANTENNA</b>	2 removable 2dB gain antennas with R-SMA connectors for external antennas.		2 R-SMA connectors for external antennas
<b>POWER CONSUMPTION</b> (from PoE ports)	6 W maximum	7.2 W maximum (both radios active)	11a mode: 10 W; 11g mode: 10 W; 11a+b/g mode: 12.95 W
<b>SECURITY</b>			
WEP 40-/64- and 104-/128-bit encryption	Yes	Yes	Yes
TKIP WPA and WPA2 (IEEE 802.11i/RSN) 64- and 128-bit AES encryption	Yes	Yes	Yes
Multiple broadcast SSID support at the MAP	Yes	Yes	Yes

SPECIFICATIONS (CONTINUED)	MAP 2750	MAP 3150	MAP 3750
IEEE 802.1X network login	Yes	Yes	Yes
IEEE 802.11i or 802.1x RADIUS authentication	Yes	Yes	Yes
Access Control Lists (ACLs) and VLAN support at the wireless switch/ controller	Yes	Yes	Yes
Kensington Security Slot	No	Yes	Yes
<b>MANAGEMENT</b>	Remote management with Web browser over SSL or HTTPS; command line interface over SSH v2 or Telnet		
<b>LEDS</b>	Power: 10/100 Mbps. 802.11a. 11b or 11g activity	Power: 10/100 Mbps. 802.11b/g or 11a activity	Radio 1. radio 2. health
<b>STANDARDS CONFORMANCE</b>	IEEE 802.11a, 802.11b, 802.11g, 802.11i, 802.3, 802.3af, 802.1X; WEP, AES, WPA, WPA2, WI-FI CERTIFIED		
<b>REGULATORY/AGENCY APPROVALS</b>			
Safety	UL 60950 2000 +ZB and ZC deviations, EN 60950 1999, CSA 22.2 60950 3rd edition, NOM-119 SCFI, AS/NZS 60950 2000		
EMC/EMI	EN 55022 Class A, FCC 15 Subpart B Class A, EN 60111 3-2, ICES-003 Class A, VCCI Class A, CNS 13438 Class A, EN 55024		
<b>DIMENSIONS AND WEIGHT</b>			
Height	16.6 cm (6.50 in)	15.9 cm (6.25 in)	16.8 cm (6.60 in)
Width	8.3 cm (3.25 in)	21.9 cm (8.63 in)	16.8 cm (6.60 in)
Depth	3.2 cm (1.25 in)	4.1 cm (1.63 in)	4.7 cm (1.85 in)
Weight	200 g (7.0 oz)	544 g (1.2 lb)	354 g (12.5 oz)
<b>ENVIRONMENTAL RANGES</b>			
Operating temperature	-10 to 40°C (14 to 104°F)		0 to 50°C (32 to 122°F)
Storage temperature	-40 to 70°C (-40 to 158°F)		
Humidity	10 to 95% non-condensing		
<b>PACKAGE CONTENTS</b>			
3Com WLAN managed access point	Yes	Yes	Yes
Two external dual-band 2.4-2.48/5.15-5.825 GHz antennas	Yes	Yes	N/A
Mounting hardware	Yes	Yes	Yes
CAT 5 cable	N/A	1.6 m	N/A
Quick Start guide	Yes	Yes	Yes
Product operating range sheet	N/A	Yes	N/A
Warranty booklet	Yes	Yes	Yes
<b>WARRANTY AND OTHER SERVICES</b>	Limited Hardware Warranty for one year. 90 days free technical support. Refer to <a href="http://www.3com.com/warranty">www.3com.com/warranty</a> for details		

## ORDERING INFORMATION

### PRODUCT DESCRIPTION

### 3COM SKU

3Com Wireless LAN Managed Access Point 2750	3CRWX275075A
3Com Wireless LAN Managed Access Point 3150	3CRWX315075A
3Com Wireless LAN Managed Access Point 3750	3CRWX375075A

### Wireless LAN Managed Access Point Antenna Options

3Com 6/8dBi Dual Band Omni Antenna	3CWE591
3Com 3/4dBi Dual Band Ceiling Mount Antenna	3CWE592
3Com 4/6dBi Dual Band Hallway Antenna	3CWE597
3Com 8/10dBi Dual Band Panel Antenna <sup>1</sup>	3CWE598
3Com Ultra Low Loss 6 Foot Antenna Cable	3CWE580

### Wireless LAN Controller, Switches and Software<sup>2</sup>

3Com Wireless LAN Controller WX4400	3CRWX440095A
3Com Wireless LAN Controller WX2200	3CRWX220095A
3Com Wireless LAN Switch WX1200	3CRWX120095A
3Com WXR100 Remote Office Wireless LAN Switch	3CRWXR10095A
3Com Wireless LAN Switch Manager	3CWXM10A

### 3Com Global Services

3Com Wireless LAN Site Survey, Network Health Check.

Installation Services and Express<sup>SM</sup> Maintenance

[www.3com.com/services\\_quote](http://www.3com.com/services_quote)

3Com University Courses

[www.3com.com/3comu](http://www.3com.com/3comu)

<sup>1</sup> For use only with the MAP 3750.

<sup>2</sup> LAN Controller or LAN Switch and Switch Manager software required for operation of managed access point

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.

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3Com is publicly traded on NASDAQ under the symbol COMS

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Highly affordable,  
entry-level managed  
connectivity for  
medium-sized  
businesses and  
branch office  
networks

## OVERVIEW

The 3Com® Switch 4210 is a family of Layer 2 entry-level 10/100 LAN switches with enterprise-class QoS, security and management features, delivering high value for network administrators looking for an economical edge device. Available Power over Ethernet (PoE) models are ideal for voice over IP and wireless networking installations; non-PoE models are also available for simple port expansion

Setting them apart from lower-end "smart managed" devices, the Switch 4210 supports an industry-standard Command Line Interface, Web-based administration, and SNMP management. Switches can be clustered in any combination up to thirty-two units for simplified administration

In addition to rack-mount 26- and 52-port models, the Switch 4210 is available in small form factor units with nine or 18 ports for enterprise branch and small workgroup deployments, in both PoE and non-PoE variants, with the same manageability as the larger rack-mount versions

The Switch 4210 comes with 3Com's lifetime warranty covering the unit, power supply and fan; Advanced Hardware Replacement with next business day shipment is available in most regions

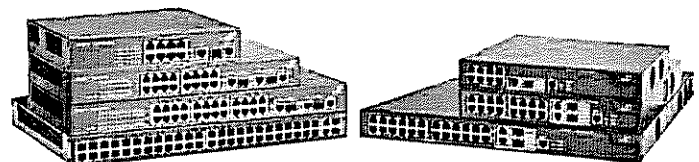
## KEY BENEFITS

### ECONOMICAL, FLEXIBLE LAYER 2 NETWORKING

3Com Switch 4210 switches deliver enterprise-class 10/100 Layer 2 edge connections with Gigabit uplinks. All models are wire-speed and non-blocking for optimum performance. These switches feature combination ports that can run in one of two modes: 10/100/1000 Mbps connections over copper Ethernet cabling, or 100 or 1000 Mbps over fiber cabling using SFP mini-GBIC technology

### POWER OVER ETHERNET FOR VOICE-READY NETWORKING

Industry-standard IEEE 802.3af Power over Ethernet is supported on three switches: the 9-, 18- and 26-port PWR models. These switches are ideal for workgroups where phones or wireless access points connect together with user end stations, reducing costs and simplifying the installation of converged voice and wireless networks by providing power over the same Ethernet cabling as used for data



left From top: 3Com Switch 4210 9-Port, Switch 4210 18-Port, Switch 4210 26-Port, Switch 4210 52-Port  
right From top: Switch 4210 PWR 9-Port, Switch 4210 PWR 18-Port, Switch 4210 PWR 26-Port



## KEY BENEFITS (CONTINUED)

### PLUG AND PLAY CONVENIENCE

The Switch 4210 automatically selects the optimal speed and duplex mode of cables connected to it, preventing mis-configuration of the network. The switches also detect and adjust to cross-over or straight-through cable connections through its auto-MDI/MDIX feature, which eliminates the need for specific cables.

Link Aggregation Control Protocol (IEEE 802.3ad) further simplifies network configuration, automatically sensing the presence of duplicate links and aggregating them into trunks, thereby maximizing network traffic flow capability.

### SECURE NETWORKING

The Switch 4210 helps ensure secure network access using standard IEEE 802.1X network login with RADIUS Authenticated Device Access (RADA), a 3Com innovation. RADIUS support enables user authentication, while the switch is also able to authenticate attached devices (IP phones, for example) via their MAC address for additional endpoint security.

A "Guest" VLAN feature allows temporary users on the network to access the internet, for example, while restricting broader access to sensitive internal resources.

Additional security measures—Secure Shell version 2 (SSH v2) and SNMP v3 with authentication and encryption of network management traffic—are enforced when accessing switch management utilities.

### ENTERPRISE-LEVEL NETWORK CONTROL AND MANAGEMENT

The Switch 4210 family is easy to use and manage, designed to increase business productivity by reliably supporting business applications.

Features usually found only in higher-end enterprise switches are included: a robust industry-standard command line interface is available, along with an embedded web-based interface; the switch also functions with SNMP management tools like the 3Com Enterprise Management System, Network Director or Network Supervisor; and an internal file system is supported, with the ability to remotely backup and restore configuration files.

Cluster together up to 32 devices for easy administration, with single IP management across 3Com switching lines—with mixed clusters of Switch 4210, 4200G, 4500G, 5500 and 5500G devices.

IPv6 management is also supported; there is no need to replace the switch when upgrading to the latest Internet Protocol standard.

### PROVEN OPERATING SYSTEM

The 3Com Operating System employed in the Switch 4210 is the same powerful software used in the 3Com Switch 8800 and Switch 7700 modular switches, the Switch 5500 and 4500 stackables, and 3Com enterprise routers. This consolidates administration over the entire switching infrastructure and provides edge-to-core visibility and control when using 3Com management applications such as 3Com Enterprise Management Suite and 3Com Network Director.

### WARRANTY AND SERVICES

3Com gives a Limited Lifetime Hardware Warranty on the Switch 4210 Family, including the power supply and fan.

Advance Hardware Replacement, with Next Business Day shipment in most regions, and Limited Lifetime software updates, is provided. See [www.3com.com/warranty](http://www.3com.com/warranty) for details.

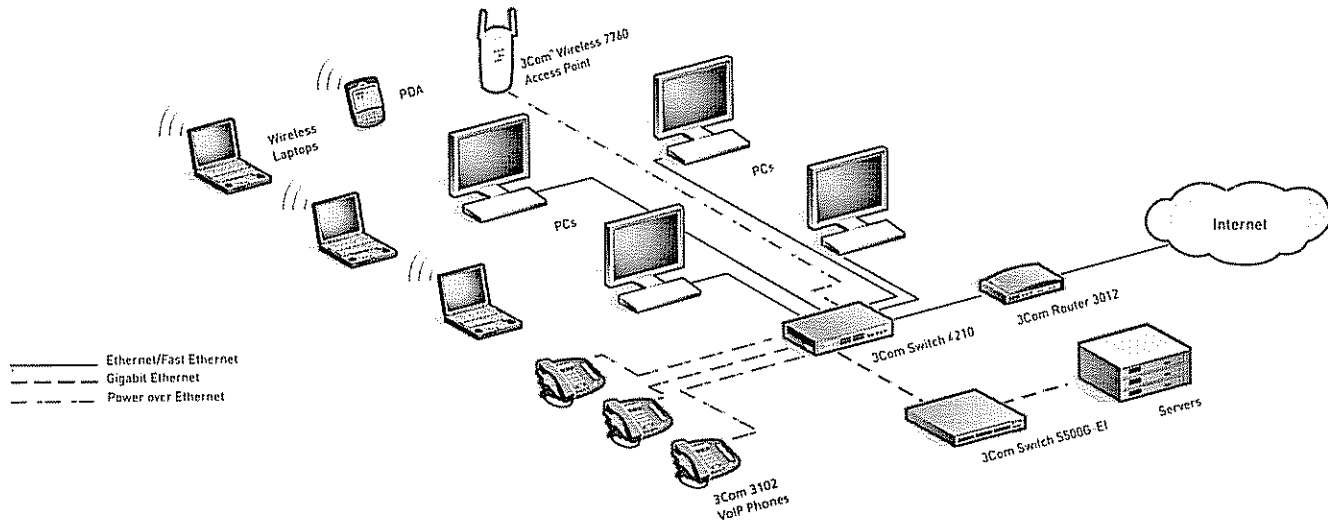
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## FEATURE HIGHLIGHTS

Feature	Description
IEEE 802.1X network access control	Standards-based security combined with RADIUS authentication.
RADIUS Authenticated Device Access (RADA)	Authentication of attached devices via MAC address for an additional level of endpoint security
Bandwidth rate limiting and four priority queues	Enforce controls on each port for efficient use of network resources and prioritization of delay-sensitive traffic
"Dual-personality" Gigabit Ethernet interfaces	Choice of copper or fiber media for flexible uplinks
Multicast filtering with IGMP snooping versions 1, 2 and 3	Eliminate unneeded traffic on the network. Improve network efficiency
Spanning Tree, Rapid Spanning Tree, and Multiple Spanning Tree support	Improve network resiliency and availability
Power over Ethernet models	Prepare the network for Voice over IP or wireless access points
100 MB and 1000 MB fiber connections	Use SFPs to add fiber connections to the network. Dual-speed support makes network migration easier.
Secure management	Authentication and encryption of management traffic via Secure Shell (SSH) version 2 and SNMP version 3
Fanless operation, small footprint	Non-PoE units run silently and occupy minimal space.
3Com Operating System	Proven software featured in 3Com premium enterprise switches such as the Switch 4500, 5500, 7700 and 8800 families and enterprise routers like the Router 6000, 5000 and 3000 families
Service and Support	Backed by 3Com Global Services and authorized partners with demonstrated expertise in network assessment, implementation and maintenance

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## SMALL-TO-MEDIUM LAN CONFIGURATION SUPPORTED BY THE SWITCH 4210



In the above network, 3Com Switch 4210 and Switch 5500G-EI units are managed as a single cluster.

## PRODUCT WARRANTY AND OTHER SERVICES

Warranty	3Com Limited Lifetime Warranty. For as long as the original end user owns the product, or for five years after 3Com discontinues sale of the product, whichever occurs first.
Hardware coverage	Covers the complete unit including power supply and fan.
In-warranty hardware replacement	Advanced Hardware Replacement of hardware for the duration of the warranty. In the US 48 contiguous states, this is same-day ship with next business day delivery when call received before noon Pacific time. For Canada, Alaska, and Hawaii, this is same-day ship when call received before noon Pacific time. For the rest of the world, it is next-business-day ship. Actual delivery times may vary depending on customer location. Reasonable commercial efforts apply.
Software coverage	90 days for media replacement.
Software updates*	Access to releases with incremental software features and bug fixes. For the Switch 4210, updates are all releases within the licensed 3Com OS software level.
Online Knowledgebase support*	Access to online troubleshooting tool for the duration of the warranty.

\* These services are not included as part of the Warranty and 3Com reserves the right to modify or cancel this offering at any time, without advance notice. This offering is not available where prohibited by law. Services are effective at warranty start date and are enabled with product registration. Customers receive a user ID with eSupport registration.

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## SERVICE AND SUPPORT

3Com Global Services offers the resources and talents of a major corporation plus more than two decades of experience in resolving network challenges and delivering business benefits to enterprises around the world

Global support with a personalized focus in the local language helps drive productivity and minimize expenses. Because 3Com understands both the technology and the business, we're the partner you need to maintain your competitive edge and remain strong.

### Suggested Service, Support and Training Offerings

Network Health Check	<p>An activity-auditing service focused on improving network performance and productivity</p> <p>Includes traffic monitoring, utilization analysis, problem identification, and asset deployment recommendations</p> <p>Extensive report provides blueprint for action</p>
Network Installation and Implementation Services	<p>Experts set-up and configure equipment and integrate technologies to maximize functionality and minimize business disruption</p> <p>For large and complex sites, implementation services include personalized configuration, project management, extended testing and coaching on network administration</p>
Project Management	<p>Provides extra focus and resources that special projects demand</p> <p>3Com engineers manage entire process from initial specifications to post-project review</p> <p>Using structured methodology, requirements are identified, projects planned and progress of implementation activities tracked</p>
3Com Guardian <sup>SM</sup> Maintenance Service	<p>This service provides comprehensive on-site support and includes advance hardware replacement, telephone technical support and software upgrades</p>
3Com Express <sup>SM</sup> Maintenance Service	<p>This service provides speedy access to 3Com shipment of advance hardware replacements, software upgrades and telephone support</p>
3Com University	<p>Self-paced and instructor-led technology and product courses, plus certification programs</p>

## SPECIFICATIONS

All information in this section is relevant to all members of the 3Com Switch 4210 family, unless otherwise stated

### CONNECTORS

#### 9-port

8 10BASE-T/100BASE-TX ports and 1 dual-personality 10/100/1000 or SFP port

10/100 and 10/100/1000 ports are auto-negotiating, configured as auto-MDI/MDIX

RJ-45 console port

IEEE 802.3af in-line power on 4 10/100 ports (PWR model)

#### 18-port

16 10BASE-T/100BASE-TX ports and 2 dual-personality 10/100/1000 or SFP ports

10/100 and 10/100/1000 ports are auto-negotiating, configured as auto-MDI/MDIX

RJ-45 console port

IEEE 802.3af in-line power on 8 10/100 ports (PWR model)

#### 26-port

24 10BASE-T/100BASE-TX ports and 2 dual-personality 10/100/1000 or SFP ports

10/100 and 10/100/1000 ports are auto-negotiating, configured as auto-MDI/MDIX

RJ-45 console port

IEEE 802.3af in-line power on all 10/100 ports (PWR model)

#### 52-port

48 10BASE-T/100BASE-TX and 2 10/100/1000 ports, and 2 SFP ports 10/100 and 10/100/1000 ports are auto-negotiating, configured as auto-MDI/MDIX

RJ-45 console port

### PERFORMANCE

#### 9-port

3.6 Gbps switching capacity (maximum)  
2.7 Mpps forwarding rate (maximum)

#### 18-port

5.2 Gbps switching capacity (maximum)  
3.9 Mpps forwarding rate (maximum)

#### 26-port

8.8 Gbps switching capacity (maximum)  
6.6 Mpps forwarding rate (maximum)

#### 52-port

17.6 Gbps switching capacity (maximum)  
13.1 Mpps forwarding rate (maximum)

#### All models

Switch fabric bandwidth: 19.2 Gbps  
Wirespeed performance across ports in full mesh configuration  
Store-and-forward switching;  
latency <10 µs

### LAYER 2 SWITCHING

8,196 MAC addresses in address table  
64 static MAC addresses (in addition to default address)

256 Port-based VLANs (IEEE 802.1Q)

IEEE 802.3ad Link Aggregation Control Protocol (LACP); automated and manual aggregation

Per-switch trunk groups:

- 2 groups (9- and 18-port)
- 3 groups (26-port)
- 6 groups (52-port)
- 8 10/100 ports or 2 Gigabit ports per group

Auto-negotiation of port speed and duplex

IEEE 802.3x full-duplex flow control

Back pressure flow control for half duplex

Broadcast storm suppression

IEEE 802.1D Spanning Tree Protocol (STP)

IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)

IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

Bridge Protocol Data Unit (BPDU) protection

Internet Group Management Protocol (IGMP) snooping v1, 2 and 3

Filtering for 128 multicast groups

### CONVERGENCE

Four hardware queues per port

Strict priority queuing

IEEE 802.1p Class of Service/Quality of Service (CoS/QoS) on egress

### SECURITY

IEEE 802.1X Network login user authentication:

- EAP over LAN (EAPoL) transport with EAP-MD5, PAP, CHAP, PEAP and EAP-TLS authentication
- Multiple users per port
- RADIUS server authentication

RADIUS Authenticated Device Access (RADA): authenticate devices based on MAC address against RADIUS server

Port-based MAC address Disconnect Unknown Device (DUD)

SNMP v3 encryption

SSH v2

Denial of Service protection

### CLUSTERED STACKING

Single IP address and management interfaces for centralized control

Up to 32 devices per cluster across Switch 4210, 4200G, 4500G, 5500 and 5500G devices

### MANAGEMENT

CLI via console or Telnet

Embedded web management interface  
System configuration with SNMP v1, 2c and 3

Remote Monitoring (RMON) groups statistics, history, alarm and events

Clear text configuration files for easy administration with backup and restore

DHCP Relay and UDP Helper

System file transfer mechanisms: FTP, Trivial FTP (TFTP)

3Com management applications:

- 3Com Enterprise Management Suite for flexible, extensible management in advanced enterprise IT environments
- 3Com Network Director for comprehensive, turn-key network management for the enterprise
- 3Com Network Supervisor for basic, turn-key network management for mid-market businesses
- 3Com Network Access Manager for IEEE 802.1X and RADA integration with IAS/Active Directory

### DIMENSIONS

#### 9-port non-PWR

Height: 45 mm (1.7 in or 1 RU)

Width: 230 mm (9.1 in)

Depth: 160 mm (6.3 in)

Weight: 1.06 kg (2.3 lbs)

#### 18-port non-PWR

Height: 45 mm (1.7 in or 1 RU)

Width: 360 mm (14.2 in)

Depth: 160 mm (6.3 in)

Weight: 1.53 kg (3.4 lbs)

#### 26-port non-PWR

Height: 45 mm (1.7 in or 1 RU)

Width: 440 mm (17.3 in)

Depth: 160 mm (6.3 in)

Weight: 2.14 kg (4.7 lbs)

#### 52-port non-PWR

Height: 45 mm (1.7 in or 1 RU)

Width: 440 mm (17.3 in)

Depth: 230 mm (9.1 in)

Weight: 3.10 kg (6.8 lbs)

#### 9-port PWR

Height: 45 mm (1.7 in or 1 RU)

Width: 300 mm (11.8 in)

Depth: 233 mm (9.2 in)

Weight: 2.22 kg (4.9 lbs)

#### 18-port PWR

Height: 45 mm (1.7 in or 1 RU)

Width: 300 mm (11.8 in)

Depth: 275 mm (10.8 in)

Weight: 2.7 kg (6.0 lbs)

#### 26-port PWR

Height: 45 mm (1.7 in or 1 RU)

Width: 440 mm (17.3 in)

Depth: 430 mm (16.9 in)

Weight: 6.09 kg (13.4 lbs)

### MOUNTING

9- and 18-port models are free-standing

26- and 52-port models are free-standing or 19" rack mount

**SPECIFICATIONS**

(CONTINUED)

**POWER SUPPLY**

AC Line Frequency: 50/60 Hz  
 Input Voltage: 90-240 VAC  
 Current rating [AC]  
 9-, 18-, and 26-port non-PWR: 0.4A  
 52-port non-PWR: 0.8A  
 9-port PWR: 2.0A  
 18-port PWR: 3.5A  
 26-port PWR: 8.0A

**Power consumption [max]**

9-port non-PWR: 10 W  
 18-port non-PWR: 12 W  
 26-port non-PWR: 14 W  
 52-port non-PWR: 25 W  
 9-port PWR: 20 W, plus up to 62W for PoE  
 18-port PWR: 25 W, plus up to 123W for PoE  
 26-port PWR: 25W, plus up to 370W for PoE

**ENVIRONMENTAL REQUIREMENTS**

Operating temperature: 0° to 40°C  
 (32° to 104°F)

Storage temperature: -40° to 70°C  
 (-40° to 158°F)

Humidity (operating and storage):  
 up to 95% non-condensing  
 Standard: EN 60068 (IEC 68)

**Heat dissipation [max]**

9-port non-PWR: 35 BTU/hour  
 18-port non-PWR: 42 BTU/hour  
 26-port non-PWR: 50 BTU/hour  
 52-port non-PWR: 87 BTU/hour  
 9-port PWR: 70 BTU/hour; excludes heat from PoE  
 18-port PWR: 87 BTU/hour; excludes heat from PoE  
 26-port PWR: 87 BTU/hour; excludes heat from PoE

**RELIABILITY**

(MTBF @ 25°C)  
 9-port: 54 years (473,000 hours)  
 18-port: 50 years (438,000 hours)  
 26-port: 49 years (430,000 hours)  
 52-port: 40 years (350,000 hours)  
 9-port PWR: 53 years (465,000 hours)  
 18-port PWR: 46 years (403,000 hours)  
 26-port PWR: 41 years (359,000 hours)

**IEEE STANDARDS SUPPORTED**

IEEE 802.1D Spanning Tree Protocol (STP)  
 IEEE 802.1p QoS  
 IEEE 802.1Q VLANs / VLAN tagging  
 IEEE 802.1s Multiple Spanning Tree  
 IEEE 802.1w Rapid Spanning Tree  
 IEEE 802.1X Network Login Security  
 IEEE 802.3 Ethernet  
 IEEE 802.3ad Link Aggregation (unit wide)  
 IEEE 802.3i 10BASE-T  
 IEEE 802.3u Fast Ethernet  
 IEEE 802.3x Flow control  
 IEEE 802.3z Gigabit Ethernet  
 1000BASE-X

**IETF STANDARDS**

RFC 783 TFTP Protocol  
 RFC 791 IP  
 RFC 793 TCP  
 RFC 826 Address Resolution Protocol (ARP)  
 RFC 854 Telnet  
 RFC 1157 SNMP v1, v2  
 RFC 1212 Concise MIB definitions  
 RFC 1305 Network Time Protocol (NTP) v3  
 RFC 1350 Remote software upgrade TFTP  
 RFC 1881 IPv6 address allocation management  
 RFC 1886 DNS extensions to support IPv6  
 RFC 1887 Architecture for IPv6 Unicast address allocation  
 RFC 1924 Compact representation of IPv6 addresses  
 RFC 2131 DHCP client  
 RFC 2236 Internet Group Management Protocol (IGMP) snooping  
 RFC 2284 Network login 802.1X  
 RFC 2373 IPv6 addressing architecture  
 RFC 2452 IPv6 MIB for the transmission control protocol  
 RFC 2454 IPv6 MIB for the user diagram protocol  
 RFC 2460 IPv6 specification  
 RFC 2461 Neighbor discovery for IPv6  
 RFC 2463 ICMPv6 for IPv6  
 RFC 2464 Transmission of IPv6 over Ethernet  
 RFC 2465 MIB of IPv6, textual conversations and general group  
 RFC 2466 MIB for IPv6 ICMPv6 group  
 RFC 2526 Reserved IPv6 anycast address  
 RFC 2581 TCP congestion control  
 RFC 2616 HTTP compatibility  
 RFC 2767 dual stacks IPv4 and IPv6  
 RFC 2819 RMON 4 groups  
 RFC 2865 Remote authentication dial-in user (RADIUS)  
 RFC 2866 RADIUS RFC 2138 / Accounting  
 RFC 3376 Internet Group Management Protocol (IGMP) Snooping  
 RFC 3484 Default address selection for IPv6  
 RFC 3493 Basic socket interface for IPv6  
 RFC 3513 IPv6 Addressing Architecture  
 RFC 3542 Advanced sockets API for IPv6  
 RFC 3587 IPv6 Global Unicast Address  
 RFC 4443 Internet Control Message Protocol (ICMPv6) for IPv6

**Management, including MIBs Supported**

RFC 1213 SNMP MIB II  
 RFC 1215 SNMP Traps  
 RFC 1493 Bridge MIB  
 RFC 1757 RMON I MIB  
 RFC 1907 SNMP v2c, SMI v2 and Revised MIB-II  
 RFC 2096 IP Forwarding Table MIB  
 RFC 2233 Interfaces MIB  
 RFC 2571 SNMP Framework MIB  
 RFC 2573 SNMP Notification MIB / Target MIB  
 RFC 2574 SNMPv3 MIB  
 RFC 2575 SNMP Access Control  
 RFC 2618 RADIUS Authentication Client MIB  
 RFC 2620 RADIUS Accounting Client MIB  
 RFC 2665 EtherLike MIB  
 RFC 2674 Bridge MIB Extensions Q-Bridge, P-Bridge, Extensions  
 RFC 2737 Entity MIB  
 RFC 2819 RMON I MIB  
 RFC 2863 Disc-sizing MIB  
 RFC 2925 Definitions of managed objects for remote ping, traceroute, and lookup operations  
 RFC 3414 SNMP User based SM MIB  
 RFC 3415 SNMP View based ACM MIB  
 RFC 3418 SNMP v2 MIB

**EMISSIONS/AGENCY APPROVALS**

EN 55022 Class A  
 FCC Part 15 Subpart B Class A  
 ICES-003 Class A  
 VCCI Class A

**IMMUNITY**

EN 55024

**SAFETY AGENCY CERTIFICATIONS**

UL 60950-1  
 EN 60950-1  
 CSA 2.22 # 60950  
 IEC 60950-1  
 EU RoHS Compliant

**WARRANTY AND OTHER SERVICES**

Limited Lifetime Hardware Warranty, including fans and power supply  
 Limited Software Warranty for 90 days  
 Advance Hardware Replacement with Next Business Day shipment in most regions  
 Limited Lifetime software updates  
 90 days of telephone technical support  
 Refer to [www.3com.com/warranty](http://www.3com.com/warranty) for details

## ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
3Com Switch 4210 9-Port	3CR17331-91
3Com Switch 4210 18-Port	3CR17332-91
3Com Switch 4210 26-Port	3CR17333-91
3Com Switch 4210 52-Port	3CR17334-91
3Com Switch 4210 PWR 9-Port	3CR17341-91
3Com Switch 4210 PWR 18-Port	3CR17342-91
3Com Switch 4210 PWR 26-Port	3CR17343-91
<b>Fast Ethernet SFP Transceivers</b>	
3Com 100BASE-FX SFP	3CSFP81
3Com 100BASE-LX10 SFP	3CSFP82
3Com 100BASE-BX10-D SFP	3CSFP85
3Com 100BASE-BX10-U SFP	3CSFP86
<b>Gigabit SFP Transceivers</b>	
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-LH SFP	3CSFP97
<b>Accessories</b>	
Rack Mount Kit for Switch 4210 9-Port	2150A025
Rack Mount Kit for Switch 4210 18-Port	2150A01A
Rack Mount Kit for Switch 4210 26-Port	Included
Rack Mount Kit for Switch 4210 52-Port	Included
Rack Mount Kit for Switch 4210 PWR 9-Port	2150A026
Rack Mount Kit for Switch 4210 PWR 18-Port	2150A026
Rack Mount Kit for Switch 4210 PWR 26-Port	Included
<b>3Com Global Services</b>	
3Com Network Health Check, Installation Services, and Express Maintenance	<a href="http://www.3com.com/services_quote">www.3com.com/services_quote</a>
3Com University Courses	<a href="http://www.3com.com/3comu">www.3com.com/3comu</a>

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.

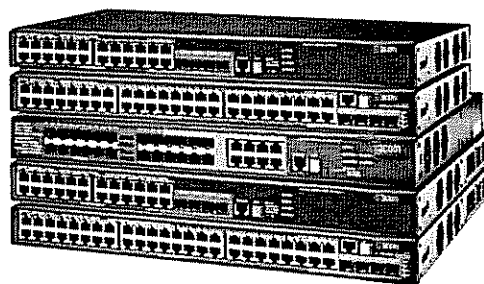
3Com Corporation, Corporate Headquarters, 350 Campus Drive, Marlborough, MA 01752-1064  
3Com is publicly traded on NASDAQ under the symbol COMS

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# 3COM® SWITCH 4800G GIGABIT FAMILY

Premium Gigabit switches with enhanced IPv4/IPv6 networking, and maximum security, convergence and intelligence



Shown above from top: 3Com Switch 4800G 24-Port. Switch 4800G 48-Port. Switch 4800G 24-Port SFP. Switch 4800G PWR 24-Port. Switch 4800G PWR 48-Port

## OVERVIEW

The 3Com® Switch 4800G Gigabit Family delivers outstanding security, reliability and multi-service support capabilities for robust switching at the edge or aggregation layer of large enterprise networks and campus networks, or in the core layer of medium- and small-sized enterprise networks. The family is comprised of Layer 2/3/4 Gigabit Ethernet switches that can accommodate the most demanding applications, providing resilient and secure connectivity and the latest traffic-prioritization technologies to optimize applications on converged networks.

Designed for maximum flexibility, these switches are available with 24 or 48 Gigabit ports. Power over Ethernet (PoE) and non-PoE models are offered, with optional 10-Gigabit expansion capability and SFP mini-GBIC Gigabit combo ports for fiber flexibility. The all-SFP model with dual power supplies, for highest availability applications, allows for very flexible fiber with copper Gigabit connectivity.

Each of the five 3Com Switch 4800G models comes in a convenient, stackable 1U-high enclosure:

**Switch 4800G 24-Port.** 24 10/100/1000 Mbps ports with two dual-port 10-Gigabit slots; includes four SFP Gigabit combo ports

**Switch 4800G 48-Port.** 48 10/100/1000 Mbps ports with two dual-port 10-Gigabit slots; includes four SFP Gigabit combo ports

**Switch 4800G PWR 24-Port.** 24 10/100/1000 Mbps PoE ports with two dual-port 10-Gigabit slots; includes four SFP Gigabit combo ports

**Switch 4800G PWR 48-Port.** 48 10/100/1000 Mbps PoE ports with two dual-port 10-Gigabit slots; includes four SFP Gigabit combo ports

**Switch 4800G 24-Port SFP.** 24 SFP Gigabit ports with two dual-port 10-Gigabit slots and dual removable power supplies, with up to two power-cord inputs; includes eight 10/100/1000 Mbps combo ports



## KEY BENEFITS

### HIGH EXPANDABILITY FOR INVESTMENT PROTECTION

All models in the 3Com Switch 4800G Gigabit Family include auto-sensing 10-, 100- and 1000-Mbps connections, giving you the ability to gradually upgrade your edge connections to higher bandwidth while retaining full compatibility with slower desktops. Support for dual-speed SFPs facilitates connections to both 100 and 1000 MB fiber cabling, making network migration easier.

Two expansion slots, each supporting available 1- or 2-port 10-Gigabit extension modules, allow for the adoption of 10-Gigabit interfaces for high bandwidth unit-to-unit local connections and uplinks, helping you to protect your network investment

Every Switch 4800G model has the ability to pass and route IPv4 and IPv6 data. As an IPv4/IPv6 dual-stack platform, the switches are IPv4- and IPv6-ready, supporting the major L3 routing protocols, multicast protocols and policy routing mechanisms and ensuring a seamless migration from IPv4 to IPv6.

### PREMIUM SECURITY

Multiple layers of security are built into each Switch 4800G. Management access can be limited to known stations and unauthorized access can be prevented by encrypting management traffic with SSH for CLI access, SSL/HTTPS for web access and SNMPv3 for SNMP management access.

Advanced processor queuing mechanisms help prevent Denial of Service (DOS) attacks while DHCP servers preserve data integrity. Enhanced Access Control Lists (ACLs) restrict users to certain areas of your network. Unicast Reverse Path Finding (uRPF) technology verifies the authenticity of a route from the receiving interface to the source address, deleting the data packet if the route does not exist and preventing malicious network attacks that are based on source address spoofing.

Advanced network access control features, including IEEE 802.1X and MAC-based network login, help ensure that only authorized users get access to the network.

### MULTILAYER RELIABILITY

3Com 4800G switches interoperate with a number of link reliability technologies including Rapid Ring Protection Protocol (RRPP), a fast ring protection mechanism created by 3Com. If a link or node on the Ethernet ring fails, RRPP rapidly moves traffic to a backup link, ensuring normal operations without impacting network convergence time. Other network resiliency

features include Spanning Tree, Rapid Spanning Tree and Multiple Spanning Tree protocol support.

Hardware resiliency, delivered with available redundant power system support, allows for the continued operation of the switch in the event of a power supply failure, and supplements power for full PoE operation across all ports. For high-availability fiber connections, the Switch 4800G 24-Port SFP comes with dual 1+1 redundant power supplies with dual power inputs. All switches in this family include fault detection and alarms, power supply and fan monitoring, and remote management.

### CONVERGENCE-READY SUPPORT

Built-in PoE enables certain models of the Switch 4800G to power network-attached equipment, significantly reducing costs associated with terminal equipment cabling and management. Industry-standard IEEE 802.3af Power over Ethernet speeds deployment of VoIP, wireless access points and network-attached video surveillance camera systems.

The voice VLAN technology embedded in this family ensures the highest level of security and performance by placing voice traffic on a virtual voice network. By identifying voice streams at their ports and adding corresponding access ports to voice VLANs, the switches provide dedicated channels for voice traffic. Priority rules are then issued to ensure that voice streams are transmitted before data or video streams and conversation quality is optimal.

### UNPARALLELED QUALITY OF SERVICE

The 3Com Switch 4800G offers L2-L4 packet filtering and delivers flow classification based on source IP and MAC addresses, destination IP and MAC addresses, ports, protocols or VLANs. The switches also offer flexible queue scheduling algorithms that support settings based on ports and queues and include three scheduling modes: Strict Priority (SP), Weighted Round Robin (WRR) and SP+WRR. Committed Access Rate (CAR) provides minimum granularity of 64 kbps. Outbound and inbound port mirroring monitors and duplicates data packets for network detection and troubleshooting.

### POWERFUL, INTEGRATED MANAGEMENT CAPABILITIES

The Switch 4800G supports Simple Network Management Protocol (SNMP) versions 1/2c/3 and open network management platforms such as OpenView and the QuidView Network Management System (NMS).

The switches may also be managed via Command Line Interface (CLI), Web network management, TELNET and Huawei Group

Management Protocol (HGMP) cluster (stacking) management, making equipment management more convenient. Encryption modes such as SSH2.0, SNMPv3 and HTTPS are embedded in the Switch 4800G, ensuring that management traffic is highly secure.

MAC-based and protocol-based VLANs, combined with ACL policies in the global or VLAN mode, minimize hardware resources and simplify configuration. Inbound and outbound packets are randomly sampled and collected according to a set ratio with the sFlow function. LLDP and LLDP-MED are supported for standards-based neighbor discovery.

### REDUNDANT POWER SYSTEM SUPPORT

Four 3Com Switch 4800G models support a redundant power system (RPS) connection.

RPS units provide these benefits:

- ▶ For PWR switches, an RPS can deliver more power budget for IEEE 802.3af Power over Ethernet than what the switches alone can provide. For example, the 48-port PWR switch has a PoE power budget of 370 Watts, which means that approximately half of the ports can provide the full 802.3af PoE power of 15.4 Watts. With an RPS providing power, all 48-ports can provide a full 15.4 Watts of PoE power.
- ▶ They deliver redundant power to switches so there is continued operation should the main switch unit power supply fail. This allows for continuous operation of advanced Enterprise networks, particularly important for converged networks running IP phones on the network.

3Com switches are compatible with Eaton Powerware and 3Com H3C™ RPS solutions.

#### EATON POWERWARE RPS

3Com collaborated with Eaton Powerware for the development of a premium enterprise RPS system for 3Com switches. Eaton, an industry leader in enterprise-capable power solutions,

designed an RPS line for 3Com with standard -48V DC connections, one that stands up to the rigors of an enterprise switch network with Power over Ethernet.

These units have a customizable design, can be built for highest N+1 redundancy, can provision a full stack up to eight-high of PoE switches, support integrated battery backup units, and can be remotely monitored.

#### 3COM H3C RPS SYSTEMS

H3C Redundant Power Systems are enterprise-class power redundancy systems that work with many 3Com fixed-configuration switches, including the Switch 4800G family. 3Com Corporation manufactures networking equipment under the H3C brand for sale into many markets.

There are three H3C RPS models:

- ▶ The H3C RPS 1000 is 1U high and provides multiple power output connections to support multiple switch units at the same time. Two power rectifiers can be installed for 1+1 load sharing and power redundancy. It supports switches with -54V RPS connections, and delivers sufficient power to fully provision all PoE ports of a switch with full power redundancy.
- ▶ The RPS 800 provides selective DC outputs of +12V and -54V. This is a fixed-configuration 1U high unit with a single power rectifier and a single power connection. Sufficient redundant power is available for provisioning a single Switch 4800G 48- or 24-port non-PoE unit.
- ▶ The RPS 500 provides selective DC outputs of +12V and -54V. This is a fixed-configuration 1U high unit with a single power rectifier and a single power connection. Sufficient redundant power is available for provisioning a single Switch 4800G 24-port non-PoE unit.

The table below summarizes RPS support for the 3Com Switch 4800G.

SWITCH 4800G MODEL	RPS SUPPORT	EATON POWERWARE	H3C RPS 1000	H3C RPS 800	H3C RPS 500
PWR 24-Port	Yes [-48V]	Yes	Yes	No	No
PWR 48-Port	Yes [-48V]	Yes	Yes	No	No
24-Port	Yes [+12V]	No	Yes	Yes	Yes
48-Port	Yes [+12V]	No	Yes	Yes	No
24-Port SFP					

No – use 2x PSU for power redundancy

Table 1. RPS support for the 3Com Switch 4800G

# SPECIFICATIONS

## CONNECTIVITY

### Switch 4800G 24-Port

24 10/100/1000 Mbps with 4 SFP combo interfaces

### Switch 4800G PWR 24-Port

24 10/100/1000 Mbps with 4 SFP combo interfaces

10/100/1000 ports with 15.4W per port maximum; 370W total PoE power budget without supplemental RPS power

### Switch 4800G 48-Port

48 10/100/1000 Mbps with 4 SFP combo interfaces

### Switch 4800G PWR 48-Port

48 10/100/1000 Mbps with 4 SFP combo interfaces

10/100/1000 ports with 15.4W per port maximum; 370W total PoE power budget without supplemental RPS power

### Switch 4800G 24-Port SFP

24 100/1000 Mbps SFP with 8 10/100/1000 Mbps combo interfaces

### All models

2 expansion slots each supporting up to 2 10-Gigabit interfaces

10BASE-T/100BASE-TX/1000BASE-T ports configured as auto-MDI/MDIX

## PERFORMANCE

### 24-port models

128 Gbps full duplex switching capacity

95.2 Mpps forwarding rate

### 48-port models

176 Gbps full duplex switching capacity

130.9 Mpps forwarding rate

### All models

Wirespeed performance across ports

Store-and-forward switching

Latency < 10  $\mu$

## LAYER 2 SWITCHING

32K MAC addresses in address table

1K static configurable unicast MAC addresses (in addition to default addresses)

Jumbo frame support

4,094 port-based IEEE 802.1Q VLANs

IEEE 802.1Q-in-Q double-tagged VLANs

IEEE 802.1v protocol-based VLANs

MAC-based VLANs using RADA auto-VLAN assignment

IEEE 802.3ad Link Aggregation Control Protocol (LACP); manual and static modes

Link aggregation trunk groups per switch:

- 24-port models: 14 groups; 48-port models: 26 groups
- 8 10/100/1000 ports or 4 10-Gigabit ports per group

Auto-negotiation and manual configuration of port speed and duplex

IEEE 802.3x full-duplex flow control and back pressure

Half-duplex back pressure flow control

Unidirectional Link Detection (UDLD)

Broadcast, Multicast and Unicast traffic suppression

IEEE 802.1D Spanning Tree Protocol (STP)

IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)

IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), 16 instances

Bridge Protocol Data Unit (BPDU) protection

Spanning Tree root guard

Internet Group Management Protocol (IGMP) v1, 2 and 3 snooping

Filtering for 1,024 L2/L3 multicast groups

IGMP querier

Dynamic Host Configuration Protocol Relay (DHCP) Option 82

## LAYER 3 ROUTING

Hardware based IPv4 and IPv6 routing

256 static routes, in addition to default address

12K routing table entries

Address Resolution Protocol (ARP) entries: 8K dynamic, 1K static

128 virtual IP interfaces

Routing Information Protocol (RIP) v1 and v2: 2K routes

Open Shortest Path First (OSPF) v1 and v2: 12K routes

Protocol Independent Multicast-Dense Mode (PIM-DM)

Protocol Independent Multicast-Sparse Mode (PIM-SM)

IGMP v1, v2, v3

Border Gateway Protocol (BGPv4); 12K routes

IEEE 802.1Q GARP VLAN Registration Protocol (GVRP)

Equal Cost Multipath Protocol (ECMP); up to 3 ECMP instances

Multicast VLAN Registration (MVR)

Multicast Source Discovery Protocol (MSDP)

Multicast Listener Discovery (MLD) v1 and 2, and MLD Snooping v1, 2 and 3

Dynamic Host Configuration Protocol Relay (DHCP Relay)

Virtual Router Redundancy Protocol (VRRP)

Rapid Ring Protection Protocol (RRPP)

Policy-based routing

Routing Information Protocol next generation (RIPng) for IPv6; 2K routes

OSPF version 3 for IPv6; 6K routes

Border Gateway Protocol 4 (BGP4) for IPv6; 6K routes

MSDP for IPv6

Manual configuration of IPv6 over IPv4 tunnels

Compatible with 6to4 tunneling and Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)

## CONVERGENCE

8 hardware output queues at each port

IEEE 802.1p Class of Service/Quality of Service (CoS/QoS) on ingress and egress

Remarking of packet priority based on:

- Type of Service (ToS)
- IEEE 802.1p CoS
- IP precedence
- Physical port
- Source/destination MAC address (IPv4/IPv6)

## SPECIFICATIONS (CONTINUED)

- VLAN information
  - Ethertype
  - Source/destination IP address
  - Source/destination TCP port
  - Source/destination UDP port
- Packet/traffic redirection  
 Inbound and outbound ACL policies  
 VLAN-based ACL policies  
 Time-based Access Control Lists (ACLs)  
 Auto-voice VLAN for automatic vendor-independent segregation and prioritization of VoIP traffic  
 Auto-prioritization of voice traffic determined by vendor OUI  
 Weighted Round Robin (WRR) Queuing  
 Strict Priority (SP) Queuing  
 Mixed mode WRR + SP Queuing  
 DiffServ Code Point (DSCP) priority/expedited remarking of packets  
 Forwarding (DSCP EF) remarking for prioritization of VoIP traffic  
 Application rate limiting, inbound and outbound; Committed Access Rate (CAR) with granularity of 64 kbit/sec  
 Restricted packet sending and receiving rates with granularity of 64 kbits/sec.  
 Storm suppression based on port rate percentage and pps  
 Port-based traffic shaping on egress  
 Wake-on-LAN support  
 IEEE 802.3af Power over Ethernet standards-compliant (PWR models)

### SECURITY

- IEEE 802.1X network login user authentication:
- Local, RADIUS, or TACACS+ server authentication
  - Port-based, MAC-based and trunk port authentication
  - PAP, CHAP, EAP over LAN (EAPoL), EAP-TLS/TTLS and PEAP
  - Automatic port assignment of VLANs, ACLs and QoS profile based on user
  - Multiple users per port
  - 1,024 max online users
  - Guest VLAN option
  - Multiple authentication server realm definitions
- Centralized MAC address authentication  
 AAA authentication  
 RADIUS/TACACS+ session accounting  
 RADIUS Authenticated Device Access (RADA): authenticate devices based on MAC address against RADIUS server or local database  
 Combined MAC and IEEE 802.1X authentication on same port  
 Black-hole MAC addresses  
 DHCP Tracker  
 DHCP snooping, including DHCP Trust  
 Wirespeed packet filtering in hardware  
 ACLs filter at Layers 2, 3 and 4:
- Source/destination MAC address
  - Ethernet type
  - Source/destination IP address

- Source/destination TCP port
- Source/destination UDP port

User-defined ACL filters

VLAN-based ACLs

Port-based MAC address Disconnect

Unknown Device (DUD)

ARP inspection and IP source guard

IEEE 802.1X or TACACS+ user authentication of switch management on TELNET and console sessions

MD5 cipher-text and clear-text authentication for OSPF v2 and RIP v2 packets and SNMP v3 traffic

Hierarchical management and password protection for management interface and encrypted traffic, with SNMP v3, SSL, and SSH v2

4 local user access privilege levels

Trusted management station IP and/or MAC address

Encoded Archival Description (EAD)

Denial of service protection

### STACKING

Clustered stacking technology: single IP management for up to 32 devices from different 3Com switch families, including Switch 5500G, 5500, 4800G, 4500G, 4500, 4200G and 4210

### MANAGEMENT

Single console interface

Configuration via CLI (Command Line Interface), Console port, Simple Network Management Protocol (SNMP), embedded web interface

Remote configuration via TELNET

Embedded web management interface

System configuration with SNMP v1, 2c and 3

Comprehensive statistics, including ACL/QoS and IP interface

Syslog

IPv4 management including ping, traceroute, TELNET, and remote ping

IPv6 management including pingv6, tracertv6, Tetnetv6, TFTPv6, DNSv6 and ARPv6

IPv6 management interface IP address configuration

Remote Monitoring (RMON) groups statistics, history, alarm and events

DHCP server including options 60, 82 and 184

Supports multiple software images and bank swap, stored in non-volatile memory

1-to-1 port mirroring

Many-to-1 port mirroring

VLAN-to-1/flow-based port mirroring

Remote port mirroring (RSPAN)

Ability to apply ACL to mirror port and forward only certain traffic types

Detailed alarm and debug information

Front panel indicators for port and unit status information

Configuration file for backup and restore, stored in non-volatile memory; multiple configuration files available

Backup and restore of software images

Network Time Protocol (NTP)

DHCP Relay and UDP Helper

## SPECIFICATIONS (CONTINUED)

System file transfer mechanisms: Xmodem, FTP, Trivial FTP (TFTP)

Virtual Cable Test (VCT) function

Link Layer Discovery Protocol (LLDP)

sFlow

Power alarms; fan and temperature alarms

Debugging information output

Device Link Detection Protocol (DLDP)

Port loopback detection

Management applications:

- 3Com Network Supervisor (3NS)
- 3Com Network Director (3ND)
- 3Com Enterprise Management Suite (EMS)
- QuidView Network Management Systems (NMS)

### DIMENSIONS

Height: 43.6 mm (1.7 in or 1 RU)

Width: 440.0 mm (17.4 in)

Depth:

24- and 48-port non-PWR: 300.0 mm (11.8 in)

24- and 48-port PWR: 420.0 mm (16.5 in)

24-port SFP: 360.0 mm (14.2 in)

Weight:

Switch 4800G 24-Port: 4.0 kg (8.8 lbs)

Switch 4800G 48-Port: 4.5 kg (9.9 lbs)

Switch 4800G PWR 24-Port: 6.0 kg (13.2 lbs)

Switch 4800G PWR 48-Port: 6.5 kg (14.3 lbs)

Switch 4800G 24-Port SFP: 6.3 kg (13.9 lbs)

### POWER SUPPLY

#### AC

Rated voltage range: 100 V to 240, 50/60 Hz

#### DC-rated voltage range (for RPS)

Switch 4800G 24-Port: 10.8 to 13.2

Switch 4800G 48-Port: 10.8 to 13.2; -52 to -55

Switch 4800G PWR 24-Port: -52 to -55

Switch 4800G PWR 48-Port: -52 to -55; -48 to -60

Switch 4800G 24-Port SFP: -48 to -60

#### Power consumption (max)

Switch 4800G 24-Port: 110 W

Switch 4800G 48-Port: 155 W

Switch 4800G PWR 24-Port: 205 W, plus up to 370 W for PoE

Switch 4800G PWR 48-Port: 270 W, plus up to 370 W for PoE

Switch 4800G 24-Port SFP: 115 W

Optional RPS available to provision additional PoE power to ports (PWR models only)

### ENVIRONMENTAL REQUIREMENTS

Operating temperature: 0° to 45°C (32° to 113°F)

Operating humidity: 10% to 90% non-condensing

### Heat dissipation (max)

Switch 4800G 24-Port: 380 BTU/hour

Switch 4800G 48-Port: 530 BTU/hour

Switch 4800G PWR 24-Port: 700 BTU/hour; excludes heat from PoE

Switch 4800G PWR 48-Port: 925 BTU/hour; excludes heat from PoE

Switch 4800G 24-Port SFP: 395 BTU/hour

### RELIABILITY

24-port: 42 years (374,000 hours)

48-port: 37 years (328,000 hours)

24-port PWR: 44 years (389,000 hours)

48-port PWR: 35 years (307,000 hours)

24-port SFP: 36 years (322,000 hours)

### EMISSIONS/AGENCY APPROVALS

CISPR 22 Class A

FCC Part 15 Class A

EN 55022 1998 Class A

EN 61000-3-2 2000, 61000-3-3

ICES-003 Class A

VCCI Class A

### IMMUNITY

EN 55024

### SAFETY AGENCY CERTIFICATIONS

UL 60950

IEC 60950-1

EN 60950-1

CAN/CSA-C22.2 No. 60950-1-03

### STANDARDS AND PROTOCOLS

#### IEEE standards

IEEE 802.1AB (LLDP)

IEEE 802.1D (STP)

IEEE 802.1p (CoS)

IEEE 802.1PAE (PAE MIB)

IEEE 802.1Q GVRP (GVRP)

IEEE 802.1s (MSTP)

IEEE 802.1v (Protocol-based VLANs)

IEEE 802.1w (RSTP)

IEEE 802.1X (Network Login)

IEEE 802.3 LAG (LAG MIB)

IEEE 802.3ab (1000BASE-T)

IEEE 802.3ac (VLAN Tagging Extension)

IEEE 802.3ad (Link Aggregation)

IEEE 802.3ae (10 Gigabit Ethernet)

IEEE 802.3af (Power over Ethernet)

IEEE 802.3i (10BASE-T)

IEEE 802.3u (Fast Ethernet)

IEEE 802.3x (Flow Control)

IEEE 802.3z (Gigabit Ethernet)

## SPECIFICATIONS (CONTINUED)

### RFC standards

RFC 791 (IP)  
 RFC 792 (ICMP)  
 RFC 793 (TCP)  
 RFC 854 and RFC 856 (TELNET)  
 RFC 925 (Multi-LAN Address Resolution)  
 RFC 950 (IP Datagram Forwarding)  
 RFC 951 (BootP)  
 RFC 1058 (RIP v1)  
 RFC 1122 (IP Options)  
 RFC 1141 (IP Datagram Forwarding)  
 RFC 1157 (SNMPv1/v2)  
 RFC 1212 (Concise MIB Definitions)  
 RFC 1213 (SNMP MIB II)  
 RFC 1215 (SNMP Traps)  
 RFC 1253 (OSPFv2 MIB)  
 RFC 1305 (NTPv3)  
 RFC 1350 (TFTP)  
 RFC 1389 (RIP MIB)  
 RFC 1492 (HWTACACS)  
 RFC 1519 (CIDR)  
 RFC 1542 (BootP)  
 RFC 1587 (OSPF NS SA)  
 RFC 1657 (BGP-4 MIB)  
 RFC 1723 (RIPv2)  
 RFC 1724 (RIPv2 MIB Extension)  
 RFC 1757 (RMON I MIB)  
 RFC 1771 (BGP)  
 RFC 1812 (IPv4 Router Compliance)  
 RFC 1850 (OSPFv2 MIB)  
 RFC 1881 (IPv6 Address Allocation Management)  
 RFC 1886 (IPv6 DNS Extensions)  
 RFC 1887 (IPv6 Unicast Address Allocation Architecture)  
 RFC 1901 (SNMPv2)  
 RFC 1907 (SNMPv2c, SMIPv2 and Revised MIB-II)  
 RFC 1918 (Private Internet Address Allocation)  
 RFC 1981 (IPv6 Path MTU Discovery)  
 RFC 2096 (IP Forwarding Table MIB)  
 RFC 2012 (TCP SNMPv2 MIB)  
 RFC 2080 (IPv6/RIPng)  
 RFC 2131 (DHCP Client)  
 RFC 2233 (MIB)  
 RFC 2236 (IGMP Snooping)  
 RFC 2284 (EAP over LAN)  
 RFC 2328 (OSPFv2)  
 RFC 2373 (IPv6 Addressing Architecture)  
 RFC 2375 (IPv6 Multicast Address Assignments)  
 RFC 2401 (IP Security Architecture)  
 RFC 2402 (IP Authentication Header)  
 RFC 2406 (IP Encapsulating Security Payload)  
 RFC 2409 (IKE)  
 RFC 2452 (TCP/IP)  
 RFC 2454 (UDP6)  
 RFC 2460 (IPv6 Specification)  
 RFC 2461 (IPv6/ND)  
 RFC 2462 (IPv6 Stateless Address Auto-configuration)  
 RFC 2463 (ICMPv6)  
 RFC 2464 (IPv6 Over Ethernet)  
 RFC 2465 and 2466 (IPv6 MIB)  
 RFC 2474 (DSCP Diffserv)  
 RFC 2475 (IPv6 Diffserv Architecture)  
 RFC 2526 (Reserved IPv6 Anycast Addresses)  
 RFC 2571 (SNMP Framework)  
 RFC 2572 - 2576 (SNMP)  
 RFC 2578 (New Traps)  
 RFC 2581 (TCP6)  
 RFC 2597 (Assured Forwarding)  
 RFC 2598 (Expedited Forwarding)  
 RFC 2616 (HTTP Compatibility v1.1)  
 RFC 2618 (RADIUS Authentication Client MIB)  
 RFC 2620 (RADIUS Accounting Client MIB)  
 RFC 2644 (Directed Broadcast Control)  
 RFC 2710 (MLD IPv6/MLD Snooping)  
 RFC 2740 (OSPFv3)  
 RFC 2767 (Dual stacks IPv4 & IPv6)  
 RFC 2819 (RMON I MIB)  
 RFC 2858 (BGP-4 Multi-protocol Extensions)  
 RFC 2865 (Remote Authentication Dial-In User RADIUS)  
 RFC 2866 (RADIUS RFC 2138/ Accounting)  
 RFC 2893 (IPv6 Host and Router Transition Mechanism)  
 RFC 2925 (Ping MIB)  
 RFC 3056 (6to4 Tunneling)  
 RFC 3246 (Expedited PHB)  
 RFC 3306 (Unicast Prefix-Based IPv6 Multicast Addresses)  
 RFC 3307 (IPv6 Multicast Address Allocation)  
 RFC 3410 (SNMP)  
 RFC 3414 (SNMP User-Based SM MIB)  
 RFC 3415 (SNMP View-based ACM MIB)  
 RFC 3416 (SNMPv2)  
 RFC 3417 (SNMP Transport)  
 RFC 3484 (IPv6 Default Address Selection)  
 RFC 3493 (IPv6 Basic Socket Interface)  
 RFC 3513 (IPv6 Addressing Architecture)  
 RFC 3542 (Advanced Sockets API for IPv6)  
 RFC 3587 (IPv6 Global Unicast Address)  
 RFC 3596 (IPv6/DNS6 Extensions)  
 RFC 3623 (OSPF GR)  
 RFC 3768 (VRRP)  
 RFC 3810 (MLDv2)  
 RFC 4113 (IPv6 MIB for UDP)  
 RFC 4213 (IPv6 Host and Routers Transition Mechanisms)  
 RFC 4443 (ICMPv6 for IPv6)

## PRODUCT WARRANTY AND OTHER SERVICES

**Warranty.** Limited Lifetime Warranty. For as long as the original end user owns the product, or for five years after 3Com discontinues the sale of the product, whichever occurs first.

**Hardware coverage.** Covers the complete unit including power supplies and fan.

**In-warranty hardware replacement\*.** Advanced Hardware Replacement of hardware for the duration of the warranty. In the US 48 contiguous states this is same-day ship with next business day delivery when call received before noon Pacific time. For Canada, Alaska and Hawaii, this is same-day ship when call received before noon Pacific time. For the rest of the world, it is next-business-day ship. Actual delivery times may vary depending on customer location. Reasonable commercial efforts apply.

**Software coverage.** 90 days for media replacement.

**Software updates\*.** Access to releases with incremental software features and bug fixes

**Telephone support\*.** Technical support via phone for 90 days.

\*These services are not included as part of the Warranty and 3Com reserves the right to modify or cancel this offering at any time, without advance notice. This offering is not available where prohibited by law. Services are effective at warranty start date, and are enabled with product registration. Customers receive a user ID with eSupport registration.

## ORDERING INFORMATION

PRODUCT DESCRIPTION	ORDER NUMBER
3Com Switch 4800G 24-Port	3CRS48G-24-91
3Com Switch 4800G 48-Port	3CRS48G-48-91
3Com Switch 4800G PWR 24-Port	3CRS48G-24P-91
3Com Switch 4800G PWR 48-Port	3CRS48G-48P-91
3Com Switch 4800G 24-Port SFP	3CRS48G-24S-91
<b>Modules</b>	
3Com 2-Port 10-Gigabit Module (XFP)	3C17766
3Com 2-Port 10-Gigabit Local Connection Module	3C17767
3Com 1-Port 10-Gigabit Module (XFP)	3C17768
<b>Power Supplies</b>	
3Com Switch 4800G 24-Port SFP AC Power Module*	0231A66A
<b>Gigabit SFP Transceivers</b>	
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-LH SFP	3CSFP97
<b>Fast Ethernet SFP Transceivers</b>	
3Com 100BASE-FX SFP (Dual-Mode)	3CSFP9-81
3Com 100BASE-LX SFP (Dual-Mode)	3CSFP9-82
<b>10-Gigabit XFP Transceivers</b>	
3Com 10GBASE-LR	3CXFP92
3Com 10GBASE-SR	3CXFP94
3Com 10GBASE-ER	3CXFP96

PRODUCT DESCRIPTION	ORDER NUMBER
<b>Cables</b>	
3Com CX4 Local Connection Cable - 50 cm	3C17775
3Com CX4 Local Connection Cable - 100 cm	3C17776
3Com CX4 Local Connection Cable - 300 cm	3C17777
<b>3Com Global Services</b>	
3Com Wireless LAN Site Survey	www.3com.com/services_quote
Network Health Check, Installation Services and Express™ Maintenance	
3Com University Courses	www.3com.com/3comu

\* For the Switch 4800G 24-Port SFP only. The switch ships with one PSU and one empty redundant PSU slot. Order this for 1+1 PSU redundancy.

Visit [www.3com.com](http://www.3com.com) for more information about 3Com solutions.

3Com Corporation, Corporate Headquarters, 380 Corporate Drive, Marlborough, MA 01752-5054  
3Com is a public trade font NVDAQ under the symbol COMS

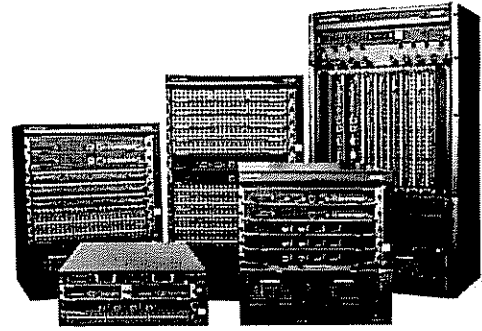
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3COM-003-01-02



# 3COM® SWITCH S7900E FAMILY

A modern high-performance modular switching and routing platform for the demanding enterprise environment, supporting highly available, secure and converged business applications



Front left to right: 3Com Switch S7902E and Switch S7903E  
Back left to right: 3Com Switch S7906E Switch S7510E and Switch S7906EV

## OVERVIEW

The 3Com® Switch S7900E Family is the next generation of multi-layer switches, meeting the evolving needs of integrated service networks.

This switch can be deployed in multiple network environments like the enterprise LAN core, aggregation and wiring closet edge, as well the convergence and edge of Metropolitan Area Networks (MANs).

A passive backplane and support for load sharing and redundant management and fabrics helps the Switch S7900E offer high availability. With modern ASICs, high-speed backplanes and the latest distributed ASIC switching technology, this switch delivers wire speed Layer 2 and Layer 3 routing services for the most demanding applications, while providing long term investment protection.

Supporting high-reliability technologies such as non-stop forwarding (NSF) and ring network protection, the Switch S7900E helps ensure maximum uptime, improving productivity and reducing the total cost of ownership. This switch family is environmentally friendly, meeting the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) standards.

The 3Com Switch S7900E Family features five available chassis models, providing flexibility based on the switching capacity and interface port density required:

- › Switch S7910E with 12 slots,
- › Switch S7906E with eight slots,
- › Switch S7906E-V with eight vertical slots,
- › Switch S7903E with five slots, and the
- › Switch S7902E with four slots.



## KEY BENEFITS

### MODERN ARCHITECTURE

The Switch S7900E chassis has been designed to allow for long term investment protection. The backplane traces will allow for higher bandwidth and increased power in the future. Intelligent power and environmental management make these changes possible. The system uses a new generation of ASICs, with the ability to support emerging standards. These new ASICs are also more energy efficient. With a choice of five different chassis, users have increased configuration flexibility. Fabrics and modules can be used across all chassis.

### EXTENSIVE FEATURE LIST

The Switch S7900E provides all the features expected in a high-end modular chassis used for demanding Enterprise core, distribution and aggregation applications:

- › separate data and control paths for added security and performances
- › extensive Quality of Service (QoS) features for mission critical applications including Voice over IP (VoIP), storage and video
- › comprehensive security for network access control, encryption and protection of corporate resources
- › extensive CLI capabilities, with available GUI
- › an open, standards-based architecture to enable seamless growth and future investments without proprietary lock-ins.

### RESILIENT ARCHITECTURE FOR BUSINESS CONTINUITY

The Switch S7900E has a high-availability design including passive backplane, load sharing fabrics and management modules and redundant power supplies. All elements in the system can be hot-swapped, minimizing the impact of single component failure. Changes in network topology due to device or link failures can lead to disruption of service for critical business applications. Rapid recovery from such topology changes is achieved with features such as Multiple Spanning Tree Protocol (MSTP), Rapid Spanning Tree Protocol (RSTP), OSPF Equal Cost Multi Path (ECMP) and Virtual Router Redundancy Protocol (VRRP).

The 3Com Switch S7900E also supports Rapid Ring Protection Protocol (RRPP), which allows the creation of fast recovery rings using standard Ethernet technology.

### SUPPORT OF CONVERGENCE

Real-time applications such as VoIP demand high QoS and differentiated service levels to function properly. The Switch S7900E provides robust QoS and advanced traffic management features, allowing critical applications to be prioritized and serviced as dictated by the needs of the organization.

Additionally, this switch supports industry-standard IEEE 802.3af Power over Ethernet (PoE) to provide both electrical power and network connectivity to PoE-capable devices such as IP telephones and wireless access points, making the switches ideal for large-scale edge deployments. PoE simplifies network deployments by eliminating the need for separate data and power infrastructures.

The Switch S7900E supports flexible PoE solutions including hybrid power supplies providing both data and power.

### EXTENSIVE SECURITY FEATURES

Security is paramount in today's enterprise. The 3Com Switch S7900E delivers advanced security including user and device authentication, policy-based access control lists (ACLs), encrypted protocol headers and system management access. The switch supports IEEE 802.1X Network Login along with RADIUS to allow user access control. Port, VLAN and MAC address authentication allow for additional security.

### SCALABLE PERFORMANCE

The 3Com Switch S7900E has a 2.4 Tbps backplane, providing enhanced performance and future expansion capability. With dual fabrics, the switch delivers up to 488 Mpps throughput. A wide selection of modules allow a single switch to support up to 24 10-Gigabit and 480 Gigabit and Fast Ethernet ports. Flexible modules combine 10-Gigabit and Gigabit in a single module. All fiber-based Gigabit modules support both 100BASE-FX and 1000BASE-X transceivers.

Standards-based link aggregation—supported across modules—allows aggregating multiple links together as a trunk.

### ENTERPRISE CLASS MANAGEMENT

The Switch S7900E features independent data and control paths. The dedicated data channel provides high-speed data switching and packet forwarding, while a separate management channel provides control, monitoring, route learning and distribution.

Comprehensive management features allows the switch to provide enterprise-wide visibility and control to IT staff for configuration, network monitoring and advanced troubleshooting. Switch management is accessible through an industry standard CLI, an intuitive GUI, a Web-based interface, or SNMP, with hierarchical access controls and password protection.

Additional switch management security is provided through the user authentication and encryption capabilities of SNMP v3 and SSH v2, further reducing the likelihood of unauthorized access or snooping of management traffic.

## FEATURE SUMMARY

Modern modular multilayer switch with flexible, resilient architecture for deployment in enterprise core, distribution and edge applications

High-density wire-speed 10 Gigabit (up to 24 ports) and Gigabit and Fast Ethernet (up to 480 ports)

Up to 2.4 Tbps backplane capacity with up to 488 Mpps system throughput

Virtually non-stop operation with redundant/ load sharing fabrics and management modules, redundant power supplies, and hot swappable modules. Supports fast recovery Rapid Ring Protection Protocol (RRPP) for MAN applications

Granular QoS and traffic management for enhanced availability

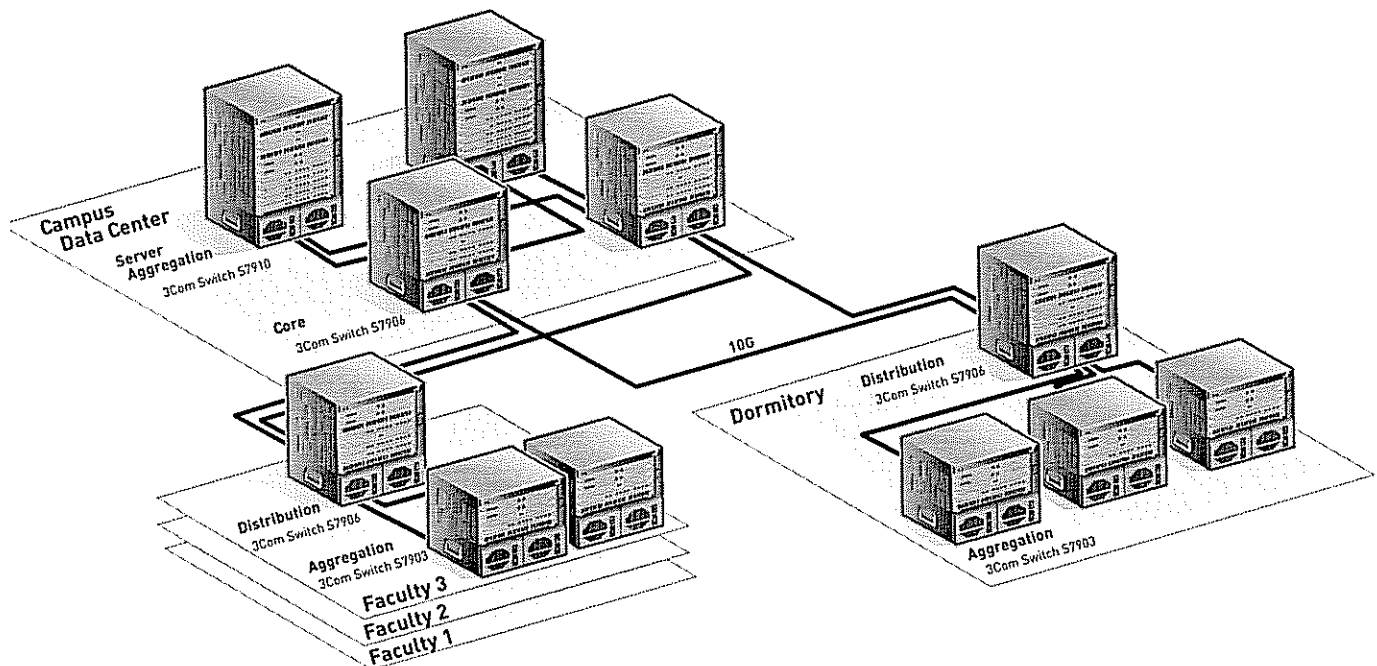
Extensive L2/L3/L4 switching and routing capability, including RIP, OSPF, BGP-4, IS-IS and IPv6. IPv6 support includes dual stack, tunneling and IPv6 ACLs

Robust network access control via IEEE 802.1X and RADIUS, extensive ACLs, as well as authentication and encryption of management traffic

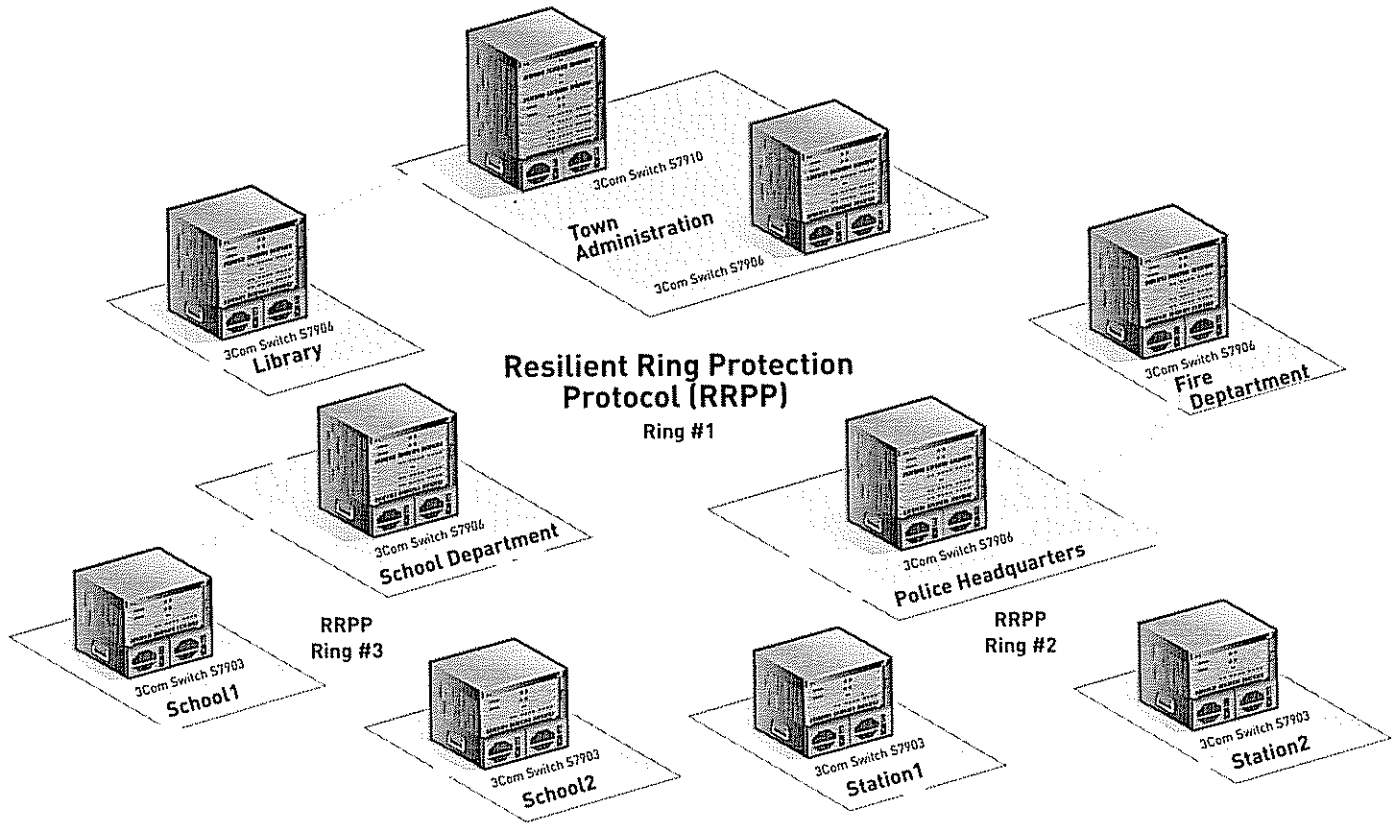
## AGGREGATE SYSTEM CAPACITIES

	SWITCH S7910E	SWITCH S7906E	SWITCH S7906E-V	SWITCH S7903E	SWITCH S7902E
<b>CHASSIS SLOTS</b>					
Total slots	12	8	8	5	4
I/O slots	10	6	6	3	2
<b>PERFORMANCE</b>					
Switching capacity	768 Gbps	768 Gbps	768 Gbps	480 Gbps	192 Gbps
Backplane capacity	2.4 Tbps	1.6 Tbps	1.6 Tbps	1.0 Tbps	400 Gbps
IPv4 IPv6 packet forwarding rate	488 Mpps	488 Mpps	488 Mpps	274 Mpps	143 Mpps
<b>TOTAL PORT CAPACITY</b>					
10-Gigabit	24	16	16	10	4
Fiber Gigabit	480	288	288	144	96
Copper Gigabit	480	288	288	144	96
Fiber Fast Ethernet	480	288	288	144	96
PoE-capable	yes	yes	yes	yes	no

## TYPICAL HIERARCHICAL NETWORK



# MEDIUM-SIZED METROPOLITAN AREA NETWORK (MAN)



## SPECIFICATIONS

All information in this section is applicable to all members of the 3Com Switch S7900E family, unless stated otherwise.

### CAPACITIES AND PERFORMANCES

#### Switch S7910E

Two slots for switch fabrics. ten payload slots  
 Backplane: 2.4 Tbps max  
 Bandwidth: 768 Gbps max. (dual fabric); 384 Gbps max. (single fabric)  
 Throughput, aggregate: 488 Mpps. max

#### Switch S7906E

Two slots for switch fabrics. six payload slots  
 Backplane: 1.6 Tbps max  
 Bandwidth: 768 Gbps max. (dual fabric); 384 Gbps max. (single fabric)  
 Throughput, aggregate: 488 Mpps. max

#### Switch S7906E-V

Two slots for switch fabrics. six payload slots  
 Backplane: 1.6 Tbps max  
 Bandwidth: 768 Gbps max. (dual fabric). 384 Gbps max. (single fabric)  
 Throughput, aggregate: 488 Mpps. max.

#### Switch S7903E

Two slots for switch fabrics. three payload slots  
 Backplane: 1.0 Tbps max.  
 Bandwidth: 480 Gbps max. (dual fabric); 240 Gbps max. (single fabric)  
 Throughput, aggregate: 274 Mpps. max.

#### Switch S7902E

Two slots for management modules. two payload slots  
 Backplane: 400 Gbps max.  
 Bandwidth: Throughput, aggregate: 143 Mpps. max

### LAYER 2 SWITCHING

128K MAC addresses per system (EA modules or Advanced Fabric only)  
 4096 VLANs (IEEE 802.1Q)  
 Port-based, protocol-based (IEEE 802.1v) and subnet-based VLANs  
 Dynamic VLAN assignments  
 Guest VLANs  
 Voice VLANs  
 Multicast VLANs  
 Private VLANs  
 RFC 3069 SuperVLANs  
 IEEE 802.1ad Q-in-Q and VLAN mapping  
 GVRP (GARP VLAN Registration Protocol)  
 IEEE 802.3ad Link Aggregation, across modules; 128 groups of 8 ports  
 IEEE 802.3 (10BASE-T), 802.3u (100BASE-T, 100BASE-FX)  
 IEEE 802.3z (1000BASE-X), 802.3ab (1000BASE-T)  
 IEEE 802.3ae (10GBASE-X)  
 IEEE 802.3x (traffic control)  
 IEEE 802.3af (PoE)  
 Auto-negotiation of port speed and duplex  
 Auto MDI/MDI-X  
 Broadcast, multicast and unknown unicast storm protection

## SPECIFICATIONS (CONTINUED)

IEEE 802.1D Spanning Tree Protocol  
 IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)  
 IEEE 802.1s Multiple Spanning Tree Protocol Instances (MSTP)  
 BPDU protection  
 UDLD (Uni-Directional Link Detection)  
 Jumbo frames up to 9KB  
 Rapid Ring Protection Protocol (RRPP)

### LAYER 3 SWITCHING

Max 128K IPv4 routes (EA modules or Advanced Fabric only)  
 Static Routes  
 RIP v1 and v2; supports split horizon and poison reverse  
 OSPF v1 and v2  
 ECMP; 8 paths  
 BGP-4  
 IS-IS  
 Policy-based routing  
 IGMP v1, v2 and v3  
 IGMP snooping  
 IGMP fast leave  
 PIM-DM and SM (Protocol Independent Multicast, Dense Mode and Sparse Mode)  
 MSDP (Multicast Source Discovery Protocol)  
 Anycast-RP  
 DHCP Client and Server  
 DHCP Relay  
 DHCP option 82  
 TCP/IP Protocol stack  
 UDP Helper  
 VRRP (Virtual Router Redundancy Protocol)  
 IPv6 addressing architecture  
 Site-local, link-local and global unicast addresses  
 IPv6 multicast addresses  
 IPv6 specification  
 Transmission of IPv6 over Ethernet  
 IPv6 neighbor discovery  
 IPv6 duplicate address detection  
 IPv6 stateless address autoconfiguration  
 IPv6 path MTU discovery  
 ICMP v6  
 ICMP v6 redirection  
 DHCP v6  
 RIPng  
 OSPF v3  
 BGP-4+ for IPv6  
 IS-IS v6  
 VRRP v3  
 ECMP 8 paths  
 PIMv6 DM and SM  
 Dual stack architecture  
 Configured tunnels  
 IPv6 to IPv4 tunnels  
 ISATAP tunnels  
 ACLs for IPv6  
 DNSv6  
 Telnet6  
 Ping and traceroute v6

### CONVERGENCE FEATURES

Eight hardware queues per port  
 IEEE 802.1p VLAN priority  
 Standard and VLAN-based ACL  
 Ingress and egress ACLs  
 CAR, traffic shaping  
 Queue scheduling including SP, WRR, SP+WRR and CDWFQ  
 IP precedence packet labeling  
 Congestion avoidance including tail-drop and WRED

### SECURITY FEATURES

RIPv2, OSPF and BGPv4 plain text and MD5 cipher text authentication  
 IEEE 802.1X Network Login  
 MAC and RADIUS authentication  
 Web Authentication  
 SSH v1.5 and v2  
 TACACS+  
 SNMP v3 with encryption

### MANAGEMENT

Web-based management  
 Industry-standard CLI  
 Configuration via console port, dial-up modem or in-band  
 Local/remote configuration via Telnet  
 SNMP v1, v2 and v3  
 Port mirroring, 1:1, n:1, n:4  
 Remote port monitoring  
 RMON; 4 groups  
 Syslog  
 Hierarchical alarms  
 NQA (Network Quality Assurance)  
 NTP (Network Time protocol)  
 FTP  
 TFTP  
 SFTP  
 Configuration files for backup and restore  
 GUI using Switch Manager  
 3Com Intelligent Management Center (IMC) Enterprise Edition  
 3Com Enterprise Management Suite (EMS)  
 3Com Network Director (3ND)

### DIMENSIONS

**Switch S7910E**  
 Height: 70.8 cm (28.1 in)  
 Width: 43.6 cm (29.2 in)  
 Depth: 42.0 cm (16.7 in)  
 Weight: 96 kg (211 lb)

**Switch S7906E**  
 Height: 57.5 cm (22.8 in)  
 Width: 43.6 cm (29.2 in)  
 Depth: 42.0 cm (16.7 in)  
 Weight: 77 kg (169 lb)

**Switch S7910E-V**  
 Height: 93.0 cm (36.9 in)  
 Width: 43.6 cm (29.2 in)  
 Depth: 42.0 cm (16.7 in)  
 Weight: 94 kg (207 lb)

**Switch S7903E**  
 Height: 44.1 cm (17.5 in)  
 Width: 43.6 cm (29.2 in)  
 Depth: 42.0 cm (16.7 in)  
 Weight: 63 kg (139 lb)

## SPECIFICATIONS (CONTINUED)

### Switch S7902E

Height: 17.5 cm (6.9 in)

Width: 43.6 cm (29.2 in)

Depth: 42.0 cm (16.7 in)

Weight: 27 kg (59 lb)

### POWER SUPPLIES

#### 2800W AC Power Supply

Input voltage: 100V to 240V auto ranging

Operating frequency: 47-63 Hz

Max. data output: 1.150W (110V), 1.400W (220V)

Max. PoE output: 1.150W (110V), 1.400W (220V)

Two power cords

Max. current per power cord: 10.45 A at 110VAC, 7.0 A at 200 VAC

#### 1400W AC Power Supply

Input voltage: 100V to 240V auto ranging

Operating frequency: 47-63 Hz

Max. data output: 1.150W (110V), 1.400W (220V)

Max. current: 10.45A at 110VAC, 7.0A at 200 VAC

Data only

#### 650W AC Power Supply

Input voltage: 100V to 240V auto ranging

Operating frequency: 47-63 Hz

Max. data output: 650W

Max. current: 5.9A at 110VAC, 3.25A at 200 VAC

Data only

#### 1400W DC Power Supply

Input voltage: -48 VDC to -60VDC

Max. voltage range: -40VDC to -72VDC

Max. output power: 1400W

Can be used for data or PoE

#### 650W DC Power Supply

Input voltage: -48 VDC to -60VDC

Max. voltage range: -40VDC to -72VDC

Max. output power: 650W

Data only

### ENVIRONMENTAL REQUIREMENTS

Operating temperature: 0° to 40°C (32° to 104°F)

Storage temperature: -10° to 70°C (14° to 158°F)

Humidity (operating and storage): 10% to 90% non-condensing

### Heat dissipation

Switch S7910E : 4.148 BTU/hr

Switch S7906E: 2.746 BTU/hr

Switch S7906E-V: 2.765 BTU/hr

Switch S7903E: 1.651 BTU/hr

Switch S7902E: 883 BTU/hr

### IEEE STANDARDS SUPPORTED

IEEE 802.1D (STP)

IEEE 802.1p (COS)

IEEE 802.1Q (VLAN)

IEEE 802.1s (MSTP)

IEEE 802.1v (VLAN)

IEEE 802.1w (RSTP)

IEEE 802.1X (Security)

IEEE 802.3ab (1000BASE-T)

IEEE 802.3ad (Link aggregation)

IEEE 802.3ae (10GBASE-X)

IEEE 802.3af (PoE)

IEEE 802.3i (10BASE-T)

IEEE 802.3u (Fast Ethernet)

IEEE 802.3x (Flow control)

IEEE 802.3z (Gigabit)

### IETF STANDARDS

RFC 768 (UDP)

RFC 791 (IP)

RFC 792/950 (ICMP)

RFC 793 (TCP)

RFC 826 (ARP)

RFC 919/922 (Broadcasting Ethernet Datagrams)

RFC 950 (IP subnetting)

RFC 951 (BOOTP)

RFC 959/2228 (FTP)

RFC 1058 (RIP)

RFC 1112 (IGMP v1)

RFC 1122 (IP Host Requirements)

RFC 1141 (Internet Checksum)

RFC 1142 (OSI IS-IS)

RFC 1195 (IS-IS)

RFC 1256 (ICMP Router Discovery)

RFC 1305 (NTP)

RFC 1350 (TFTP)

RFC 1518/1519 (CIDR)

RFC 1542 (BOOTP)

RFC 1587/3101 (OSPF NSSA)

RFC 1723/2453 (RIP v2)

RFC 1765 (OSPF Database overflow)

RFC 1771 (BGP-4)

RFC 1812/2644 (IPv4)

RFC 1881/1887 (IPv6 Address Allocation)

RFC 1965/3065 (BGP AS Confederation)

RFC 1981 (Path MTU discovery for IPv6)

RFC 1997/1998 (BGP Communities)

RFC 2080 (RIPng)

RFC 2082 (RIP v2 MD5 authentication)

RFC 2113 (Router Alert)

RFC 2131/3396 (DHCP)

RFC 2132 (DHCP Options)

RFC 2138/2865 (RADIUS)

RFC 2139/2866 (RADIUS Accounting)

RFC 2236 (IGMP v2)

RFC 2267/2827 (IP Spoofing)

RFC 2328 (OSPF v2)

RFC 2338/3768 (VRRP)

RFC 2362 (PIM-SM)

RFC 2370/3630 (OSPF Opaque LSA option)

RFC 2373/3513/4291 (IPv6 addressing architecture)

RFC 2375 (IPv6 Multicast Addresses)

RFC 2385 (BGP - MD5)

RFC 2439 (BGP Route flap dampening)

RFC 2452 (IPv6 TCP MIB)

RFC 2454 (IPv6 UDP MIB)

RFC 2460 (IPv6 Specification)

RFC 2461 (IPv6 Neighbor discovery)

RFC 2462 (IPv6 Stateless Address Autoconfiguration)

RFC 2463 (ICMPv6)

RFC 2464 (IPv6 over Ethernet)

## SPECIFICATIONS (CONTINUED)

RFC 2465 (IPv6 MIB)  
 RFC 2466 (ICMPv6 MIB)  
 RFC 2474 (DSCP)  
 RFC 2474/3168 (Diffserv)  
 RFC 2475 (Architecture for Diffserv)  
 RFC 2526 (IPv6 reserved Unicast Addresses)  
 RFC 2545 (BGP-4 for IPv6)  
 RFC 2553 (Basic sockets for IPv6)  
 RFC 2597 (AF PHB)  
 RFC 2598 (Expedited AF PHB)  
 RFC 2622 (Routing Policy)  
 RFC 2644 (Router Directed Broadcast)  
 RFC 2697 (Single-rate 3-color marker)  
 RFC 2698 (Two-rate 3-color marker)  
 RFC 2715 (Multicast Routing Protocols)  
 RFC 2740 (OSPF v3)  
 RFC 2787 (VRRP MIB)  
 RFC 2796 (BGP Route reflection)  
 RFC 2858 (MBGP)  
 RFC 2868 (RADIUS Tunnels)  
 RFC 2869 (RADIUS Extensions)  
 RFC 2893 (Transition Mechanisms for IPv6)  
 RFC 2918 (BGP Route Refresh)  
 RFC 2918 (BGP-4 Route Refresh)  
 RFC 2973 (ISIS Mesh Groups)  
 RFC 3048 (DHCP Relay)  
 RFC 3056 (IPv6 6-to-4 tunnels)  
 RFC 3065 (BGP AS)  
 RFC 3069 (Super VLAN)  
 RFC 3101 (OSPF NSSA)  
 RFC 3131 (DHCP Relay)  
 RFC 3131 (DHCP)  
 RFC 3137 (OSPF Stub)  
 RFC 3153 (IPv6 Addressing)  
 RFC 3168 (ECN)  
 RFC 3277 (IS-IS black hole avoidance)  
 RFC 3307 (IPv6 multicast address allocation)  
 RFC 3358 (IS-IS Checksum)  
 RFC 3363 (IPv6 Address in DNS)  
 RFC 3376 (IGMP v3)  
 RFC 3392 (BGP Capabilities Advertisement)  
 RFC 3442 (DHCP)  
 RFC 3446 (Anycast RP)  
 RFC 3484 (IPv6 Default Address)  
 RFC 3596 (DNS extensions for IPv6)  
 RFC 3618 (MSDP)  
 RFC 3768 (VRRP)  
 RFC 3973 (PIM-DM)  
 RFC 4213 (Basic Transition for IPv6 Hosts and Routers)

### Management, including MIB support

RFC 1155 (SMIPv1)  
 RFC 1155 (TCP MIB)  
 RFC 1157 (SNMP v1/v2c)  
 RFC 1213 (MIB-II)  
 RFC 1213/2011-2013 (MIB II)  
 RFC 1253 (OSPF MIB)  
 RFC 1253/1850 (OSPF v2 MIB)  
 RFC 1493 (Bridge MIB)

RFC 1493 (IEEE 802.1s MIB)  
 RFC 1573/2233/2863 (Private IF MIB)  
 RFC 1657 (BGP MIB)  
 RFC 1657 (BGP MIB)  
 RFC 1757 (RMON)  
 RFC 1774 (RIP v2 MIB)  
 RFC 2452 (IPv6 MIB)  
 RFC 2454 (IPv6 UDP MIB)

### ISO

ISO 10589 (IS-IS)  
 ISO 9542 (ES-IS)

### IETF DRAFTS

draft-ietf-isis-wg-mib-13  
 draft-ietf-isis-admin-tags-01  
 draft-ietf-ngtrans-isisatp

### EMISSION/AGENCY APPROVALS

CISPR 22 Class A  
 FCC Part 15 Class A  
 EN 55022 Class A  
 ICES-003 Class A  
 AS/NZS 3548 Class A  
 EN 61000-3-2  
 EN 61000-3-3

### IMMUNITY

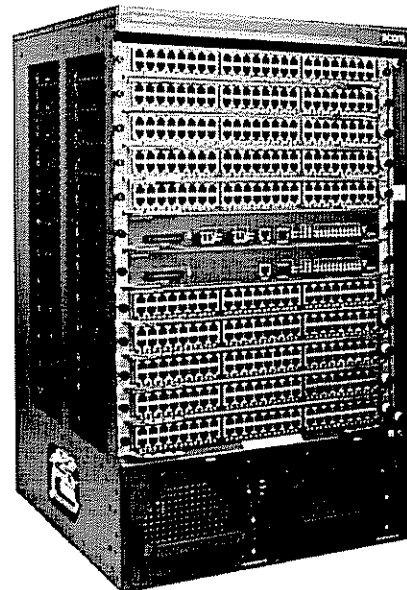
EN 55024: 1998  
 EN 61000-4-2 to 61000-4-6  
 EN 61000-4-11

### SAFETY AGENCY CERTIFICATIONS

UL 60950  
 IEC 60950-1:2001; all national deviations  
 EN 60950-1: 2001; all national deviations  
 CAN/CSA-C22 2 No 60950-1-03

### WARRANTY AND OTHER SERVICES

Limited Hardware Warranty for one year  
 Limited Software Warranty for 90 days  
 90 days free telephone technical support  
 Refer to [www.3com.com/warranty](http://www.3com.com/warranty) for details

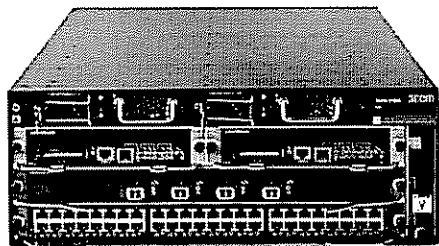


Switch S7510E

## SERVICE AND SUPPORT

3Com Global Services offers the resources and talents of a major corporation plus more than two decades of experience in resolving network challenges and delivering business benefits to enterprises around the world.

Global support with a personalized, local focus in the local language helps drive productivity and minimize expenses. Because 3Com understands both the technology and the business, we're the partner you need to remain strong and competitive.



3Com Switch S7902E

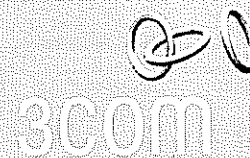
## ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
<b>Chassis</b>	
3Com Switch S7910E Chassis (with fan assembly)	3CS7910E
3Com Switch S7906E Chassis (with fan assembly)	3CS7906E
3Com Switch S79006E-V Chassis (with fan assembly)	3CS7900EV
3Com Switch S7903E Chassis (with fan assembly)	3CS7903E
3Com Switch S7902E Chassis (with fan assembly)	3CS7902E
<b>Switch Fabrics</b>	
3Com Switch S7900E 384 Gbps Fabric, Advanced	0231A935
3Com Switch S7900E 384 Gbps Fabric	0231A934
3Com Switch S7900E 384 Gbps Fabric with 2-Port 10GBASE-X (XFP)	0231A933
3Com Switch S7902E Management Module	0231A92Y
<b>10-Gigabit I/O Modules</b>	
3Com Switch S7900E 2-Port 10GBASE-X (XFP)	0231A92Q
3Com Switch S7900E 24-Port 1000BASE-X (SFP) with 2-Port 10GBASE-X (XFP)	0231A92N
<b>Gigabit I/O Modules</b>	
3Com Switch S7900E 12-Port 1000BASE-X (SFP) Advanced	0231A92P
3Com Switch S7900E 24-Port 1000BASE-X (SFP) Module	0231A931
3Com Switch S7900E 48-Port 1000BASE-X (SFP) Module	0231A92X
3Com Switch S7900E 24-Port 10/100/1000BASE-T	0231A932
3Com Switch S7900E 48-Port 10/100/1000BASE-T;	0231A930
upgradeable to PoE	
3Com Switch S7900E 48-Port 10/100/1000BASE-T Access;	0231A92W
upgradeable to PoE	
<b>Power over Ethernet (PoE) Components</b>	
3Com Switch 8800/S7900E/77XX PoE Option (PoE DIMM Module)	3C17529
<b>Power Supplies</b>	
3Com Switch S7900E 2800W AC Power Supply (data and PoE)	0231A93V
3Com Switch S7900E 1400W AC Power Supply	0231A93A
3Com Switch S7900E 1400W DC Power Supply (PoE pass-through)	0231A93B
3Com Switch S7902E 650W AC Power Supply	0231A938
3Com Switch S7902E 650W DC Power Supply	0231A939
<b>Spare Components</b>	
3Com Switch S7910E Fan Assembly	0231A92V
3Com Switch S7906E Fan Assembly	0231A92T
3Com Switch S7906EV Fan Assembly	0231A92U
3Com Switch S7903E Fan Assembly	0231A92S
3Com Switch S7902E Fan Assembly	0231A92R
<b>3Com Global Services</b>	
3Com Network Health Check, Installation Services and Express Maintenance	<a href="http://www.3com.com/services_quote">www.3com.com/services_quote</a>
3Com University Courses	<a href="http://www.3com.com/3comu">www.3com.com/3comu</a>

Visit [www.3com.com](http://www.3com.com) for more information about 3Com solutions.

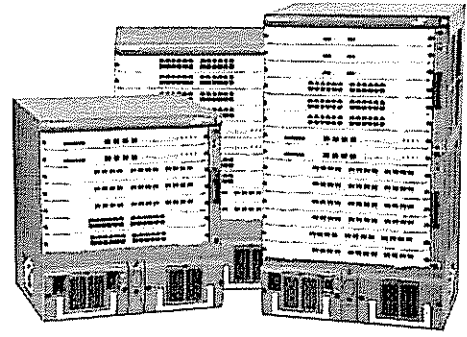
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031100-003 01/03



# 3COM® SWITCH 8800 FAMILY

A high-performance, multilayer modular switching platform for the most demanding Enterprise environments, driving secure, non-stop delivery of business applications



from left: 3Com Switch 8807, Switch 8810, Switch 8814

## OVERVIEW

The 3Com® Switch 8800 Family of intelligent, multilayer modular LAN switches is ideal for enterprise environments where non-stop availability of critical applications and the highest performance, security and granular control are required.

These switches provide unparalleled investment protection for the enterprise with industry-leading scalability and flexible modular architecture, delivering high performance Gigabit and 10-Gigabit switching and routing.

The Switch 8800 Family enables end-to-end connectivity and network application control in an architecture scalable to 1.44 Terabits per second. Three available chassis models—featuring 14, 10 and 7 slots—provide flexibility based on the switching capacity and interface port density required:

- › Switch 8814: Highest capacity. 14-slot chassis, with two slots supporting dual load-sharing switch fabrics and 12 slots for any combination of switching I/O modules, supporting up to 48 10-Gigabit ports or 576 10/100/1000 ports.
- › Switch 8810: 10-slot chassis, with two slots for load-sharing switch fabrics and eight slots for switching I/O modules, supporting up to 32 10-Gigabit ports or 384 10/100/1000 ports
- › Switch 8807: 7-slot chassis, with two slots for load-sharing switch fabrics and five slots for switching I/O modules, supporting up to 20 10-Gigabit ports or 240 10/100/1000 ports.

Application modules for the Switch 8800 provide the flexibility to add a firewall, IPsec encryption, network monitoring with NetFlow, and Layer 2 VPN networking using Virtual Private LAN Service (VPLS) by simply adding a module to the chassis

## KEY BENEFITS

### INTELLIGENT ENTERPRISE INFRASTRUCTURE

Enterprise network infrastructure is evolving dramatically, from the core to the edge of the network, with greater demands being placed on the entire network system to deliver:

- › Highly intelligent, non-stop transport of data and access to information resources
- › Guaranteed quality of service (QoS) for mission critical business applications, including Voice over IP (VoIP), storage and video
- › Comprehensive security for network access control, encryption and protection of corporate resources
- › Unprecedented levels of management visibility and granular control
- › An open, standards-based architecture to enable seamless growth and future investment without proprietary lock-ins



## KEY BENEFITS (CONTINUED)

The 3Com Switch 8800 has been designed to stand up to these challenges for the most demanding enterprise environments. The Switch 8800 delivers a comprehensive infrastructure solution that is highly resilient, intelligent, secure and scalable—one that is capable of adapting to the evolving needs of the enterprise.

### RESILIENT ARCHITECTURE FOR BUSINESS CONTINUITY

With a highly resilient modular architecture, the Switch 8800 Family enhances business continuity by helping ensure availability of convergent enterprise applications including data, voice and video. All critical system components including power supplies, cooling fans and switch fabrics are redundant and hot-swappable, minimizing any impact to the enterprise in the event a single component should fail.

All Switch 8800 chassis models support the option for dual switch fabrics providing high resiliency and rapid failover—less than one second—to deliver the highest possible availability of network resources. With dual switch fabrics installed, both fabrics are active and load-sharing, ensuring resiliency as well as doubling effective system performance.

Changes in network topology due to device or link failures can lead to disruption of service for critical business applications. Rapid recovery from such topology changes is achieved with features such as Multiple Spanning Tree Protocol (MSTP), Rapid Spanning Tree Protocol (RSTP), Open Shortest Path First (OSPF) routing and Virtual Router Redundancy Protocol (VRRP).

### APPLICATION CONVERGENCE: QoS AND POWER OVER ETHERNET

Real-time applications such as voice over IP (VoIP) demand high Quality of Service (QoS) and differentiated service levels to function properly. The 3Com Switch 8800 Family provides robust QoS and advanced traffic management features, allowing critical applications to be prioritized and serviced as the needs of the organization dictate.

Additionally, the Switch 8800 supports industry-standard IEEE 802.3af Power over Ethernet (PoE) to provide both electrical power and network connectivity to PoE-capable devices, such as IP telephones and wireless access points, making the switches ideal for large-scale enterprise edge deployment. PoE simplifies network deployment by eliminating the need for separate data and power infrastructures, significantly reducing installation and maintenance costs. PoE also provides greater flexibility for moves, adds and changes on the network, as powered network devices can be deployed or relocated anywhere an Ethernet connection is available without requiring a dedicated power outlet.

## ENTERPRISE-WIDE SECURITY

Security is paramount in today's enterprise and as dependency on information technology continues to rise, so does the need for highly secure IT systems and infrastructure. The 3Com Switch 8800 Family features advanced security capabilities, including user and device authentication, policy-based access controls, encrypted system management access and quarantine enforcement for containment of vulnerabilities and deliberate attacks.

The Switch 8800 provides secure network access using standard IEEE 802.1X along with user- and device-based access control capabilities. RADIUS support enables user authentication. Port- and VLAN-based Access Control Lists (ACLs) and dynamic traffic filtering capabilities can be deployed to further control access to network resources.

Additional security measures are enforced on access to switch management utilities via Secure Shell version 2 (SSH v2) and SNMP v3 with authentication and encryption of network management traffic.

Optional firewall and IPsec modules deliver an unprecedented level of integrated security. The firewall module enables a stateful firewall that operates in either a routed or transparent mode, and offers high-efficiency packet filtering, transparent proxy, stateful detection security technology. The IPsec module is a high-performance hardware-based encryption VPN module designed for enterprises requiring support for multiple VPN applications. It provides multiple VPN functions (L2TP VPN, GRE VPN, IPsec VPN) and supports IPsec hardware encryption of DES, 3DES, and AES with a maximum of 256-bit encryption.

The Switch 8800 family functions as an integral part of the 3Com Quarantine Protection solution to automate containment of security threats on the enterprise network. 3Com Quarantine integrates the industry-leading TippingPoint® Intrusion Prevention System with switch-based endpoint enforcement at the network edge.

## SCALABLE PERFORMANCE

With its 1.44 Terabits-per-second-capable backplane and wire-speed switching capacity, the Switch 8800 provides exceptional scalability for core, data center, distribution and edge environments within the enterprise. System performance and connectivity options can be tailored to each environment with a wide selection of switching modules, scaling up to 48 10-Gigabit ports or 576 Gigabit ports in a single chassis.

The flexible design of the Switch 8800 allows for any combination of switching modules to be used in a single system, allowing easy expansion of network capacity, accommodating a range of port densities and media types for 10-Gigabit and Gigabit Ethernet.

## KEY BENEFITS (CONTINUED)

Installation of the optional second switch fabric increases performance from 720 Gbps to 1.44 Tbps, as the fabrics are load-sharing. Each switching I/O module provides on-board local multilayer switching, maximizing system performance and application response times; adding modules increases the aggregate system performance, to a maximum Layer 2/3 switching capacity of 856 Mpps. In addition, the backplane is designed to accommodate higher-performing switch fabrics.

Standards-based link aggregation (via IEEE 802.3ad) allows scalable, high-bandwidth interconnectivity between network devices, with the ability to aggregate multiple Gigabit or 10-Gigabit links together as a single "trunk." Link aggregation of ports is supported across modules within the Switch 8800 for virtually non-stop network availability.

### PRIORITIZATION AND TRAFFIC MANAGEMENT

Eight priority queues per port enable standard IEEE 802.1p Class of Service Quality of Service (CoS/QoS) Protocol filtering and bandwidth rate limiting capabilities allow the switch to enforce port-based controls for efficient use of network resources and prioritization of business-critical or time-sensitive applications, including Voice over IP (VoIP).

For example, protocols associated with key business applications can receive prioritized, high-bandwidth service, while protocols associated with non-critical (or even undesirable) applications can receive lower priority and bandwidth resources, or be blocked completely.

### STANDARDS BASED INTEROPERABILITY AND INVESTMENT PROTECTION

Enterprises today rely on open standards-based technology solutions to enable interoperability among new and existing systems and to ensure that today's investments will continue to provide value well into the future without being locked-in to a particular vendor's products or technology.

The Switch 8800 has an open architecture, facilitating seamless growth and migration based on widely accepted international standards, free from costly lock-ins and the restrictions of proprietary approaches.

3Com's standards-based design philosophy—inherent in the Switch 8800 and all other 3Com products—provides investment protection as well as the flexibility to deploy "best-in-class" technology solutions which leverage industry standards.

### ENTERPRISE CLASS MANAGEMENT AND CONTROL

The Switch 8800 system features independent channels for data and management control. The dedicated data channel provides high-speed data switching and packet forwarding, while a separate management channel provides control, monitoring, route learning and distribution.

A comprehensive set of management features allows the Switch 8800 to provide enterprise-wide visibility and control to IT staff for configuration, network monitoring and advanced troubleshooting capabilities. Management features are accessible via an intuitive command line interface (CLI), as well as by SNMP, with hierarchical access controls and password protection for secure management access.

Additional management security is provided through user authentication and the data encryption capabilities of SNMP v3 and SSH v2, further reducing the likelihood of unauthorized access or snooping of management traffic.

### SEAMLESS MIGRATION TO IPV6

IPv6-ready hardware architecture enables migration from today's IPv4 networks to IPv6 whenever required, without the worry of costly forklift upgrades. An optional Advanced Feature Software version enables comprehensive IPv6 capabilities including RIPng, OSPFv3, BGP-4, MLD, and PIM (SM and DM). IPv6 routing functions are performed in hardware for maximum routing performance.

### ETHERNET METRO AREA NETWORK

Ethernet Metro Area Networks (MANs) offer enterprises a compelling solution for linking diverse sites together over metropolitan area distances into a seamless Ethernet switched network. The simplicity and affordability of Ethernet, in comparison to legacy technologies used for metro area networks, have driven significant new Ethernet-based MAN deployments that will continue to accelerate.

The Switch 8800 supports long range optical lasers on its Gigabit and 10-Gigabit Ethernet Modules for linking Switch 8800s across the metro area, as well as technologies like "Q-in-Q" encapsulation (VLAN VPN) and MPLS for creating IP-VPNs, and Virtual Private LAN Service (VPLS) for creating Layer 2 VPNs. Combined with Ethernet, VPLS transforms the MAN—with many enterprise sites—into a large Ethernet switch with any-to-any connectivity.

## FEATURES

Highly flexible, resilient architecture for end-to-end enterprise deployment in the core, data center, distribution layer and network edge.

High-density multilayer switching for Gigabit and 10-Gigabit Ethernet  
Up to 576 Gigabit or 48 10-Gigabit Ethernet ports.

1.44 Tbps system bandwidth; up to 856 Mpps switching capacity.

Advanced traffic prioritization and routing of multicast traffic in hardware for convergent applications including voice over IP, streaming audio and video.

Virtually non-stop operation with redundant power supplies, fans and switch fabrics, as well as hot-swappable switching I/O modules.

Robust network access control and enterprise-wide security via standards-based IEEE 802.1X, RADIUS authentication and advanced Access Control Lists, as well as authentication and encryption of management traffic.

Industry-standard Power over Ethernet to power IP phones, wireless access points and other devices; reduces implementation and maintenance costs.

Unifies management and administration with a common operating system and centralized control available via 3Com Enterprise Management Suite.

Granular QoS and traffic management for enhanced availability and performance of critical business applications.

Extensive L2/3/4 switching and routing capability, including advanced features\* like IS-IS, BGP-4, MBGP, MPLS, and VPLS, applicable in very large enterprises.

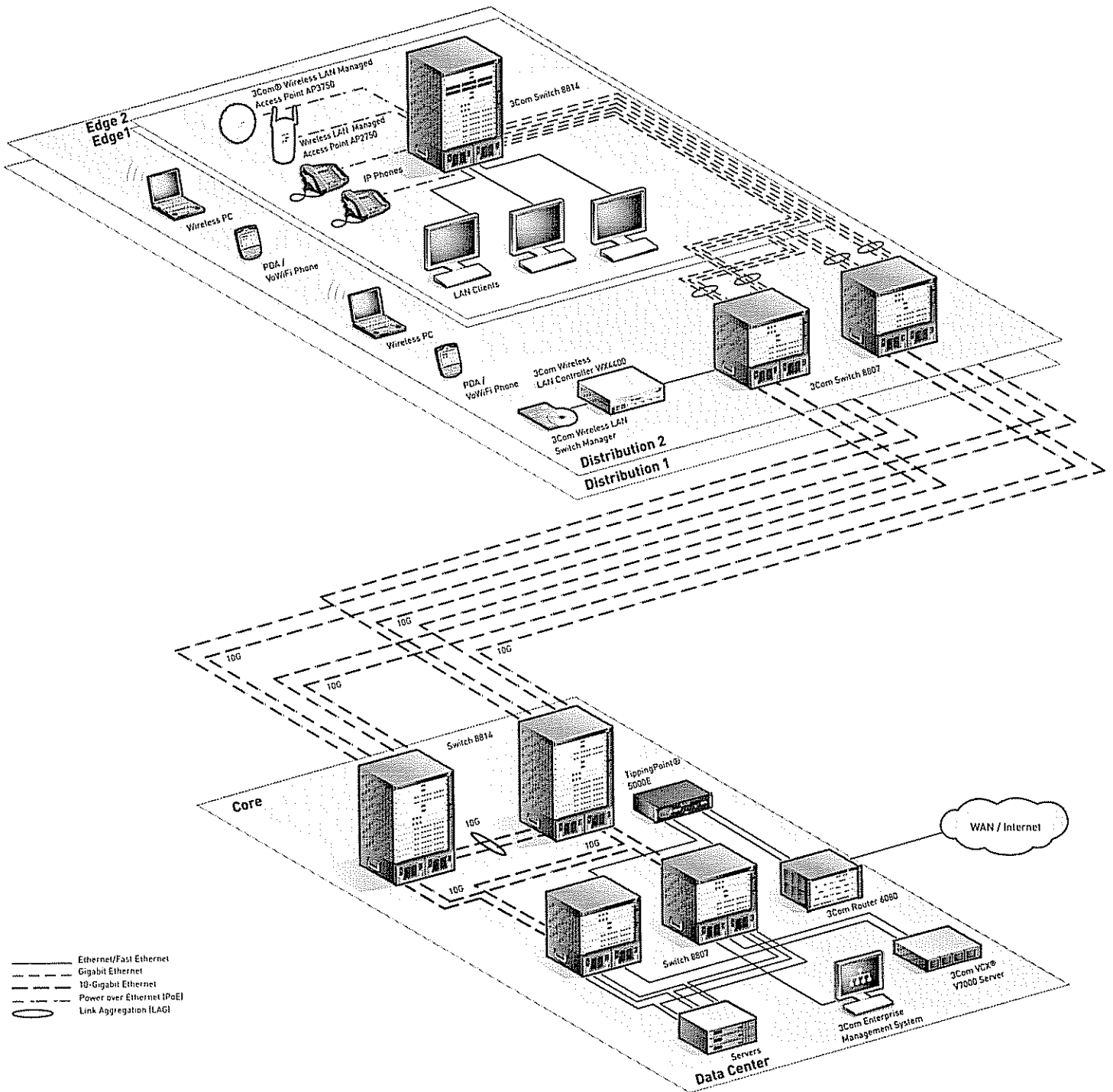
Specialized application modules for enhanced security, network analysis and Layer 2 Ethernet VPN enable the flexibility to integrate major capabilities as the network evolves.

Extensive IPv6 feature suite<sup>o</sup> with support for full IPv6 addressing and routing, and transition mechanisms such as dual stack and tunneling. IPv6 can be supported on all existing I/O modules using "Centralized Mode", preserving previous investment in those modules.

\* Available in the 3Com Advanced Feature Software v3, at additional cost.

<sup>o</sup> Available in the 3Com Advanced Feature Software v5 IPv6, at additional cost.

# SAMPLE CONFIGURATION: CORE / DATA CENTER DEPLOYMENT OF SWITCH 8800 FAMILY IN ENTERPRISE CAMPUS NETWORK



# SPECIFICATIONS

All information in this section is relevant to all members of the 3Com Switch 8800 Family, unless stated otherwise.

## CAPACITIES AND PERFORMANCE

### Switch 8814

Two slots for switch fabrics; twelve payload slots

Backplane: 1.44 Tbps, max.

Bandwidth:

- 1.44 tbps, max. (dual fabrics)
- 720 Gbps, max. (single fabric)

Throughput, aggregate: 856 Mpps, max.

### Switch 8810

Two slots for switch fabrics; eight payload slots

Backplane: 960 Gbps, max.

Bandwidth:

- 960 Gbps, max. (dual fabrics)
- 480 Gbps, max. (single fabric)

Throughput, aggregate: 572 Mpps, max.

### Switch 8807

Two slots for switch fabrics; five payload slots

Backplane: 600 Gbps, max.

Bandwidth:

- 300 Gbps, max. (dual fabrics)
- 150 Gbps, max. (single fabric)

Throughput, aggregate: 358 Mpps, max.

## LAYER 2 SWITCHING

14K MAC addresses per I/O module, 168K MAC addresses per chassis max. (depending on VLAN configuration and number of I/O modules in chassis)

1K static MAC addresses

Modules forwarding (delay < 10µs)

4096 VLANs (IEEE 802.1Q)

Port-based (IEEE 802.1Q) and protocol-based (IEEE 802.1v) VLANs

Dynamic VLAN assignment capability based on user/device authentication

GVRP (GARP VLAN Registration Protocol)

IEEE 802.3ad Link Aggregation, with support for aggregation groups across modules

Max. 31 link aggregation groups of 8 ports each; Advanced modules (for hybrid mix) provides max. 7 groups of 8 ports each

Auto-negotiation of port speed and duplex

IEEE 802.3x full-duplex flow control

Back-pressure flow control for half-duplex

Broadcast storm suppression per VLAN

IEEE 802.1D Spanning Tree Protocol (STP)

IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)

IEEE 802.1S Multiple Spanning Tree Protocol instances (MSTP)

Single STP instance

BPDU (Bridge Protocol Data Unit) protection

Jumbo frames (up to 10K bytes)

Super VLAN aggregation (RFC 3069)

Private VLAN

VLAN-based ACL

Multicast VLAN

Q-in-Q Tagging (VLAN VPN)

VPLS (Virtual Private LAN Service) using MPLS (Multiprotocol Label Switching) and LDP (Label Distribution Protocol)<sup>8</sup>

VLL (Virtual Leased Line) using Martini and Kompella<sup>9</sup>

## LAYER 3 SWITCHING

Hardware-based routing

128K routes; 256K routes on Advanced modules<sup>11</sup>

4K dynamic/static ARP (Address Resolution Protocol) max. entries per chassis (3K for user ports and 1K allocated for link aggregation); Advanced modules allow for 8K entries per I/O module (7K for user ports and 1K allocated for link aggregation), with 64K max. per chassis<sup>4</sup>

1K IP interfaces

RIP (Routing Information Protocol), v1 and v2, 2K routes; supports Split Horizons

OSPF (Open Shortest Path First), v1 and v2, 80K entries; 80K routes on Advanced modules

ECMP (Equal Cost Multi-Path) for OSPF

BGP4 (Border Gateway Protocol 4)<sup>\*</sup>

IS-IS (Intra-Domain Intermediate System to Intermediate System)<sup>\*</sup>

Hardware-based multicast routing for wirespeed performance

4K multicast routes; 256 groups

IGMP (Internet Group Management Protocol) snooping on Layer 2 interfaces

IGMP v1 and v2

PIM-DM (Protocol Independent Multicast-Dense Mode)

PIM-SM (Protocol Independent Multicast-Sparse Mode)

Multicast BGP<sup>\*</sup>

MSDP (Multicast Source Discovery Protocol)

Multiple multicast static addresses to support Microsoft ISA and other firewalls

DHCP Relay (Dynamic Host Configuration Protocol Relay)

DHCP Option 82

TCP/IP protocol stack

UDP Helper

MPLS with Layer 3 VPN, LDP and MBGP (Multiprotocol BGP)<sup>\*</sup>

VRRP (Virtual Router Redundancy Protocol): 256 virtual routers per switch; each virtual router supports 16 IP addresses

Complete IPv6 feature suite<sup>6</sup>:

- IPv6 addressing architecture
- site-local, link-local and global unicast addresses
- multicast addresses
- IPv6 specification
- transmission of IPv6 over Ethernet networks
- IPv6 neighbor discovery
- IPv6 duplicate address detection
- IPv6 stateless address autoconfiguration
- IPv6 path MTU discovery
- ICMPv6
- IPv6 static routes
- RIPng
- OSPFv3
- BGP4+ for IPv6
- VRRPv3
- ECMP for IPv6
- MLD
- MLD snooping
- PIM-SM and PIM-DM for IPv6
- dual stack architecture
- configured tunnels
- IPv6 to IPv4 tunnels
- GRE tunnels
- ISATAP tunnels
- ACLs for IPv6
- DNSv6
- Telnetv6
- FTP/TFTP over IPv6
- ping and traceroute for IPv6
- centralized IPv6 for non-IPv6-capable modules

<sup>8</sup> Chassis must be configured with VPLS and Advanced routing modules

<sup>11</sup> Chassis must be configured only with Advanced routing modules

<sup>\*</sup> Support for 256K routes requires optional 1Gb memory upgrade kit (3C17518)

<sup>\*</sup> Available in the 3Com Advanced Feature Software v3, at additional cost

<sup>6</sup> Available in the 3Com Advanced Feature Software v5 (IPv6), at additional cost

## SPECIFICATIONS (CONTINUED)

### CONVERGENCE

Eight hardware queues per port

Flow-based QoS profiles

Ingress and egress

Remarking of packets based on priority:

- Selectable prioritization
- DSCP (Diffserv Code Point)
- Type of Service (ToS)
- IEEE 802.1p Class of Service (CoS)
- IP precedence
- Local precedence: physical port, source/destination MAC address, VLAN information, Ethernet type, Layer 3 protocol, source/destination IP address, DSCP, datagram type, IP Layer 4 protocol, IP Layer 4 ports

Flow-based bandwidth management

Flows identified through ACLs (Access Control Lists)

Configurable bandwidth granularity

RED (Random Early Detect/Discard)

Queueing algorithms

Strict Priority Queuing

WRR (Weighted Round Robin) provided through bandwidth management

IEEE 802.3af PoE on 10/100/1000 ports

### SECURITY

Network login with IEEE 802.1X user authentication

Local authentication and RADIUS authentication

TACACS+ (Terminal Access Controller Access Control System Plus) authentication<sup>v</sup>

Automatic assignment of VLAN based on user/device authentication

Wirespeed packet filtering in hardware

Supports a maximum of 12K ACL rules per system; 1K ACL rules per module

ACLs filter at Layers 2, 3 and 4:

- physical port
- source/destination MAC address
- VLAN information
- Ethernet type
- Layer 3 protocol
- source/destination IP address
- DSCP
- datagram type
- IP Layer 4 protocol
- IP Layer 4 ports

MD5 cipher-text authentication and clear-text authentication for OSPF v2 and RIP v2 packets and SNMP v3 traffic

Protection against DoS (Denial of Service) attacks which exploit protocols including IP, ARP and IEEE 802.1X/EAP

IEEE 802.1X user authentication on switch Telnet sessions

Hierarchical management and password protection for management interface

Encrypted management traffic using SSH v2<sup>v</sup> and SNMP v3<sup>v</sup>

Realtime hardware data encryption: DES, 3DES, AES 256-bit encryption<sup>5</sup>

### NETWORK APPLICATION MODULES

#### Network Monitoring Module

Netflow network analysis; v5, 8 and 9 compatible data export

400 network monitoring stream sessions, max.

Statistics based on, among others:

- source and destination IP address
- UDP and TCP port
- protocol type
- ICMP type
- IP priority
- TOS
- DSCP

2 Gbps throughput, max.

#### Firewall Module

Stateful firewall, supports routing and transparent modes

NAT (Network Address Translation)

2k rules for each ACL item, max.

15K max Application Specific Packet Filters (ASPFs)

128 secure VLANs, max.

8 Demilitarized Zones (DMZ), max.

Protects from attacks originating outside (IP spoofing, smurf, fraggle, WinNuke, SYN flood, etc.) and inside (ARP and host cheats)

ICMP redirection, traceroute control

Net traffic real time analysis

Mail alarm for firewall events

Binary log file

2 Gbps throughput, max.

8 1000 Mbps SFP ports

3 10/100 Ethernet ports and AUX and console ports for management

#### IPsec Module

Fully integrated IPsec VPN

3DES, DES; AES 256-bit hardware encryption

8,192 L2TP tunnels, max.

100 L2TP sessions, max.

1,024 GRE tunnels, max.

5,000 IPsec tunnels, max.

100 IPsec sessions, max.

512-bit hardware encryption, max.

2 Gbps throughput, max.

8 1000 Mbps SFP ports

3 10/100 Ethernet ports and AUX and console ports for management

#### VPLS Module

Lassere Kompella LDP VPLS

Complies with IETF draft-ietf-ppvpn-vpls-ldp [05]

H-VPLS

Q-in-Q

MPLS hierarchical VPLS PE (U-PE, N-PE)

1K VPLS instances, max.

128K MAC addresses, max.

3.5 Gbps bandwidth, max.

<sup>v</sup> Available in the 3Com Advanced Feature Software v3, at additional cost

<sup>v</sup> TACACS+ authentication and SNMP v3 and SSH v2 encryption features are available in the Basic Software with Encryption and Advanced Feature Software versions only

<sup>5</sup> Available in the 3Com Switch 8800 IPsec module, at additional cost

## SPECIFICATIONS (CONTINUED)

### MANAGEMENT

CLI (Command Line Interface) configuration mode  
 Configuration via the console (control console) port  
 Local/remote configuration via Telnet  
 Remote configuration via modem dial-up  
 System configuration with SNMP v1, 2 and 3<sup>\*</sup>  
 Comprehensive statistics  
 Port mirroring (one-to-one and many-to-one), supported across modules  
 RMON (Remote Monitoring) groups: statistics, history, alarm and events  
 ACL/QoS and IP interface statistics  
 System log  
 Syslog  
 Detailed alarm/debug information  
 Hierarchical alarms  
 Alarm generation and filtering  
 Statistics  
 Ping and Traceroute  
 NQA (Network Quality Assurance)  
 NTP (Network Time Protocol)  
 Configuration file for backup and restore  
 System file transfer mechanisms: Xmodem, FTP, TFTP  
 IGMP MIBs per RFC 2932

### GRAPHICAL MANAGEMENT

3Com Enterprise Management Suite: flexible, extensible management in advanced enterprise IT environments  
 3Com Network Director: comprehensive, turnkey network management; includes 3Com Switch Manager application for GUI-based management of Switch 8800 systems

### CONNECTIVITY

Mix and match technologies and media types in available payload slots:

- 1-, 2- and 4-port 10GBASE-X (XFP) modules
- 12-, 24- and 48-port 1000BASE-X (SFP) modules
- 24- and 48-port 10/100/1000BASE-T (RJ-45) modules

### DIMENSIONS

#### Switch 8814

Height: 75.3 cm (29.6 in)  
 Width: 43.6 cm (17.2 in)  
 Depth: 48.0 cm (18.9 in)  
 Weight (fully loaded chassis): <120 kg (265 lbs)

#### Switch 8810

Height: 61.9 cm (24.4 in)  
 Width: 43.6 cm (17.2 in)  
 Depth: 48.0 cm (18.9 in)  
 Weight (fully loaded chassis): <80 kg (176 lbs)

#### Switch 8807

Height: 48.6 cm (19.1 in)  
 Width: 43.6 cm (17.2 in)  
 Depth: 48.0 cm (18.9 in)  
 Weight (fully loaded chassis): <65 kg (143 lbs)

### POWER SUPPLY

#### 1,200 W AC Power Supply

Input voltage: 100-240 VAC auto-ranging  
 Operating frequency: 47-63 Hz  
 Max. current: 13.6 A at 110 VAC; 6.8 A at 200 VAC  
 Max. output power: 1,200 Watts  
 Max. input power: 1,500 Watts

#### 2,000 W AC Power Supply

Input voltage: 100-140 or 200-240 VAC auto-ranging  
 Operating frequency: 47-63 Hz  
 Max. current: 11.4 A at 110 VAC; 11.4 A at 200 VAC  
 Max. output power: 1,000 Watts at 110 V; 2,000 Watts at 220 V  
 Max. input power: 1,250 Watts at 110 V; 2,500 Watts at 220 V

### ENVIRONMENTAL REQUIREMENTS

Operating temperature: 0° to 40°C (32° to 104°F)  
 Storage temperature: -10° to 70°C (14° to 158°F)  
 Humidity (operating and storage): 10% to 90% non-condensing

#### Heat dissipation:

Switch 8814: 5.529 BTU/hr  
 Switch 8810: 3.857 BTU/hr  
 Switch 8807: 2.594 BTU/hr

### IEEE STANDARDS SUPPORTED

IEEE 802.1D (STP)  
 IEEE 802.1p (CoS)  
 IEEE 802.1Q (VLANs)  
 IEEE 802.1S (MSTP)  
 IEEE 802.1v (VLANs)  
 IEEE 802.1w (RSTP)  
 IEEE 802.1X (Security)  
 IEEE 802.3ad (Link Aggregation)  
 IEEE 802.3ab (1000BASE-T)  
 IEEE 802.3ae (10G Ethernet)  
 IEEE 802.3af (Power over Ethernet)  
 IEEE 802.3i (10BASE-T)  
 IEEE 802.3u (Fast Ethernet)  
 IEEE 802.3x (Flow Control)  
 IEEE 802.3z (Gigabit Ethernet)

### IETF STANDARDS

RFC 768 (UDP)  
 RFC 783/1350 (TFTP)  
 RFC 791/1349 (IP)  
 RFC 792/950 (ICMP)  
 RFC 793 (TCP)  
 RFC 826 (ARP)  
 RFC 919/ 922 (Broadcasting Internet Datagrams)  
 RFC 950 (Internet Standard Subnetting Procedure)  
 RFC 951 (BOOTP)  
 RFC 958 (SNTP)  
 RFC 959/ 2228/ 2640 (FTP)  
 RFC 1058 (RIP v1)  
 RFC 1112 (IGMP v1)  
 RFC 1142 (OSI IS-IS Intra-domain Routing Protocol)<sup>†</sup>  
 RFC 1155 (Structure and Identification of Management Information for TCP/IP-based Internets)  
 RFC 1195 and ISO10589-1992 (IS-IS)<sup>†</sup>  
 RFC 1256 (ICMP Router Discovery Messages)  
 RFC 1518/ 1519 (CIDR)  
 RFC 1542/ 2132/ 3442 (DHCP)  
 RFC 1587/ 3101 (OSPF NSSA option)  
 RFC 1723/ 2453/ (RIP v2)  
 RFC 1765 (OSPF Database Overflow)  
 RFC 1771 (BGP-4)<sup>†</sup>  
 RFC 1772 (BGP-4 Applicability)<sup>†</sup>  
 RFC 1812/ 2644 (IP v4)  
 RFC 1965/ 3065 (BGP AS Confederations)<sup>†</sup>  
 RFC 1981 Path MTU Discovery for IPv6<sup>‡</sup>  
 RFC 1997/ 1998 (BGP Communities Attributes)<sup>†</sup>  
 RFC 2080 (RIPng)<sup>‡</sup>  
 RFC 2131/3396 (DHCP)

\* Available in the 3Com Advanced Feature Software v3, at additional cost

† TACACS+ authentication and SNMP v3 and SSH v2 encryption features are available in the Basic Software with Encryption and Advanced Feature Software versions only

‡ Available in the 3Com Switch 8800 IPsec module, at additional cost

## SPECIFICATIONS (CONTINUED)

RFC 2138/ 2865/ 2868/ 3575  
[RADIUS Authentication]  
RFC 2139/ 2866/ 2867  
[RADIUS Accounting]  
RFC 2236 [IGMP v2]  
RFC 2267/ 2827/ 3704 [Network Ingress Filtering]  
RFC 2328 [OSPF v2]  
RFC 2338/ 3768 [VRRP]  
RFC 2354 IPv6 MIB for UDP<sup>o</sup>  
RFC 2362 [PIM-SM]  
RFC 2370/ 3630 [OSPF Opaque LSA Option]  
RFC 2373 IPv6 Addressing Architecture<sup>o</sup>  
RFC 2385 [BGP - MD5]<sup>†</sup>  
RFC 2439 [BGP Route Flap Damping]<sup>†</sup>  
RFC 2452 IPv6 MIB for TCP<sup>o</sup>  
RFC 2454 IPv6MIB for UDP  
RFC 2460 IPv6 Specification<sup>o</sup>  
RFC 2461 Neighbor Discovery for IPv6<sup>o</sup>  
RFC 2462 IPv6 Stateless Address Autoconfiguration<sup>o</sup>  
RFC 2463 ICMPv6<sup>o</sup>  
RFC 2464 Transmission of IPv6 over Ethernet<sup>o</sup>  
RFC 2465 MIB for IPv6 - Textual Conventions<sup>o</sup>  
RFC 2466 ICMPv6 MIB<sup>o</sup>  
RFC 2474 Definition of DS in IPv4 and IPv6<sup>o</sup>  
RFC 2474/ 3168 [Diffserv]  
RFC 2475 [Architecture for Differentiated Service]  
RFC 2545 Use of BGP-4 for IPv6<sup>o</sup>  
RFC 2547. 3031. 3036 [MPLS]<sup>†</sup>  
RFC 2553 Basic Socket Interface for IPv6<sup>o</sup>  
RFC 2597 AF PHB<sup>o</sup>  
RFC 2598 Expedited AF PHB<sup>o</sup>  
RFC 2622 [Routing poticy]  
RFC 2644 [Change Default: Router Directed Broadcasts]  
RFC 2697 Single rate 3 color marker<sup>o</sup>  
RFC 2698 Two rate 3 color marker<sup>o</sup>  
RFC 2710 MLD for IPv6<sup>o</sup>  
RFC 2715 [Interoperability: Multicast Routing Protocols]  
RFC 2740 OSPFv3<sup>o</sup>  
RFC 2784 GRE<sup>o</sup>  
RFC 2796 [BGP Route Reflection]<sup>†</sup>  
RFC 2893 Transition Mechanisms for IPv6<sup>o</sup>  
RFC 2918 [Route Refresh for BGP-4]<sup>†</sup>  
RFC 3056 Connection of IPv6 via IPv4<sup>o</sup>  
RFC 3069 [LDP, VLAN Aggregation]  
RFC 3168 [Explicit Congestion Notification (ECN)]  
RFC 3363 IPv6 Addresses in DNS<sup>o</sup>  
RFC 3513 IPv6 Addressing<sup>o</sup>  
RFC 3596 DNS Extensions for IPv6<sup>o</sup>  
RFC 3954 [NetFlow]  
RFC 4213 Basic Transition for IPv6 Hosts and Routers<sup>o</sup>

### Management, including MIBs Supported

RFC 1155 [Structure and Mgmt Information (SMI v1)]  
RFC 1157 [SNMP v1/v2c]  
RFC 1213/ 2011-2013 [MIB II]  
RFC 1213. 1573 / 2233/ 2863 [MIB II]  
RFC 1253/ 1850 [OSPF Version 2 MIB]  
RFC 1493 [Bridge MIB]  
RFC 1573/ 2233/ 2863 [Private IF MIB]  
RFC 1657 [draft] [BGP4]<sup>†</sup>  
RFC 1724 [RIP Version 2 MIB Extension]  
RFC 1850 [OSPF Version 2 MIB Extension]  
RFC 1901-1907/ 2578-2580/ 3416-3418 [SNMP v2c, SMI v2 and Revised MIB-II]  
RFC 2233/ 3376 [Interfaces MIB]  
RFC 2271/ 2571 [FrameWork]  
RFC 2571-2575/ 3411-3415 [SNMP v3]<sup>†</sup>  
RFC 2578-2580 [SMI v2]  
RFC 2613 [Remote Network Monitoring MIB Extensions]  
RFC 2618 [RADIUS Authentication Client MIB]  
RFC 2620 [RADIUS Accounting Client MIB]  
RFC 2665/ 3635 [Pause control]  
RFC 2674 [VLAN MIB Extension]  
RFC 2787 [VRRP MIB]  
RFC 2819 [RMON MIB]  
RFC 2932 [IGMP MIBs]

### IETF DRAFTS

draft-martini-l2circuit-tran-mpls [Martini LDP]  
draft-kompella -ppvpn-l2vpn-l2VPN  
draft-ietf-pwe3-ethernet-encap-07.txt  
draft-ietf-ppvpn-vpls-ldp.03 [support FEC127]

### EMISSIONS/AGENCY APPROVALS

CISPR 22 Class A  
FCC Part 15 Class A  
EN 55022 Class A  
ICES-003 Class A  
AS/NZS 3548 Class A  
EN 61000-3-2  
EN 61000-3-3

### IMMUNITY

Product conforms to:  
EN 55024: 1998  
EN 61000-4-2 to 61000-4-6. EN 61000-4-11

### SAFETY AGENCY CERTIFICATIONS

UL 60950  
IEC 60950-1:2001; all national deviations  
EN 60950-1: 2001; all deviations  
CAN/CSA-C22 2 No 60950-1-03  
NOM-019 SCFI. Mexico; AS/NZ TS-001 and 60950: 2000, Australia

<sup>o</sup> Available in the 3Com Advanced Feature Software v3. at additional cost  
<sup>o</sup> Available in the 3Com Advanced Feature Software v5 [IPv6]. at additional cost

<sup>†</sup> Switch 8800 systems with one or more 48-Port 10/100/1000BASE-T Access modules (3C17532A) installed will not support the BGP4. IS-IS and MBGP Advanced Software routing features

<sup>†</sup> Advanced Feature Software v5 does not include IS-IS and MPLS and does not support Application Modules



## SPECIFICATIONS (CONTINUED)

### SYSTEM SOFTWARE OPTIONS

#### Basic Software

Standard software version for Switch 8800. pre-loaded on Switch Fabric

#### Basic Software with Encryption

Includes all features of the Basic Software plus:

- SNMP v3 and SSH v2 encryption
- TACACS+ authentication

Available as a free download: [www.3com.com/software\\_8800](http://www.3com.com/software_8800)

#### Advanced Feature Software, v3

Includes all features of the Basic Software with Encryption plus:

- BGP4 (WAN routing protocol)<sup>a</sup>
- IS-IS (Large-scale WAN routing protocol)<sup>a</sup>
- MBGP (WAN routing protocol)<sup>a</sup>
- MPLS (requires Advanced Routing module)
- VPLS (requires VPLS Network Module and Advanced Routing Module)

Ordered separately

#### Advanced Feature Software, v5 (IPv6)<sup>a</sup>

Includes all features of the Basic Software with Encryption plus:

- IPv6 addressing architecture
- site-local, link-local and global unicast addresses
- multicast addresses
- IPv6 specification
- transmission of IPv6 over Ethernet networks
- IPv6 neighbor discovery
- IPv6 duplicate address detection
- IPv6 stateless address autoconfiguration
- IPv6 path MTU discovery
- ICMPv6
- IPv6 static routes
- RIPng

- OSPFv3
  - BGP4+ for IPv6
  - VRRPv3
  - ECMP for IPv6
  - MLD
  - MLD snooping
  - PIM-SM and PIM-DM for IPv6
  - dual stack architecture
  - configured tunnels
  - IPv6 to IPv4 tunnels
  - GRE tunnels
  - ISATAP tunnels
  - ACLs for IPv6
  - DNSv6
  - Telnetv6
  - FTP/TFTP over IPv6
  - ping and traceroute for IPv6
  - centralized IPv6 for non-IPv6-capable modules
- Ordered separately

### WARRANTY AND OTHER SERVICES

Limited Hardware Warranty for 1 year

Limited Software Warranty for 90 days

90 days free telephone technical support

Refer to [www.3com.com/warranty](http://www.3com.com/warranty) for details

<sup>a</sup> Switch 8800 systems with one or more 48-Port 10/100/1000BASE-T Access modules (3C17532A) installed will not support the BGP4, IS-IS and MBGP Advanced Software routing features

<sup>a</sup> Advanced Feature Software v5 does not include IS-IS and MPLS and does not support Application Modules

## AGGREGATE SYSTEM CAPACITIES

	SWITCH 8814	SWITCH 8810	SWITCH 8807
<b>CHASSIS SLOTS</b>			
Available slots (switch fabric and I/O)	14	10	7
<b>PERFORMANCE</b>			
Switching Capacity	856 Mpps	572 Mpps	358 Mpps
Fabric bandwidth:			
Single switch fabric	720 Gbps	480 Gbps	150 Gbps
Dual switch fabric	• 1.4 Tbps	960 Gbps	300 Gbps
<b>TOTAL PORT CAPACITY</b>			
10-Gigabit Ethernet (XFP)	48	32	20
Gigabit Ethernet (10/100/1000)	576	384	240
Gigabit Ethernet PoE (10/100/1000)	576	384	240
Gigabit Ethernet (SFP)	576	384	240

## SERVICE AND SUPPORT

3Com Global Services offers the resources and talents of a major corporation plus more than two decades of experience in resolving network challenges and delivering business benefits to enterprises around the world.

Global support with a personalized, local focus in the local language helps drive productivity and minimize expenses. Because 3Com understands both the technology and the business, we're the partner you need to remain strong and competitive.

### SUGGESTED SERVICE, SUPPORT AND TRAINING OFFERINGS

Network Health Check	<p>An activity-auditing service focused on improving network performance and productivity</p> <p>Includes traffic monitoring, utilization analysis, problem identification, and asset deployment recommendations</p> <p>Extensive report provides blueprint for action</p>
Network Installation and Implementation Services	<p>Experts set up and configure equipment and integrate technologies to maximize functionality and minimize business disruption</p> <p>For large and complex sites, implementation services include personalized configuration, project management, extended testing and coaching on network administration</p>
Project Management	<p>Provides extra focus and resources that special projects demand</p> <p>3Com engineer(s) manage entire process from initial specifications to post-project review</p> <p>Using structured methodology, requirements are identified, projects planned and progress of implementation activities tracked</p>
3Com Guardian <sup>SM</sup> Maintenance Service	<p>This service provides comprehensive on-site support and includes advance hardware replacement, telephone technical support and software upgrades</p>
3Com Express <sup>SM</sup> Maintenance Service	<p>This service provides speedy access to 3Com shipment of advance hardware replacements, software upgrades and telephone support</p>
3Com University	<p>Self-paced and instructor-led technology and product courses, plus certification programs</p>

For additional information, please visit [www.3com.com/services](http://www.3com.com/services)

# ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
<b>Chassis Kits</b>	
3Com Switch 8814 Chassis Kit (chassis, one power supply, two fan assemblies; fabric ordered separately)	3C17540
3Com Switch 8810 Chassis Kit (chassis, one power supply, fan assembly; fabric ordered separately)	3C17541
3Com Switch 8807 Chassis Kit (chassis, one power supply, fan assembly; fabric ordered separately)	3C17543
<b>Switch Fabric</b>	
3Com Switch 8800 720 Gbps Fabric	3C17539
3Com Switch 8800 360 Gbps Fabric	3C17508
<b>10-Gigabit I/O Modules</b>	
3Com Switch 8800 2-Port 10GBASE-X (XFP) Advanced	3C17527
3Com Switch 8800 2-Port 10GBASE-X (XFP) IPv6	3C17537
3Com Switch 8800 4-Port 10GBASE-X (XFP) Quad IPv6	3C17536
3Com Switch 8800 4-Port 10GBASE-X (XFP)	3C17526
<b>Gigabit I/O Modules</b>	
3Com Switch 8800 24-Port 1000BASE-X (SFP) IPv6	3C17533
3Com Switch 8800 24-Port 1000BASE-X (SFP) Advanced	3C17530
3Com Switch 8800 48-Port 1000BASE-X (SFP) IPv6	3C17538
3Com Switch 8800 24-Port 10/100/1000BASE-T IPv6	3C17534
3Com Switch 8800 24-Port 10/100/1000BASE-T Advanced	3C17531
3Com Switch 8800 48-Port 10/100/1000BASE-T IPv6	3C17528A
3Com Switch 8800 48-Port 10/100/1000BASE-T Access IPv6 <sup>Ω</sup>	3C17532A
<b>Network Application Modules</b>	
3Com Switch 8800 Network Monitoring	3C17542
3Com Switch 8800 Firewall	3C17546
3Com Switch 8800 VPLS	3C17548
3Com Switch 8800 IPsec	3CR1754766
<b>Software</b>	
3Com Switch 8800 Advanced Feature Software, v3 <sup>Ω</sup>	3CR1752165V3
3Com Switch 8800 Advanced Feature Software, v5 (IPv6) <sup>Ω</sup>	3CR1752593V5

PRODUCT DESCRIPTION	3COM SKU
<b>Transceivers</b>	
3Com 10GBASE-CX4 XFP	3CXFP95
3Com 10GBASE-ER XFP	3CXFP96
3Com 10GBASE-LR XFP	3CXFP92
3Com 10GBASE-SR XFP	3CXFP94
H3C 10GBASE-ER XFP	0231A03W
H3C 10GBASE-ER XFP	0231A72X
H3C 10GBASE-LR XFP	0231A438
H3C 10GBASE-SR XFP	0231A494
H3C 10GBASE-ZR XFP	0231A41G
3Com 1000BASE-LH70 SFP	3CSFP97
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-T SFP	3CSFP93
H3C 1000BASE-LH100 SFP	0231A321
H3C 1000BASE-LH40 SFP (1310nm)	2312170
H3C 1000BASE-LH40 SFP (1550nm)	2312172
H3C 1000BASE-LH70 SFP	2312173
H3C 1000BASE-LX BX10-D (BiDi) SFP	0231A11V
H3C 1000BASE-LX BX10-U (BiDi) SFP	0231A11U
H3C 1000BASE-LX SFP	0231A563
H3C 1000BASE-SX SFP	0231A562
H3C 1000BASE-T SFP	0231A085
<b>Power over Ethernet (PoE) Components</b>	
3Com Switch 8800 External PoE Power Rack	3C17509
3Com Switch 7750/8800 PoE Power Supply Unit	3C16884
3Com Switch 8800 PoE Option (PoE DIMM Module)	3C17529
3Com Switch 8800 PoE Entry Module	3C17510
<b>Spare Components</b>	
3Com Switch 8807 / 8814 Fan Assembly	3C17503
3Com Switch 8810 Fan Assembly	3C17504
3Com Switch 8800 1.200W AC Power Supply	3C17506A
3Com Switch 8800 2.000W AC Power Supply	3C17507A
3Com Switch 8800 1Gb Memory Upgrade	3C17518

### 3Com Global Services

3Com Network Health Check, Installation Services,

and Express Maintenance

[www.3com.com/services\\_quote](http://www.3com.com/services_quote)

3Com University Courses

[www.3com.com/3comu](http://www.3com.com/3comu)

<sup>Ω</sup> Switch 8800 systems with one or more 48-Port 10/100/1000BASE-T Access modules (3C17532A) installed will not support the BGP4, IS-IS and MBGP Advanced Software routing features

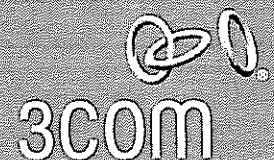
<sup>Ω</sup> Advanced Feature Software v5 does not include IS-IS and MPLS and does not support Application Modules

Visit [www.3com.com](http://www.3com.com) for more information about 3Com solutions.

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3COM-001117





DATA SHEET

Economical, modular routers fully equipped to handle converged WAN traffic at regional and branch enterprise sites

OVERVIEW

The economical 3Com® Router 5000 Family provides full-featured, secure WAN access for regional, branch and remote office locations

These four routers models offer high-speed processors, a complete complement of industry-standard routing technologies, advanced security and control features and robust management in a flexible, modular package. Each router comes with all the processing power, memory and software required for enterprise-level deployments—no need for expensive upgrades or complicated onsite configuration

Multifunction Interface Modules (MIMs) and Smart Interface Cards (SICs) may be added to accommodate growth and handle increased demand on the network. Advanced quality of service (QoS) and other traffic management capabilities provide built-in support for converged voice, data and video traffic, while resilience and redundancy features ensure continuous operation for business-critical applications.

KEY BENEFITS

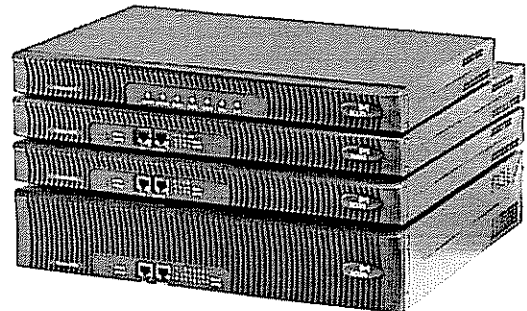
FLEXIBLE, DEPLOYMENT-READY ROUTING

The 3Com Router 5000 Family consists of four models:

- › Router 5682: eight slots for optional MIMs
- › Router 5642: four MIM slots
- › Router 5232: three MIM slots, two 10/100 Ethernet ports
- › Router 5012: one MIM slot, two slots for optional Smart Interface Cards, one 10/100 Ethernet port, one serial (sync/async) port

All four models come with an AUX serial port and a management console port

For maximum flexibility, more than 20 MIMs are offered for the 3Com Router 5000 Family. They provide a broad array of WAN interfaces (ISDN, T1, E1, T3, E3, FXS, FXO), voice support, additional LAN ports (including Gigabit Ethernet links) and other interfaces. Smart Interface Cards provide cost-effective interfaces for the compact Router 5012 model, supplementing the single MIM slot on that device.



From top: 3Com Router 5012 Router 5032, Router 5642 Router 5682

## KEY BENEFITS (CONTINUED)

### FULLY FEATURED ROUTING PLATFORM

To eliminate the need for costly and inconvenient upgrades, the routers come equipped with all the required operating memory, a complete routing and security suite and a robust applications set. The routers include a full complement of memory and flash memory to support dual software images. Standard routing capabilities include: IP and IPX routing, OSPF, RIP V1/2, integrated IS-IS, multicast routing, QoS, IEEE 802.1Q VLAN and IGMP v1, 2 and 3 and more.

### MULTIVENDOR INTEROPERABILITY ACROSS THE WAN

To accommodate today's multivendor networking environments, 3Com routers are designed to interoperate with standards-based equipment from other vendors. The 3Com Router 5000 Family has been "Tolly Verified for Interoperability with Cisco," reducing implementation and testing time for enterprises with core Cisco routers.

### ADVANCED SECURITY AND CONTROL FEATURES

The Router 6000 Family helps secure and safeguard sensitive information against unauthorized access. Security and control features include: AAA, RADIUS authentication, a stateful packet inspection firewall, denial-of-service (DoS) blocking and Access Control Lists (ACLs). L2TP and IPsec VPNs with 3DES and AES encryption provide additional security over the WAN.

The embedded firewall includes support for ACLs, plus generic routing encapsulation (GRE), network address translation (NAT), NAT traversal and application layer gateways. Business applications are able to pass easily through the firewall and across the VPN.

### VOICE, DATA AND VIDEO INTEGRATION

The 3Com Router 5000 Family delivers advanced QoS, including DiffServ support, for effective traffic management on networks that run converged voice, data and video applications. Utilizing IP differentiated services for applications and ATM QoS for traffic and physical layer prioritization, the routers are equipped to handle the most demanding multimedia networking. This helps assure the level of service required for delay-sensitive traffic and continuous business operation, even during heavy network use. The routers support both IEEE 802.1p prioritization and IEEE 802.1Q VLANs.

Voice MIMs support both analog and digital voice communications. They enable enterprises, service providers and managed service providers to connect the public switched telephone network (PSTN) and traditional telephony equipment (including PBXs, key systems, analog phones and fax machines) directly to the routers without additional equipment.

### RESILIENCE AND REDUNDANCY FOR MAXIMUM UPTIME

The routers are designed for high resiliency to meet stringent enterprise uptime standards. To ensure continuous operation, they support redundant links and provide extra bandwidth to minimize downtime and ensure resilience in case of service disruptions. Reliability features include configuration rollback, multilinks, Virtual Router Redundancy Protocol (VRRP), Backup Control Center (Configuration/Port) and Dial Control Center.

In addition, the routers include 32 MB of flash memory to hold multiple configuration files and operating system images for recovery purposes. If the router cannot boot from a recently updated software image or configuration file, it can boot from a specified backup file or image residing in this memory.

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**KEY BENEFITS**  
(CONTINUED)**NEXT-GENERATION NETWORK EFFICIENCY WITH MPLS**

Using the Multiprotocol Label Switching (MPLS) capability in the routers, larger enterprises can simplify the routing configuration of an existing network infrastructure and provide scalable Layer 2 or Layer 3 VPNs throughout the network. This increases network efficiency in services that support MPLS technology.

**SIMPLIFIED REMOTE-SITE INSTALLATION AND UPGRADES**

New router deployments and upgrades can be costly and time-consuming for IT organizations, particularly for those organizations with a large number of regional or branch offices at some distance from central sites. The 3Com Router 5000 Family provides an auto-configuration feature that lets staff configure the devices from a central location. With no need for local configuration or pre-configuration prior to deployment, enterprises can easily and cost-effectively deploy the routers in locations where IT expertise is limited.

**SOPHISTICATED MANAGEMENT CAPABILITIES**

3Com Router 5000 devices can be managed using the optional 3Com Management Suite, or using 3Com Router Manager, which is included with the optional 3Com Network Director software. These graphical applications provide sophisticated remote diagnostic and management capabilities, including bulk updating of remote router code and configuration backup, auto-trap setup and monitoring, router system status and historical reporting. An intuitive, easy-to-use Call Level Interface (CLI) function can be accessed directly, or remotely via Telnet, Secure Shell, or Rlogin. Other standards-based management applications may also be used. The Info Center diagnostic tool, available through the CLI interface, helps spot problems and reports them for quick remedial action.

**WORLD-CLASS SERVICE, SUPPORT AND TRAINING**

The 3Com Router 5000 Family is backed by 3Com and its authorized partners. These professional customer service organizations offer assessment, installation, management and maintenance support for a range of network infrastructures and applications. Skilled personnel with experience in a variety of network environments can assist 3Com customers through all phases of network planning, implementation, troubleshooting and product training.

**AN END-TO-END 3COM SOLUTION**

The 3Com Router 5000 Family is an integral part of 3Com's broad portfolio of secure converged network solutions for enterprises and small businesses: 3Com TippingPoint™ Intrusion Detection Systems; 3Com Router 3000 and Router 6000 families; 3Com Switch 8800, Switch 7700, Switch 5500 and Switch 4500 families; the 3Com Convergence Application Suite and the 3Com VCX™ and NBX™ IP telephony platforms; and 3Com OfficeConnect™ routers, switches and firewalls for small offices.

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**FEATURE HIGHLIGHTS**

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Comes with all the processing power, memory and software needed for enterprise-level routing from the core to the edge of the network

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Features a versatile modular design that economically supports a wide array of WAN and LAN interfaces using Multifunction Interface Modules and Smart Interface Cards

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Supports a full complement of routing protocols and technologies for integration with a broad range of public and private networks

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Provides QoS and other traffic management to protect the performance of converged applications such as voice over IP and video over IP

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Provides MPLS support to simplify configurations and improve network efficiency

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Ensures security and control with embedded authentication, stateful packet inspection firewall, VPN capability and other features

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Interoperates with Cisco and other standards-based routers

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Supports dual software images to assist in recovery and provide rollback capabilities

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Can be managed centrally with a full set of diagnostic tools and control features

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Offers voice cards for direct connection to digital and legacy analog telephony systems and devices

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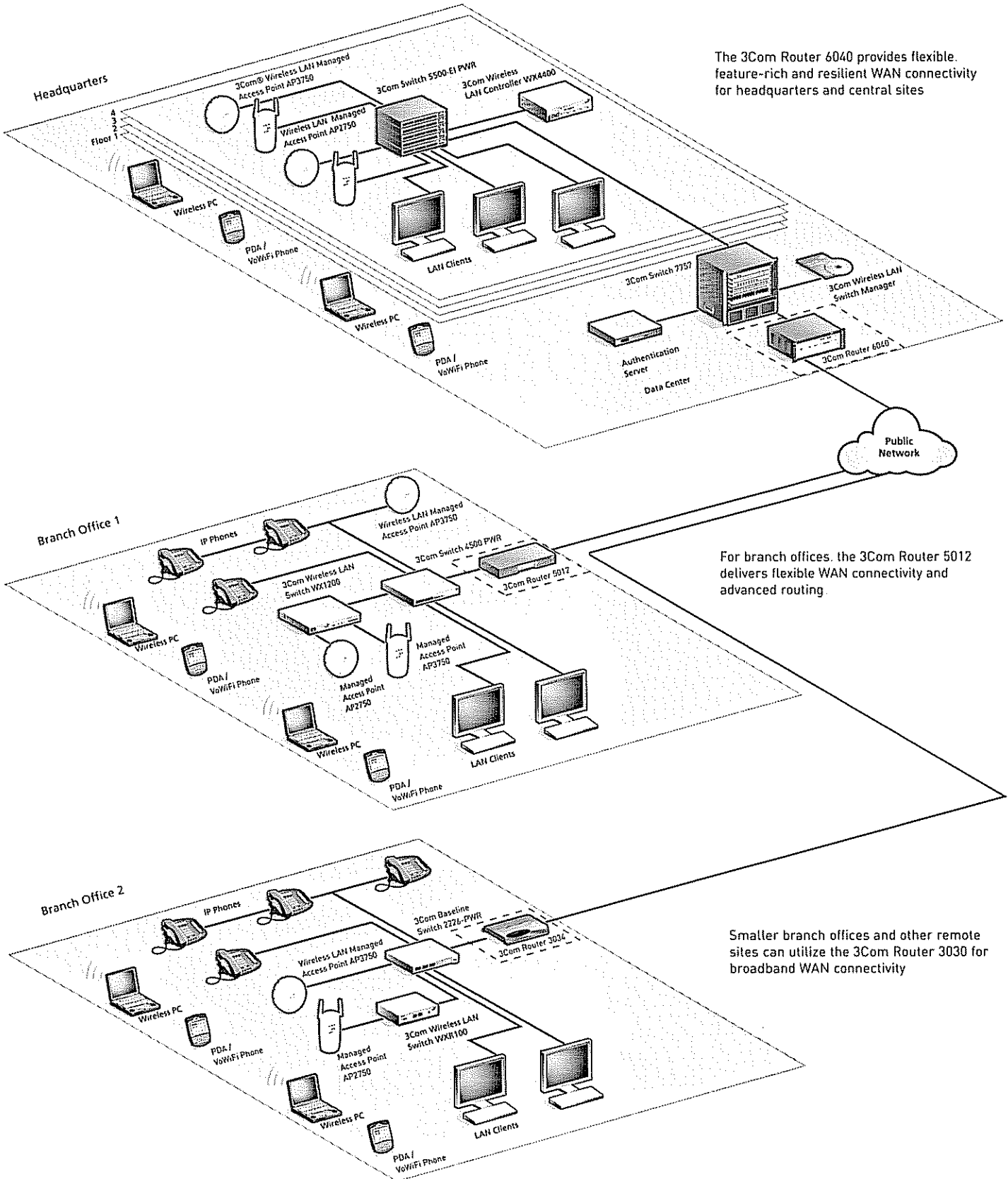
Backed by top-flight service, support and training from 3Com and 3Com authorized partners

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The "Tolly Verified" certification, supported by intensive testing by The Tolly Group, provides the opportunity for enterprise network buyers to evaluate products on an objective basis and gain the confidence that products support industry-accepted protocols and features and deliver interoperability

## 3COM ROUTERS IN A DISTRIBUTED VOICE READY NETWORK





All information in this section is relevant to the 3Com Router 5012, 5232, 5642 and 5682, unless stated otherwise

### PORTS

**Router 5012:**  
One 10/100BASE-T port  
One serial port (Sync/Async)  
One MIM and two SIC slots

**Router 5232:**  
Two 10/100BASE-T ports  
Three MIM slots

**Router 5642:**  
Four MIM slots

**Router 5682:**  
Eight MIM slots

**All models:**  
One console port  
One AUX serial port

### MEMORY

Boot ROM: 512 KB  
SDRAM:  
Router 5012: 128 MB  
Router 5232, 5642, 5682: 256 MB  
Flash: 32 MB

### AVAILABLE LAN CONNECTIONS

10/100 and 10/100/1000 Ethernet

### AVAILABLE WAN ROUTING

ISDN PRI, frame relay, X.25, X.21, T1, E1, T3, E3, V.35, HDLC/SDLC, leased line, sync/async, ATM, ADSL, ADSL 2/2+, IP, IPX, OSPF, PPP, RIP v1 and v2, BGP-4, MPLS, integrated IS-IS, static routing, multicast routing

### SECURITY

Stateful packet inspection firewall  
VPN: L2TP, GRE, IPSec  
MPLS VPN: L2 and L3  
ACLs, NAT, X.509, AAA, RADIUS, PAP/CHAP, TACACS+

### VOICE AND DATA SUPPORT

IP QoS: CAR, LAR, GTS, FIFO, PQ, CQ, WFQ, WRED, LLQ; IEEE 802.1p  
Multicast routing protocols: IGMP, PIM-SM, PIM-DM  
IEEE 802.1Q VLAN and inter-VLAN routing  
H.323 and SIP Gatekeeper support.  
G.729/G.711/G.723 compression  
Telephony interface signaling support

### SECURITY

Stateful packet inspection firewall  
VPN: L2TP, GRE, IPSec  
MPLS VPN: L2 and L3  
ACLs, NAT, X.509, AAA, RADIUS, PAP/CHAP, TACACS+

### VOICE AND DATA SUPPORT

IP QoS: CAR, LAR, GTS, FIFO, PQ, CQ, WFQ, WRED, LLQ; IEEE 802.1p  
Multicast routing protocols: IGMP, PIM-SM, PIM-DM  
IEEE 802.1Q VLAN and inter-VLAN routing  
H.323 and SIP Gatekeeper support.  
G.729/G.711/G.723 compression

### RESILIENCE

Configuration rollback, auto-configuration  
VRRP, Backup Center  
(Configuration/Port), Dial Control  
Center, multilinks

### DIMENSIONS

**Router 5012:**  
Height: 43.0 mm (1.7 in)  
Width: 440.0 mm (17.3 in)  
Depth: 315.0 mm (12.4 in)  
Weight: 6.0 kg (13.2 lb)

**Router 5232 and 5642:**  
Height: 43.0 mm (1.7 in)  
Width: 440.0 mm (17.3 in)  
Depth: 400.0 mm (15.7 in)  
Weight: 8.0 kg (17.6 lb)

**Router 5682:**  
Height: 86.0 mm (3.4 in)  
Width: 440.0 mm (17.3 in)  
Depth: 400.0 mm (15.7 in)  
Weight: 14.0 kg (30.9 lb)

### POWER SUPPLY

**Router 5012:**  
100 to 240 VAC, 50/60 Hz, 60W

**Router 5232 and 5642:**  
100 to 240 VAC, 50/60 Hz, 80W

**Router 5682:**  
100 to 240 VAC, 50/60 Hz, 120W

### ENVIRONMENTAL REQUIREMENTS

Operating temperature:  
0° to 40°C (32° to 104°F)  
Operating humidity:  
5% to 85% non-condensing

### MTBF

Router 5012: 39 years (342,000 hours)  
Router 5232: 36 years (316,000 hours)  
Router 5642: 40 years (350,000 hours)  
Router 5682: 40 years (350,000 hours)

### SICs and MIMs:

3C13712: 3,459 years (30,301,000 hours)  
3C13715: 605 years (5,303,000 hours)  
3C13716: 929 years (8,138,000 hours)  
3C13718: 548 years (4,800,000 hours)  
3C13719: 248 years (2,175,000 hours)  
3C13720A: 431 years (3,776,000 hours)  
3C13722: 292 years (2,558,000 hours)  
3C13724: 493 years (4,322,000 hours)  
3C13725: 546 years (4,786,000 hours)  
3C13726: 400 years (3,506,000 hours)  
3C13727: 496 years (4,348,000 hours)  
3C13728: 344 years (3,016,000 hours)  
3C13761: 808 years (7,083,000 hours)  
3C13762: 333 years (2,917,000 hours)  
3C13764: 182 years (1,594,000 hours)  
3C13765: 542 years (4,751,000 hours)  
3C13766: 124 years (1,087,000 hours)  
3C13767: 582 years (5,102,000 hours)  
3C13769: 234 years (2,051,000 hours)  
3C13770: 213 years (1,867,000 hours)  
3C13772: 163 years (1,428,000 hours)  
3C13774: 342 years (2,996,000 hours)  
3C13775: 240 years (2,104,000 hours)  
3C13777: 230 years (2,016,000 hours)

3C13780: 474 years (4,155,000 hours)  
3C13781: 311 years (2,726,000 hours)  
3C13783: 351 years (3,077,000 hours)  
3C13784: 211 years (1,850,000 hours)  
3C13785: 274 years (2,402,000 hours)  
3C13786: 168 years (1,473,000 hours)  
3C13787: 218 years (1,911,000 hours)  
3C13788: 206 years (1,806,000 hours)  
3CR13771-75: 394 years (3,454,000 hours)  
3CR13773-75: 758 years (6,644,000 hours)

### REGULATORY COMPLIANCE

CE Mark for European Union, Council Directive 99/5/EC

### MANAGEMENT

3Com Enterprise Management Suite  
3Com Network Director  
3Com Router Manager<sup>†</sup>  
CLI  
SNMP v1, 2 and 3; Telnet, SSH; Rlogin and Info Center (diagnostic tool) support

### EMISSIONS/AGENCY APPROVALS

CISPR 22 Class A  
EN 55022 Class A  
FCC Part 15, CFR 47 Class A  
ICES-003 Class A  
AS/NZS CISPR22 Class A  
VCCI V-3 Class A

### IMMUNITY

CISPR 24  
EN 55024  
EN 61000-3-2, 61000-3-3, 61000-4-2, 61000-4-3, 61000-4-4, 61000-4-5, 61000-4-6, 61000-4-8 and 61000-4-11

### SAFETY AGENCY CERTIFICATIONS

UL 60950 3rd Edition  
CAN/CSA-C22.2 #60950  
EN 60825-1, 60825-2, 60950  
IEC 60950  
AS/NZS60950: 2000

### WARRANTY AND OTHER SERVICES

One-year Limited Hardware Warranty  
Limited Software Warranty for 90 days  
90 days of telephone technical support  
Refer to [www.3com.com/warranty](http://www.3com.com/warranty) for details

<sup>†</sup> 3Com Router Manager included in 3Com Network Director

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**SERVICE AND SUPPORT**

3Com Global Services offers the resources and talents of a major corporation plus more than two decades of experience in resolving network challenges and delivering business benefits to enterprises around the world

Global support with a personalized, local focus in the local language helps drive productivity and minimize expenses. Because 3Com understands both the technology and the business, we're the partner you need to remain strong and competitive.

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**Suggested Service, Support and Training Offerings**

Network Health Check	<p>An activity-auditing service focused on improving network performance and productivity</p> <p>Includes traffic monitoring, utilization analysis, problem identification, and asset deployment recommendations</p> <p>Extensive report provides blueprint for action</p>
Network Installation and Implementation Services	<p>Experts set up and configure equipment and integrate technologies to maximize functionality and minimize business disruption</p> <p>For large and complex sites, implementation services include personalized configuration, project management, extended testing and coaching on network administration</p>
Project Management	<p>Provides extra focus and resources that special projects demand</p> <p>3Com engineers manage entire process from initial specifications to post-project review</p> <p>Using structured methodology, requirements are identified, projects planned and progress of implementation activities tracked</p>
3Com Guardian <sup>SM</sup> Maintenance Service	<p>This service provides comprehensive on-site support and includes advance hardware replacement, telephone technical support and software upgrades</p>
3Com Express <sup>SM</sup> Maintenance Service	<p>This service provides speedy access to 3Com shipment of advance hardware replacements, software upgrades and telephone support</p>
3Com University	<p>Self-paced and instructor-led technology and product courses, plus certification programs</p>

For additional information, please visit [www.3com.com/services](http://www.3com.com/services)

## ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU	PRODUCT DESCRIPTION	3COM SKU
3Com Router 5012	3C13701	3Com Router 1-Port 10/100/1000 MIM	3C13774
<i>3Com Router 5012 chassis, 1 x 10/100 port, 1 x serial port, 2 SIC slots, 1 MIM slot</i>		<i>1-port 10/100/1000BASE-T interface module</i>	
3Com Router 5232	3C13751	3Com Router 1-Port Channelized T3 MIM*	3C13775A
<i>3Com Router 5232 chassis, 2 x 10/100 ports, 3 MIM slots</i>		<i>1-port Channelized T3 interface module</i>	
3Com Router 5642	3C13755	3Com Router 1-Port Channelized E3 MIM*	3C13777
<i>3Com Router 5642 chassis, 4 MIM slots</i>		<i>1-port Channelized E3 interface module</i>	
3Com Router 5682	3C13759	3Com Router 4-Port E1 IMA MIM	3C13778
<i>3Com Router 5682 chassis, 8 MIM slots</i>		<i>4-Port E1 IMA interface module</i>	
<b>Smart Interface Card (SIC) Options</b>		3Com Router 4-Port T1 IMA MIM	3C13779
<i>for Router 5012 only.</i>		<i>4-Port T1 IMA interface module</i>	
3Com Router 1-Port 10/100 SIC	3C13712	3Com Router 2-Port FXS MIM	3C13780
<i>1-port 10/100BASE-T Fast Ethernet interface card</i>		<i>2-port FXS interface module</i>	
3Com Router 1-Port Enhanced Serial SIC	3C13715	3Com Router 4-Port FXS MIM	3C13781
<i>1-port Sync/Async Serial interface card</i>		<i>4-port FXS interface module</i>	
3Com Router 2-Port ISDN S/T SIC	3C13716	3Com Router 2-Port FXO MIM	3C13783
<i>2-port ISDN BRI S/T port interface card</i>		<i>2-port FXO interface module</i>	
3Com Router 2-Port ISDN U SIC	3C13718	3Com Router 4-Port FXO MIM	3C13784
<i>2-port ISDN BRI U port interface card</i>		<i>4-port FXO interface module</i>	
3Com Router 1-Port ADSL/ADSL2+ SIC	3C13719	3Com Router 2-Port E&M MIM	3C13785
<i>1-port ADSL/ADSL2+ interface card [ADSL/ADSL2+ over POTS]</i>		<i>2-port E&amp;M interface module</i>	
3Com Router 1-Port Fractional T1 SIC	3C13720A	3Com Router 4-Port E&M MIM	3C13786
<i>1-port Fractional T1 interface card</i>		<i>4-port E&amp;M interface module</i>	
3Com Router 1-Port Fractional E1 SIC	3C13722	3Com Router Channelized E1 Voice MIM	3C13787
<i>1-port Fractional E1 interface card</i>		<i>1-port Channelized E1 voice interface module</i>	
3Com Router 1-Port Analog Modem SIC	3C13724A	3Com Router Channelized T1 Voice MIM	3C13788
<i>1-port Analog modem interface card</i>		<i>1-port Channelized T1 voice interface module</i>	
3Com Router 1-Port FXS SIC	3C13725		
<i>1-port FXS interface card</i>		<b>Cables (3 meters in length, unless otherwise noted)</b>	
3Com Router 2-Port FXS SIC	3C13726	<i>for use with all Router 5000 models.</i>	
<i>2-port FXS interface card</i>		3Com Router T1 Cable, RJ-45, 3m T1- RJ-45 to RJ-45	3C13674
3Com Router 1-Port FXO SIC	3C13727	3Com Router E1 Cable, BNC, 20m E1 - 75 ohm/2 55 mm-DB-15M to	3C13675
<i>1-port FXO interface card</i>		2 x BNC 75 ohm; 20 meters	
3Com Router 2-Port FXO SIC	3C13728	3Com Router E1 Cable, RJ-45 20m E1 - 120 ohm/0 32 mm-DB-15M	3C13676
<i>2-port FXO interface card</i>		to RJ-45; 20 meters	
<b>Multi-function Interface Module (MIM) Options</b>		3Com Router E1 Cable, RJ-45, 3m G 703 - 120 ohm/0 32 mm-DB-15M	3C13677
<i>for use with all Router 5000 models, except where noted.</i>		to RJ-45	
3Com Router NDEC Encryption Accelerator MIM	3CR13771-75	3Com Router T3/E3 Cable E3/T3 Cable- 75 ohm, SMB to BNC- 15 meters	3C13687
<i>Accelerated encryption interface module</i>		<i>for use with 3C13762 and 3C13764 MIMs only.</i>	
3Com Router NDEC2 Encryption Accelerator MIM	3CR13773-75	3Com Router X.21 DTE Cable- Enhanced X.21 DTE Cable- DB-28M to X.21M	3C13681
<i>Accelerated encryption interface module</i>		3Com Router X.21 DCE Cable- Enhanced X.21 DCE Cable- DB-28M to X.21F	3C13682
3Com Router 2-Port 10/100 MIM	3C13761	3Com Router V.24 DTE Cable- Enhanced V.24 DTE Cable- DB-28M to V.24M	3C13683
<i>2-port 10/100BASE-T Fast Ethernet interface module</i>		3Com Router V.24 DCE Cable- Enhanced V.24 DCE Cable- DB-28M to V.24F	3C13684
3Com Router 2-Port Enhanced Serial MIM	3C13762	3Com Router V.35 DTE Cable- Enhanced V.35 DTE Cable- DB-28M to V.35M	3C13685
<i>2-port Sync/Async serial interface module</i>		3Com Router V.35 DCE Cable- Enhanced V.35 DCE Cable- DB-28M to V.35F	3C13686
3Com Router 4-Port Enhanced Serial MIM	3C13764		
<i>4-port Sync/Async serial interface module</i>		<i>for use with Router 5012 embedded serial port and Router 1-Port Serial SIC only.</i>	
3Com Router 2-Port E1/CE1/PRI MIM*	3C13765	3Com Router V.35 DTE Cable V.35 DTE Cable- DB-50M to V.35M	3C13670
<i>2-port E1/CE1/PRI interface module</i>		3Com Router V.35 DCE Cable V.35 DCE Cable- DB-50M to V.35F	3C13671
3Com Router 4-Port E1/CE1/PRI MIM	3C13766A	3Com Router V.24 DTE Cable V.24 DTE Cable- DB-50M to V.24M	3C13672
<i>4-port E1/CE1/PRI interface module</i>		3Com Router V.24 DCE Cable V.24 DCE Cable- DB-50M to V.24F	3C13673
3Com Router 4-Port ISDN S/T MIM*	3C13767	3Com Router X.21 DTE Cable X.21 DTE Cable- DB-50M to X.21M	3C13678
<i>4-port ISDN BRI S/T interface module</i>		3Com Router X.21 DCE Cable X.21 DCE Cable- DB-50M to X.21F	3C13679
3Com Router 2-Port T1/CT1/PRI MIM	3C13769A	3Com Router T1 Voice Cable T1 Voice Cable	3C13688
<i>2-port T1/CT1/PRI interface module</i>		3Com Router 4-Port E1 IMA Cable 4-Port E1 IMA Cable	3C13689
3Com Router 1-Port ADSL MIM	3C13770	3Com Router 4-Port T1 IMA Cable 4-Port T1 IMA Cable	3C13690
<i>1-port ADSL interface module [ADSL over POTS]</i>			
3Com Router 2-Port ADSL MIM	3C13772		
<i>2-port ADSL interface module [ADSL over POTS]</i>			

\* Not for use with Router 5012

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.3Com Corporation, Corporate Headquarters, 350 Campus Drive, Marlborough, MA 01752-3064  
3Com is publicly traded on NASDAQ under the symbol COMS

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Versatile, feature-rich routers built to deliver secure converged network connections from the core to the edge of the enterprise

## OVERVIEW

The 3Com® Router 6000 Family provides flexible, feature-rich routing from the core to the edge of the enterprise network, delivering resilient WAN connectivity for a variety of topologies and business environments

The family offers chassis with four slots (3U form factor) or eight slots (5U), plus a choice of 30 different Flexible Interface Card (FICs) that gives the enterprise a wide-ranging choice of industry-standard WAN and LAN interfaces. A hot-swappable, resilient modular design simplifies installation and maintenance, while offering numerous expansion options to help the organization keep pace with growth and change

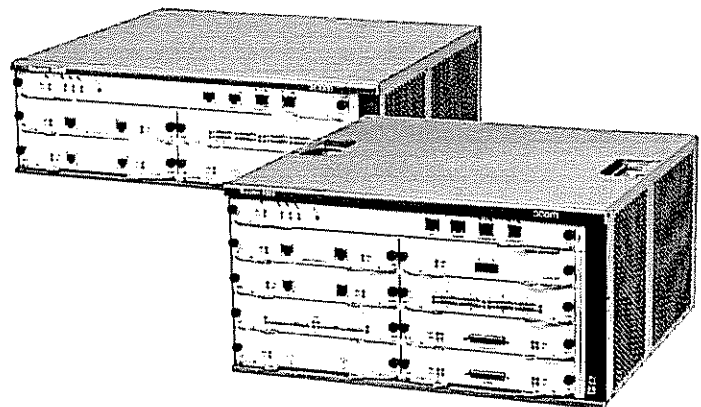
Advanced quality of service (QoS) and other traffic management capabilities support latency-sensitive converged applications such as voice over IP or video. The routers protect data and resources with a layered security approach, including an embedded stateful packet inspection firewall. And they have been independently tested for interoperability with Cisco routing devices

## KEY BENEFITS

### FLEXIBLE ENTERPRISE-READY DESIGN

The Router 6000 Family offers an attractive and economical solution for enterprises wanting to maximize throughput and uptime across the network. Comprehensive support for standards-based WAN and LAN interfaces and protocols ensures easy integration with the widest spectrum of public and private networks. Configuration options provided by the FIC modules deliver T1/E1, T3/E3, ISDN PRI, asynchronous transfer mode (ATM), frame relay and asynchronous DSL (ADSL) links, as well as various Ethernet LAN options.

Both router models come with hot-swappable FIC slots that don't require powering down for card replacement, and fan and power supply modules. A router processing unit (ordered separately) is required for each chassis.



From left: 3Com Router 6040, 3Com Router 6080

## KEY BENEFITS (CONTINUED)

### FULLY FEATURED ROUTING PLATFORM

To eliminate the need for costly and inconvenient upgrades, the routers come equipped with all the required operating memory, a complete routing and security suite and a robust applications set. The routers include a full complement of memory (512 MB of SDRAM) and flash memory to support dual software images. Standard routing capabilities include: IP and IPX routing, OSPF, RIP V1/2, integrated IS-IS, multicast routing, QoS, IEEE 802.1Q VLAN and IGMP v1, 2 and 3, and more.

### MULTIVENDOR INTEROPERABILITY ACROSS THE WAN

To accommodate today's multivendor networking environments, 3Com routers are designed to interoperate with standards-based equipment from other vendors. The 3Com Router 6000 Family has been "Tolly Verified for Interoperability with Cisco," reducing implementation and testing time for enterprises with core Cisco routers.

### ADVANCED SECURITY AND CONTROL FEATURES

The Router 6000 Family helps secure and safeguard sensitive information against unauthorized access. Security and control features include: AAA, RADIUS authentication, a stateful packet inspection firewall, denial-of-service (DoS) blocking and Access Control Lists (ACLs). L2IP and IPsec VPNs with 3DES and AES encryption provide additional security over the WAN.

The embedded firewall includes support for ACLs, plus generic routing encapsulation (GRE), network address translation (NAT), NAT traversal and application layer gateways. Business applications are able to pass easily through the firewall and across the VPN.

### VOICE, DATA AND VIDEO CONVERGENCE SUPPORT

The 3Com Router 6000 Family delivers advanced QoS, including DiffServ support, for effective traffic management on networks that run converged voice, data and video applications. Utilizing IP differentiated services for applications and ATM QoS for traffic and physical layer prioritization, the routers are equipped to handle the most demanding multimedia networking. This helps assure the level of service required for delay-sensitive traffic and continuous business operation, even during heavy network use. The routers support both IEEE 802.1p prioritization and IEEE 802.1Q VLANs.

Voice FICs support both analog and digital voice communications. They enable enterprises, service providers and managed service providers to connect the public switched telephone network (PSTN) and traditional telephony equipment—including PBXs, key systems, analog phones and fax machines—directly to the routers without additional equipment.

### RESILIENCE AND REDUNDANCY FOR MAXIMUM UPTIME

The routers are designed for high resiliency to meet stringent enterprise uptime standards. To help ensure continuous operation, they support redundant links and provide extra bandwidth to minimize downtime and ensure resilience in case of service disruptions.

Reliability features include configuration rollback, multilinks, Virtual Router Redundancy Protocol (VRRP), Backup Control Center (Configuration/Port) and Dial Control Center. In addition, the routers include 32 MB of flash memory to hold multiple configuration files and operating system images for recovery purposes. If the router cannot boot from a recently updated software image or configuration file, it can boot from a specified backup file or image residing in this memory.

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**KEY BENEFITS**  
(CONTINUED)**NEXT-GENERATION NETWORK EFFICIENCY WITH MPLS**

Using the Multiprotocol Label Switching (MPLS) capability in the routers, larger enterprises can simplify the routing configuration of an existing network infrastructure and provide scalable Layer 2 or Layer 3 VPNs throughout the network. This increases network efficiency in services that support MPLS technology.

**SIMPLIFIED REMOTE-SITE INSTALLATION AND UPGRADES**

New router deployments and upgrades can be costly and time-consuming for IT organizations, particularly for those organizations with a large number of regional or branch offices at some distance from central sites. The 3Com Router 6000 Family provides an auto-configuration feature that lets staff configure the devices from a central location. With no need for local configuration or pre-configuration prior to deployment, enterprises can easily and cost-effectively deploy the routers in locations where IT expertise is limited.

**SOPHISTICATED MANAGEMENT CAPABILITIES**

3Com Router 6000 devices can be managed using the optional 3Com Management Suite, or using 3Com Router Manager, which is included with the optional 3Com Network Director software. These graphical applications provide sophisticated remote diagnostic and management capabilities, including bulk updating of remote router code and configuration backup, auto-trap setup and monitoring, router system status and historical reporting. An intuitive, easy-to-use CLI function can be accessed directly, or remotely via Telnet, Secure Shell, or Rlogin. Other standards-based management applications may also be used. The Info Center diagnostic tool, available through the CLI interface, helps spot problems and reports them for quick remedial action.

**WORLD-CLASS SERVICE, SUPPORT AND TRAINING**

3Com routers are backed by 3Com and its authorized partners. Professional customer service organizations offer assessment, installation, management and maintenance support for network infrastructures. Skilled personnel with experience in a variety of network environments can assist 3Com customers through all phases of network planning, implementation, troubleshooting and product training.

**AN END-TO-END 3COM SOLUTION**

The 3Com Router 6000 Family is an integral part of 3Com's broad portfolio of secure converged network solutions for enterprises and small businesses: 3Com TippingPoint® Intrusion Detection Systems; 3Com Router 3000 and Router 5000 families; 3Com Switch 8800, Switch 7700, Switch 5500 and Switch 4500 families; the 3Com Convergence Application Suite and the 3Com VCX™ and NBX® IP telephony platforms; and 3Com OfficeConnect® routers, switches and firewalls for small offices.

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**FEATURE HIGHLIGHTS**

Comes with all the processing power, memory and software needed for enterprise-level routing from the core to the edge of the network

Features a versatile modular design that economically supports a wide array of WAN and LAN interfaces using Flexible Interface Cards

Offers a choice of hot-swappable four-slot or eight-slot chassis that do not have to be powered down for card replacement

Supports a full complement of routing protocols and technologies for integration with a broad range of public and private networks

Provides QoS and other traffic management to protect the performance of converged applications such as voice over IP and video over IP

Provides MPLS support to simplify configurations and improve network efficiency

Ensures security and control with embedded authentication, stateful packet inspection firewall, VPN capability and other features

Interoperates with Cisco and other standards-based routers

Supports dual software images to assist in recovery and provide rollback capabilities

Can be managed centrally with a full set of diagnostic tools and control features

Offers voice cards for direct connection to digital and legacy analog telephony systems and devices

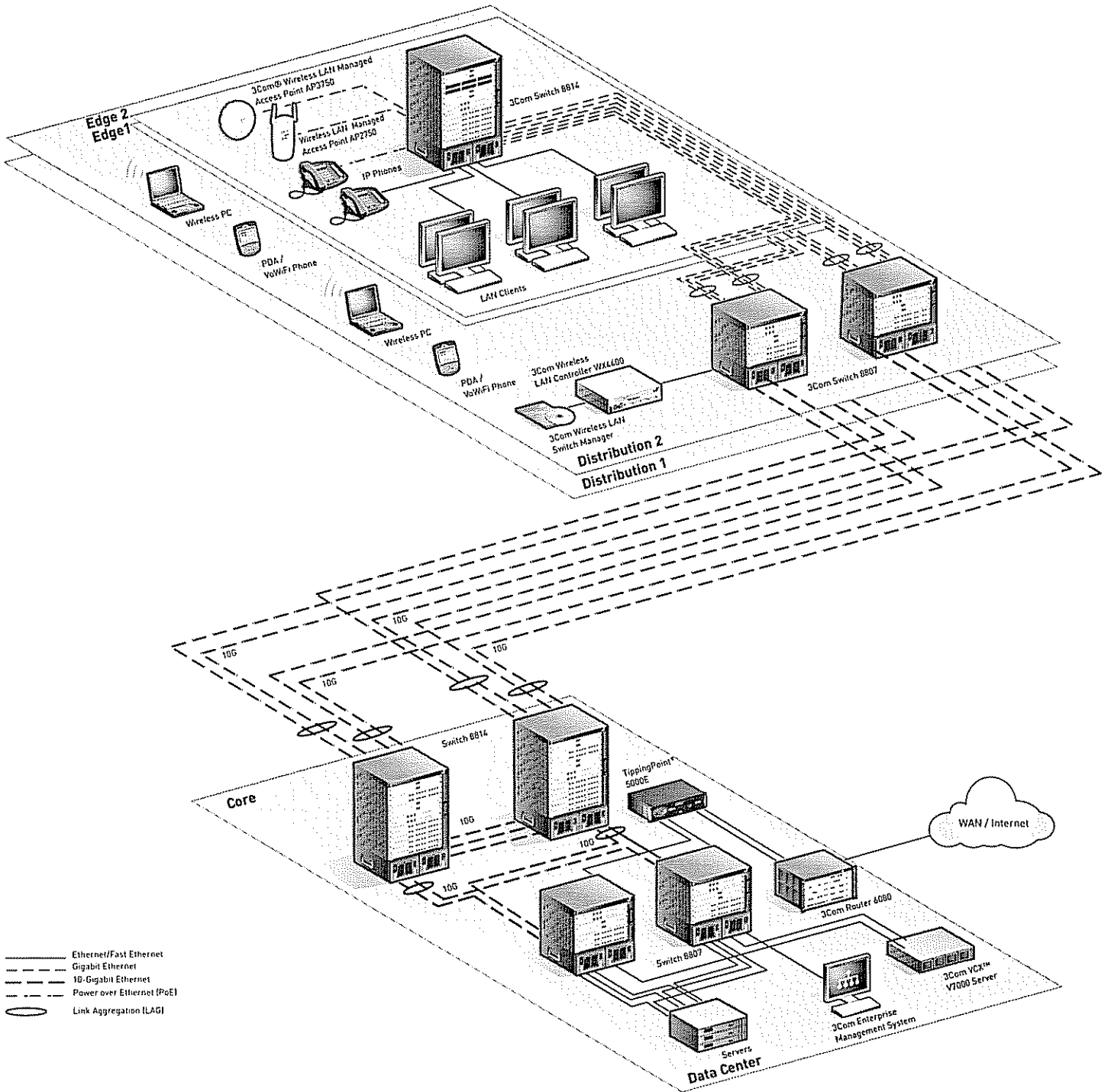
Backed by top-flight service, support and training from 3Com and 3Com authorized partners

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The "Tolly Verified" certification, supported by intensive testing by The Tolly Group, provides the opportunity for enterprise network buyers to evaluate products on an objective basis and gain the confidence that products support industry-accepted protocols and features, and deliver interoperability

SAMPLE CONFIGURATION: ROUTER 6000 DEPLOYMENT IN AN ENTERPRISE CAMPUS NETWORK





## SPECIFICATIONS

All information in this section is relevant to the 3Com Router 6040 and 6080 unless stated otherwise

### PORTS

#### Router 6040:

4 FIC slots

#### Router 6080:

8 FIC slots

#### Both models:

1 Router Processing Unit slot  
1 spare power supply slot

#### Router Processing Unit:

2 10BASE-T/100BASE-TX ports

1 console port

1 AUX serial port

#### Router Processing Unit 2:

2 10BASE-T/100BASE-TX/  
1000BASE-T ports

1 dual-personality Gigabit port pair  
configurable as 10BASE-T/100BASE-TX/  
1000BASE-T or SFP

1 console port

1 AUX serial port

1 Compact Flash slot

### MEMORY

Boot ROM: 512 KB

SDRAM: 512 MB

Flash: 32 MB

### AVAILABLE LAN CONNECTIONS

10/100 and 10/100/1000 Ethernet

### AVAILABLE WAN ROUTING

ISDN PRI, frame relay, X.25, X.21, T1, E1, T3, E3, V.35, HDLC/SDLC, leased line, sync/async, ATM, ADSL, ADSL 2/2+, IP, IPX, OSPF, PPP, RIP v1 and v2, BGP-4, MPLS, integrated IS-IS, static routing, multicast routing

### SECURITY

Stateful packet inspection firewall

VPN: L2TP, GRE, IPSec

MPLS VPN: L2 and L3

ACLs, NAT, X.509, AAA, RADIUS,

PAP/CHAP, TACACS+

### VOICE AND DATA SUPPORT

IP QoS: CAR, LAR, GTS, FIFO, PQ, CQ, WFQ, WRED, LLQ; IEEE 802.1p

Multicast routing protocols: IGMP, PIM-SM, PIM-DM

IEEE 802.1Q VLAN and inter-VLAN routing

H.323 and SIP Gatekeeper support.

G.729/G.711/G.723 compression

Telephony interface signaling support

### RESILIENCE

Hot-swap power, fan and FIC modules

N+1 power supply module backup

VRPP, Backup Center (Configuration/Port), Dial Control Center, multilinks

### DIMENSIONS

#### Router 6040:

Height: 130.5 mm (5.1 in)

Width: 436.2 mm (17.2 in)

Depth: 420.0 mm (16.5 in)

Weight: 17.5 kg (38.6 lb)

#### Router 6080:

Height: 219.5 mm (8.6 in)

Width: 436.2 mm (17.2 in)

Depth: 420.0 mm (16.5 in)

Weight: 27.5 kg (60.6 lb)

### POWER SUPPLY

Router 6040: 100-240 VAC, 240W

Router 6080: 100-240 VAC, 320W

AC line frequency 50/60 Hz

### ENVIRONMENTAL REQUIREMENTS

Operating temperature: 0° to 40°C  
(32° to 104°F)

Storage temperature: -40° to 70°C  
(-40° to 158°F)

Humidity (operating and storage):  
5% to 90% non-condensing

### MTBF

Router 6040: 1.520 years  
(13,324,000 hours)

Router 6080: 2.212 years  
(19,390,000 hours)

Router 6000 RPU: 75 years  
(657,000 hours)

Router 6000 RPU2: 75 years  
(657,000 hours)

Router 6000 PSU: 57 years  
(500,000 hours)

### FICs:

3C13821A: 119 years (1,042,000 hours)

3C13860: 151 years (1,323,000 hours)

3C13861: 389 years (3,413,000 hours)

3C13862: 136 years (1,191,000 hours)

3C13863: 157 years (1,376,000 hours)

3C13864: 95 years (832,000 hours)

3C13865A: 247 years (2,165,000 hours)

3C13867: 191 years (1,674,000 hours)

3C13870A: 119 years (1,042,000 hours)

3C13871A: 557 years (4,883,000 hours)

3C13872: 143 years (1,252,000 hours)

3C13874: 201 years (1,762,000 hours)

3C13875: 198 years (1,736,000 hours)

3C13876: 211 years (1,850,000 hours)

3C13877A: 217 years (1,902,000 hours)

3C13878: 139 years (1,218,000 hours)

3C13879: 470 years (4,120,000 hours)

3C13881A: 355 years (3,112,000 hours)

3C13882A: 255 years (2,239,000 hours)

3C13884A: 126 years (1,108,000 hours)

3C13886A: 126 years (1,108,000 hours)

3C13887: 482 years (4,225,000 hours)

3C13888: 199 years (1,744,000 hours)

3C13889A: 192 years (1,681,000 hours)

3C13890: 359 years (3,147,000 hours)

3C13891: 260 years (2,279,000 hours)

3C13893: 280 years (2,454,000 hours)

3C13894: 187 years (1,639,000 hours)

3C13895: 207 years (1,815,000 hours)

3C13896: 136 years (1,192,000 hours)

3C13897: 183 years (1,604,000 hours)

3C13898A: 175 years (1,534,000 hours)

3C13899: 95 years (833,000 hours)

3C14832: 112 years (985,000 hours)

3C14834: 112 years (984,000 hours)

3C14851A: 192 years (1,681,000 hours)

3CR13806-75: 751 years (6,579,000 hours)

3CR13873-75: 370 years (3,243,000 hours)

### REGULATORY COMPLIANCE

CE Mark for European Union, Council Directive 99/5/EC

### MANAGEMENT

3Com Enterprise Management Suite

3Com Network Director

3Com Router Manager<sup>1</sup>

CLI

SNMP v1, 2 and 3; Telnet, SSH, Rlogin and Info Center (diagnostic tool) support

### EMISSIONS/AGENCY APPROVALS

CISPR 22 Class A

EN 55022 Class A

FCC Part 15, CFR 47 Class A

ICES-003 Class A

AS/NZS CISPR22 Class A

VCCI V-3 Class A

### IMMUNITY

Product conforms to:

CISPR 24

EN 55024

EN 61000-3-2, 61000-3-3, 61000-4-2,

61000-4-3, 61000-4-4, 61000-4-5,

61000-4-6, 61000-4-8 and 61000-4-11

### SAFETY AGENCY CERTIFICATIONS

UL 60950 3rd Edition

CAN/CSA-C22.2 #60950

EN 60825-1, 60825-2, 60950

IEC 60950

AS/NZS 60950: 2000

### WARRANTY AND OTHER SERVICES

One-year Limited Hardware Warranty

Limited Software Warranty for 90 days

90 days of telephone technical support

Refer to [www.3com.com/warranty](http://www.3com.com/warranty)

for details

<sup>1</sup> 3Com Router Manager included in 3Com Network Director

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## SERVICE AND SUPPORT

3Com Global Services offers the resources and talents of a major corporation plus more than two decades of experience in resolving network challenges and delivering business benefits to enterprises around the world

Global support with a personalized, local focus in the local language helps drive productivity and minimize expenses. Because 3Com understands both the technology and the business, we're the partner you need to remain strong and competitive

### Suggested Service, Support and Training Offerings

Network Health Check	<p>An activity-auditing service focused on improving network performance and productivity</p> <p>Includes traffic monitoring, utilization analysis, problem identification, and asset deployment recommendations</p> <p>Extensive report provides blueprint for action</p>
Network Installation and Implementation Services	<p>Experts set up and configure equipment and integrate technologies to maximize functionality and minimize business disruption</p> <p>For large and complex sites, implementation services include personalized configuration, project management, extended testing and coaching on network administration</p>
Project Management	<p>Provides extra focus and resources that special projects demand</p> <p>3Com engineers manage entire process from initial specifications to post-project review</p> <p>Using structured methodology, requirements are identified, projects planned and progress of implementation activities tracked</p>
3Com Guardian <sup>SM</sup> Maintenance Service	<p>This service provides comprehensive on-site support and includes advance hardware replacement, telephone technical support and software upgrades</p>
3Com Express <sup>SM</sup> Maintenance Service	<p>This service provides speedy access to 3Com shipment of advance hardware replacements, software upgrades and telephone support</p>
3Com University	<p>Self-paced and instructor-led technology and product courses, plus certification programs</p>

For additional information, please visit [www.3com.com/services](http://www.3com.com/services)

## ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU	PRODUCT DESCRIPTION	3COM SKU
3Com Router 6040	3C13840	3Com Router 2-Port FXS FIC	3C13890
3Com Router 6040 chassis, 4 FIC slots, 1 power supply, fan module		2-port FXS interface module	
3Com Router 6080	3C13880	3Com Router 4-Port FXS FIC	3C13891
3Com Router 6080 chassis, 8 FIC Slots, 1 power supply, fan module		4-port FXS interface module	
Router Processing Unit must also be ordered separately for each chassis:		3Com Router 2-Port FXO FIC	3C13893
3Com Router Processing Unit	3C13804	2-port FXO interface module	
2 x 10/100 ports		3Com Router 4-Port FXO FIC	3C13894
3Com Router Processing Unit 2	3C13805	4-port FXO interface module	
2 x 10/100/1000 ports, 1 dual-purpose port for 10/100/1000 Mbps copper or Gigabit fiber SFP, socket for optional encryption card		3Com Router 2-Port E&M FIC	3C13895
3Com Router 6000 Power Supply	3C13801	2-port E&M interface module	
Spare / redundant power supply		3Com Router 4-Port E&M FIC	3C13896
		4-port E&M interface module	
<b>LAN Flexible Interface Card (FIC) Modules</b>		3Com Router Channelized E1 Voice FIC	3C13897
3Com Router 1-Port 100 Mbps FX MM FIC	3C13860	1-port Channelized E1 voice interface module	
1-port 100BASE-FX interface module; multi-mode fiber, SC connector		3Com Router Channelized T1 Voice FIC	3C13898A
3Com Router 2-Port 10/100 Mbps FIC	3C13861	1-port Channelized T1 voice interface module	
2-port 10BASE-T/100BASE-TX interface module		3Com Router 2-Port Channelized E1 Voice FIC	3C13899
3Com Router 1-Port 100 Mbps FX SM FIC	3C13862	2-port Channelized E1 voice interface module	
1-port 100BASE-FX interface module; single-mode fiber, SC connector		3Com Router 4-Port Channelized E1/PRI FIC	3C14832
3Com Router 1-Port Gigabit Ethernet Fiber FIC	3C13879	4-port Channelized E1/PRI interface module	
1-port Gigabit fiber SFP interface module		3Com Router 4-Port Fractional E1 FIC	3C14834
3Com Router 1-Port 10/100/1000 Mbps FIC	3C13887	4-port Fractional E1 interface module	
1-port 10BASE-T/100BASE-TX/1000BASE-T interface module		3Com Router 1-Port Channelized T3 FIC	3C14851A
		1-port Channelized T3 interface module	
<b>WAN Flexible Interface Card (FIC) Modules</b>		<b>Encryption Options</b>	
3Com Router 4-Port Fractional T1 FIC	3C13821A	3Com Router 6000 RPU2 Encryption Accelerator	3CR13806-75
4-port Fractional T1 interface module		Encryption daughter card for Router Processing Unit 2	
3Com Router 4-Port Enhanced Serial FIC	3C13863	3Com Router NDEC2 Encryption Accelerator FIC	3CR13873-75
4-port Sync/Async serial interface module		IPSec Encryption accelerator module	
3Com Router 8-Port Enhanced Serial FIC	3C13864		
8-port Sync/Async serial interface module		<b>Cables (3 meters in length, unless otherwise noted)</b>	
3Com Router 4-Port ISDN-S/T FIC	3C13865A	3Com Router Auxiliary Cable	3C13674
4-port ISDN-S/T interface module		RJ-45, DB-9M, DB-25M	
3Com Router 8-Port Channelized E1/PRI FIC	3C13867	3Com Router T1 Cable, RJ-45	3C13674
8-port E1/CE1/PRI interface module		T1- RJ-45 to RJ-45	
3Com Router 4-Port Channelized T1/PRI FIC	3C13870A	3Com Router E1 Cable, BNC, 20m	3C13675
4-port T1/CT1/PRI interface module		E1 - 75 ohm/2.55 mm-DB-15M to 2 x BNC 75 ohm, 20 meters	
3Com Router 1-Port ADSL (over POTS) FIC	3C13871A	3Com Router E1 Cable, RJ-45, 20m	3C13676
1-Port ADSL (over POTS) interface module		E1 - 120 ohm/0.32 mm-DB-15M to RJ-45, 20 meters	
3Com Router 2-Port ADSL FIC	3C13872	3Com Router E1 Cable, RJ-45	3C13677
2-port ADSL interface module (ADSL over POTS - Annex A)		G.703 - 120 ohm/0.32 mm-DB-15M to RJ-45	
3Com Router 4-Port E1 IMA FIC	3C13874	3Com Router X.21 DTE Cable- Enhanced	3C13681
4-Port E1 IMA interface module		X.21 DTE - DB-28M to X.21M	
3Com Router 4-Port T1 IMA FIC	3C13875	3Com Router X.21 DCE Cable- Enhanced	3C13682
4-Port T1 IMA interface module		X.21 DCE - DB-28M to X.21F	
3Com Router 1-Port E3 ATM FIC	3C13876	3Com Router V.24 DTE Cable- Enhanced	3C13683
1-Port E3 interface module		V.24 DTE - DB-28M to V.24M	
3Com Router 1-Port T3 ATM FIC	3C13877A	3Com Router V.24 DCE Cable- Enhanced	3C13684
1-Port T3 interface module		V.24 DCE - DB-28M to V.24F	
3Com Router 2-Port Channelized E3 FIC	3C13878	3Com Router V.35 DTE Cable- Enhanced	3C13685
2-port Channelized E3 interface module		V.35 DTE - DB-28M to V.35M	
3Com Router 1-Port OC-3 POS FIC	3C13881A	3Com Router V.35 DCE Cable- Enhanced	3C13686
1-port OC-3 POS interface module, multi-mode, SFP slot		V.35 DCE - DB-28M to V.35F	
3Com Router 1-Port OC-3 ATM, MM FIC	3C13882A	3Com Router T3/E3 Cable	3C13687
1-port OC-3 ATM interface module, multi-mode, SC connector		T3/E3 - 75 ohm, SMB to BNC, 15 meters	
3Com Router 1-Port OC-3 ATM, SM FIC	3C13884A	3Com Router T1 Voice Cable	3C13688
1-port OC-3 ATM interface module, single-mode (15km distance) SC connector		T1 Voice - DB-15M to RJ-45	
3Com Router 1-Port OC-3 ATM, SML FIC	3C13886A	3Com Router 4-Port E1 IMA Cable	3C13689
1-port OC-3 ATM interface module single-mode long reach (30km distance) SC connector		E1 IMA - DB-68M to 4 x RJ-45	
3Com Router 1-Port Channelized E3 FIC	3C13888	3Com Router 4-Port T1 IMA Cable	3C13690
1-port Channelized E3 interface module		T1 IMA - DB-68M to 4 x RJ-45	
		3Com Router 8-Port E1 Cable	3C13691
		E1 - DB-68M to 8 x RJ-45	

Visit [www.3com.com](http://www.3com.com) for more information about 3Com secure converged network solutions.

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# Ingate SIParator<sup>®</sup> 19

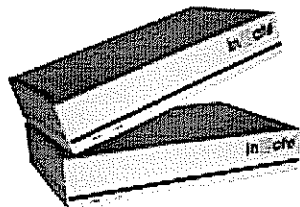


Leveling the playing field for smaller enterprises, Ingate<sup>®</sup> Systems offers the Ingate SIParator<sup>®</sup> 19, a powerful tool that offers small businesses, branch offices and home workers complete support for IP communications based on Session Initiation Protocol (SIP). With the SIParator 19, these businesses can leverage the same productivity and cost-savings benefits of Voice over IP (VoIP) and other IP-based communications as large corporations.

The SIParator works seamlessly with your existing firewall to allow the flow of the SIP traffic. While traditional firewalls block SIP traffic – including mission-critical applications like VoIP – the SIParator resolves this problem, working in tandem with your current security solutions.

It also solves the Network Address Translation (NAT) traversal issues inherent in SIP communications, and offers both far- and near-end NAT traversal to extend the SIP capabilities within the corporate network to remote workers.

With Ingate products, enterprises can use VoIP and other live communications on the LAN and globally over the Internet or private IP networks.



## Ingate SIParator 19

Small and versatile, the Ingate SIParator 19 is perfect for smaller office environments – with no fan; the SIParator is virtually silent, which means there's no need for a separate server room. The management interface for the products is the same Web-based Graphical User Interface (GUI) that has been cited by Ingate customers and the media for ease-of-use.

Included with the Ingate SIParator 19 are five SIP traversal licenses, allowing up to five calls to traverse at the same time. Additional traversal licenses can be purchased at any time.

All Ingate SIParators are fully featured and can be maintained by the network security administrator utilizing the GUI. Ingate SIParators include an encrypted Virtual Private Network (VPN) termination module. The SIParator 19 can be configured as a part of the DMZ or in a standalone mode. In both cases, the benefits of SIP-based communications can be added to the network quickly and easily.

## Trusted Network Security for VoIP

The Ingate SIParator SIP Proxy architecture grants fully secure traversal of the SIP traffic. The ports for the media streams are only opened between the specific parties of a call and only for the duration of the call. The SIP proxy inspects the SIP packets before sending them on. TLS encryption ensures privacy when communicating, making call eavesdropping, call hijacking and call spoofing harder to do. Ingate also supports authentication of users and servers.

## Support for SIP Trunking

More and more Internet Service Providers offer a SIP trunk – a combined Internet and voice connection. For enterprises with an IP-PBX this is an ideal cost-saving solution as they no longer need local PSTN gateways or costly PRI's/BRIs. However, the SIP traffic, as all other data traffic, needs to traverse the enterprise firewall. Ingate SIParator 19 handles the firewall and NAT traversal using the built-in SIP proxy.

## Choose the Right Features for Your Network

Ingate offers several other add-on software modules that allow you to tailor the SIParator 19 to meet the specific demands of your business.

Ingate Quality of Service (QoS) sets priorities to different kinds of data and allocates bandwidth for varied purposes – for instance, giving priority to VoIP.

Ingate Remote SIP Connectivity extends the SIP capabilities of the enterprise to employees working remotely (home office workers, road warriors, etc.). Remote SIP Connectivity manages the traversal of the remote NAT from a central firewall and also includes a STUN server.

Ingate VoIP Survival adds a whole new dimension to hosted VoIP service by securing full redundancy in a SIP-based hosted IP-PBX environment all the way out to the customer premises.

Ingate Enhanced Security Module provides Intrusion Detection and Intrusion Prevention for SIP as well as encryption of the communication.

The SIP Registrar Module allows for making the Ingate Registrar the primary registration server.

## Add Global VoIP Connectivity to your IP-PBX

The SIParator 19 opens up a world of possibilities and cost savings when used with a SIP based IP-PBX. Businesses can route telephone calls via IP, not only between branch offices and home workers, but also to offices and other users using SIP-based Internet telephony. No longer limited to telephony voice, communication can also include video, instant messaging, presence and more.

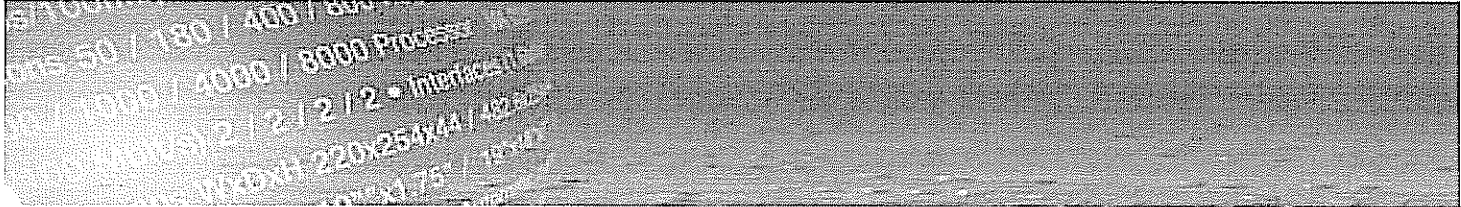
In addition, the SIParator 19 makes it possible for home workers, road warriors and even branch offices to belong to the same central IP-PBX – with the highest level of security. The SIParator also affords the possibility to set up a private VoIP network, if preferred. Advanced IP-PBX functions are supported, including such as call transfer, call hold, and voicemail.

## Free Software Upgrades for the First Year

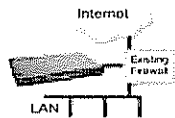
Software upgrades are free for the first year. Thereafter, an annual licensing fee will apply. New software versions can be downloaded quickly and easily online from the Ingate website. For more information, visit us at [www.ingate.com](http://www.ingate.com) or write to [info@ingate.com](mailto:info@ingate.com).

**inGate<sup>®</sup>**

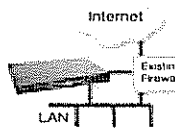
[www.ingate.com](http://www.ingate.com)



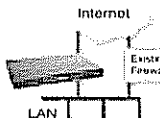
Configuration 1: DMZ



Configuration 2: DMZ/LAN



Configuration 3: Standalone



In configuration 2 and 3 the SIPParator requires a public IP address

### Configuration 1: DMZ

The Ingate SIPParator connects to the existing firewall through the DMZ interface. All traffic will pass through the existing firewall. This configuration requires that a static range of UDP and TCP ports are opened between the Internet and the SIPParator and between the SIPParator and the LAN. SIP clients on the LAN need to have the SIPParator defined as their outgoing proxy or be referred to it *via* DNS. The firewall continues to control security, but SIP traffic is routed to the LAN only through the SIPParator.

### Configuration 2: DMZ/LAN

The Ingate SIPParator connects to the DMZ of the existing firewall and to the LAN. This means that SIP traffic and media streams only have to pass through the existing firewall once (or not at all for all calls inside the office). A static range of UDP and TCP ports needs to be opened in the firewall between the Internet and the SIPParator. SIP clients on the LAN need to have the SIPParator defined as their outgoing proxy or be referred to it *via* DNS.

### Configuration 3: Standalone

The Ingate SIPParator connects to both the LAN and the Internet, operating entirely in parallel with the existing firewall. The SIPParator will only handle SIP signaling and media streams; everything else will pass through existing firewall. This setup has no requirements for the existing firewall and requires no configuration changes. SIP clients on the LAN need to have the SIPParator defined as their outgoing proxy or be referred to it *via* DNS.

## Technical Specifications Ingate SIPParators

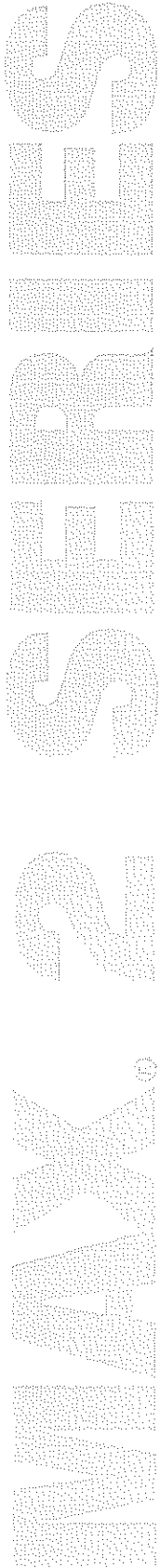
Feature	Ingate SIPParator 19	Ingate SIPParator 50	Ingate SIPParator 55	Ingate SIPParator 65	Ingate SIPParator 90
Interfaces (10/100 Mbit/s)	3	0	0	0	0
Interfaces (10/100/1000 Mbit/s)	0	4	4	4	6
Interfaces SPF (mini Gbic)	0	0	0	0	2
Redundant power supply	No	No	No	No	Yes
Flash disc for system operation	Yes	No	No	No	Yes
Dimension WxDxH (mm)	228x146x44	430x369x44	430x369x44	430x369x44	430x485x88
Certifications	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL
<b>Management</b>					
Automatic check for new releases	Yes	Yes	Yes	Yes	Yes
Configuration options: Web GUI (HTTP, HTTPS) and CLI (SSH, serial cable)	Yes	Yes	Yes	Yes	Yes
SNMP	Yes	Yes	Yes	Yes	Yes
Max numbers of VLANs	16	32	64	128	256
Internal log to HD	No	Yes	Yes	Yes	Yes
Logging to PCAP file	Yes	Yes	Yes	Yes	Yes
Syslog	Yes	Yes	Yes	Yes	Yes
E-mail events	Yes	Yes	Yes	Yes	Yes
External RADIUS server authentication for GUI and SIP	Yes	Yes	Yes	Yes	Yes
Support for multiple ISPs	Yes	Yes	Yes	Yes	Yes
Free software upgrades	First year	First year	First year	First year	First year
<b>SIP Functionality</b>					
SIP proxy	Yes	Yes	Yes	Yes	Yes
SIP registrar	Yes	Yes	Yes	Yes	Yes
SIP traffic to private IP addresses (NAT/PAT)	Yes	Yes	Yes	Yes	Yes
SIP Connection set up (SIP + RTP)	0.15 s	0.15 s	0.15 s	0.15 s	0.15 s
RTP data delay (10 Mbps/100 Mbps) network	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms
Number of concurrent voice RTP sessions (G.711)	40	150	300	650	1500
Concurrent encrypted voice RTP sessions (both SRTP and TLS)	20	75	150	330	750
Busy hour call attempt	36000	72000	79200	79200	234000
Billing and authentication of SIP users from an external RADIUS	Yes	Yes	Yes	Yes	Yes
SIPconnect compliance	Yes	Yes	Yes	Yes	Yes
<b>Add-on modules</b>					
SIP Trunking (connecting an IP-PBX to an ITSPs SIP-trunk)	Yes	Yes	Yes	Yes	Yes
Remote SIP Connectivity (Far-end NAT-passing incl STUN-server)	Yes	Yes	Yes	Yes	Yes
QoS (bandwidth limitation and prioritization)	Yes	Yes	Yes	Yes	Yes
Enhanced Security (IDS/IPS for SIP, SRTP and TLS)	Yes*	Yes	Yes	Yes	Yes
VoIP Survival (VoIP redundancy if Internet connection fails)	Yes	Yes	Yes	Yes	Yes
SIP Registrar (Ingate is used as the primary SIP registrar)	Yes	Yes	Yes	Yes	Yes

IDS/IPS is not available for the Ingate SIPParator 19

Figure 2-18/20/21



www.ingate.com



# Protect Your Investment with the Premier Series 2 Outlet Surge Protectors from Panamax

## Exclusive Protect or Disconnect™ Circuitry

Safeguards equipment against all surges. In the event of a catastrophic surge such as lightning, it completely *disconnects* AC power to connected equipment

## Signal Perfect™ Circuitry

Optimized signal line surge protection circuitry is shielded to ensure a clean, clear signal. It features solid-state components for maximum protection and reliability. The bandwidth and clamping level are optimized for standard cable or off-air TV signals

## \$5,000,000 Limited Connected Equipment Protection Warranty

Panamax will protect your equipment or we will repair or replace up to \$5,000,000!

## Lifetime Product Warranty

The surge protector shall be free of any defects in design, materials, or workmanship, and Panamax will repair or replace any defective unit

## Product Upgrade Offer

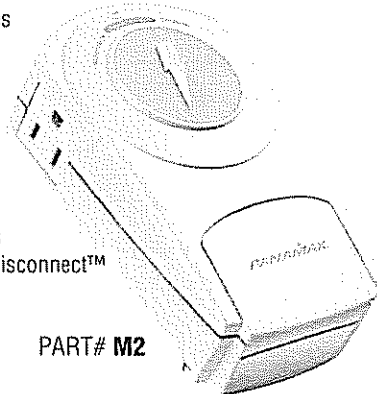
See policy for details on upgrade offer to replace damaged units

## MAX. 2

### MULTI-USE AC PROTECTION

For Use With: Computers, Printers, Copiers and Appliances

- 2 AC Outlets
- Protect-or-Disconnect™ Circuitry



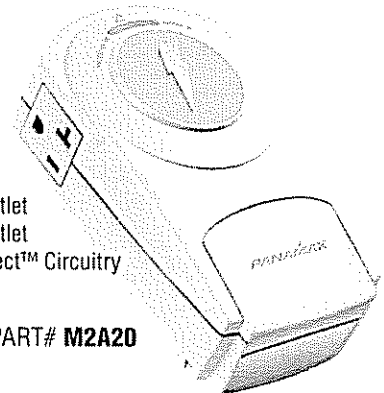
PART# M2

## MAX. 2 20-AMP

### HIGH CURRENT PROTECTION

For Use With: High Current Applications such as High Speed Copiers & Printers or Audio Amplifiers

- One 20 Amp AC Outlet
- One 15 Amp AC Outlet
- Protect or Disconnect™ Circuitry



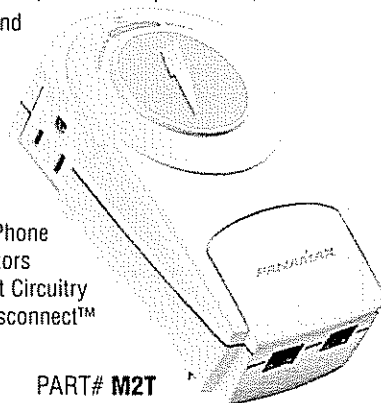
PART# M2A20

## MAX. 2 TEL

### HOME/OFFICE PROTECTION

For Use With: Computers Dial-up Modems, DSL Modems and FAX Machines

- 2 AC Outlets
- 1 set In/Out Phone Line Connectors
- Signal Perfect Circuitry
- Protect-or-Disconnect™ Circuitry



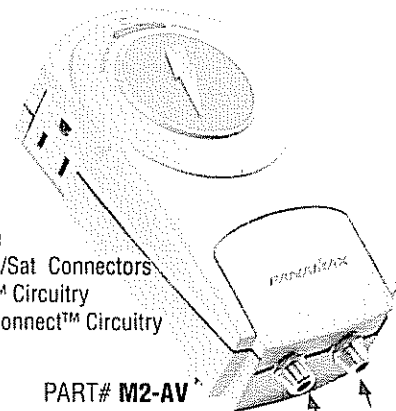
PART# M2T

## M2-AV

### AUDIO/VIDEO PROTECTION

For Use With: Televisions, DVD Players, VCR's, Audio Equipment and Cable Modems

- 2 AC Outlets
- 1 set Coax Line Universal Cable/Sat Connectors
- Signal Perfect™ Circuitry
- Protect-or-Disconnect™ Circuitry

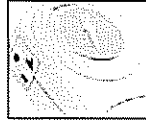
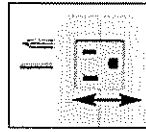


PART# M2-AV

NOW WITH UNIVERSAL CABLE/SATELLITE CONNECTORS

**FEATURES:**

Versatile outlet orientation accommodates the widest range of plug styles including transformers and right angle plugs

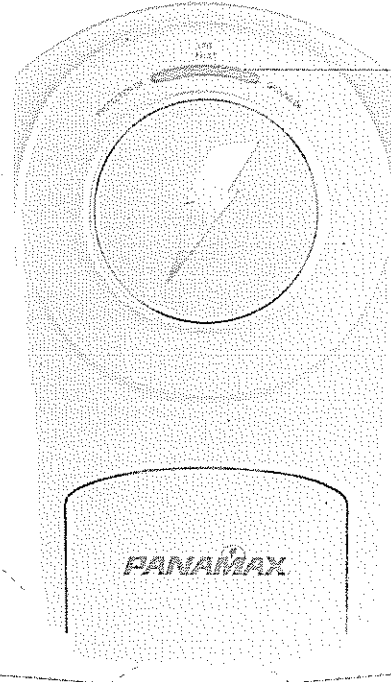


MAX 2-20 only

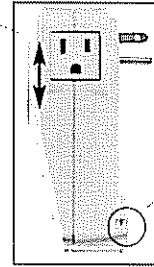
Convenient security feature; attach the protector to your equipment's power cords



MAX 2 TEL - In/Out RJ-11/45 telephone jacks

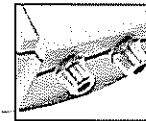


Three diagnostic lights indicate wiring integrity and protection status



Space-saving design plugs directly into wall outlet

Convenient security feature; attach the protector to your equipment's power cords



M2-AV  
Universal Cable/Satellite  
Gold In/Out coax connectors

**EXCLUSIVE TECHNOLOGY**

**Protect or Disconnect™** safeguards equipment against all surges. In the event of a catastrophic surge such as lightning, it completely disconnects AC power to connected equipment.

**SignalPerfect's** optimized CATV surge protection circuitry is shielded to ensure a clean, clear signal. It features solid-state components for maximum protection and reliability. The bandwidth and clamping level are optimized for standard cable or off-air TV signals.

**SignalPerfect's** optimized phone line surge protection circuitry ensures a clean, clear signal. It features solid-state SIDACTors® and auto-resetting PTCR's for maximum protection and reliability.

**AC Surge Protection Specifications:**

Protect or Disconnect™ Circuitry	Yes
Line Voltage	120 VAC, 50/60 Hz
Initial Clamping Level	200V
UL 1449 Suppression Rating	330V
Protection Modes	L-N, L-G, N-G
Maximum Current Rating	15A (1800 W)
EMI/RFI Noise Filtration	50 dB (100 kHz - 1 MHz)
Response Time	<1 nanosecond
Single Pulse Energy Dissipation	1350 Joules
Peak Impulse Current	52,000 A
Catastrophic Surge Circuit	Yes
Thermal Fusing	Yes

**MAX 2-20**

Maximum Current Rating	20A (2400 W)
------------------------	--------------

**Signal Line Specifications:**

<b>Telco Specifications:</b>	
SignalPerfect™ Technology	Yes
Fuseless/Auto Resettable	Yes
Clamping Level	260V
Capacitance	30pI (approx)
Suppression Modes	Metallic & Longitudinal
Wires Protected	2 wire, 1 pair (4.5)
Connectors	RJ-11/45 Compatible

**Universal Cable/Satellite Protection:**

Bi-directional	Yes
Shielded	Yes
CATV Clamping Level	75V
Frequency Range	0MHz - 2 GHz
Insertion Loss	<0.5dB
Connections	Female "F", gold plated

**Agency Approvals & Warranty**

UL 1449 Rating	330V
Product Warranty	Lifetime
Connected Equipment Protection Policy	Up to \$5,000,000
Lightning Protection	Yes

\*See warranty for terms and conditions

Specifications subject to change without notice due to product upgrades and improvements

**MEASUREMENTS, WEIGHTS & QUANTITIES FOR ORDERING & SHIPPING**

MODEL	INDIVIDUAL PAC SIZE	WEIGHT	INNER PAC SIZE	WEIGHT	QTY	MASTER CARD SIZE	WEIGHT	QTY
M2	4.5" X 6" X 3"	.75 LB.	14" X 6.75" X 6.5"	5 LBS.	6	14.75" X 14" X 14"	21 LBS.	24
M2T	4.5" X 6" X 3"	.75 LB.	14" X 6.75" X 6.5"	5 LBS.	6	14.75" X 14" X 14"	21 LBS.	24
M2A20	4.5" X 6" X 3"	.75 LB.	14" X 6.75" X 6.5"	5 LBS.	6	14.75" X 14" X 14"	22.25 LBS.	24
M2-AV	6.5" X 6" X 3"	1.00 LB.	6.5" X 6.75" X 6.5"	2.1 LBS.	2	15" X 14.5" X 7.75"	13 LBS.	12

**UPC's FOR ORDERING & SHIPPING**

MODEL	UPC FOR INDIVIDUAL PAC	UPC FOR TRAY	UPC FOR MASTER CARD
M2	0 50616 00656 9	3 00 50616 00656 0	500 50616 00656 4
M2T	0 50616 00658 3	3 00 50616 00658 4	500 50616 00658 8
M2A20	0 50616 00659 0	3 00 50616 00659 1	500 50616 00659 5
M2-AV	0 50616 00837 2	3 00 50616 00837 3	5 00 50616 00837 7

L450 REV F

**PANAMAX** 1690 Corporate Circle, Petaluma, CA 94954 • 800-472-5555 or 707-283-5900 • Fax - 707-283-5901 • www.panamax.com

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# SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

**DATE:** March 27, 2009

**TO:** Board of Directors

**FROM:** Dene Bustichi, Chair  
Ellen Pirie, Vice Chair  
Leslie R. White, General Manager

**SUBJECT: CONSIDERATION OF STATUS OF FEDERAL LEGISLATION AND  
REPORT REGARDING THE 2009 AMERICAN PUBLIC  
TRANSPORTATION ASSOCIATION LEGISLATIVE CONFERENCE.**

## I. RECOMMENDED ACTION

**That the Board of Directors accept and file a report regarding the Legislative Conference of the American Public Transportation Association and the status of pending Federal Legislation that effects METRO.**

## II. SUMMARY OF ISSUES

- On December 19, 2008 the Board of Directors adopted a Legislative Agenda for 2007 for Federal Legislation that identified provisions that, if enacted into law, would benefit METRO.
- On March 7-10, 2009 the American Public Transportation Association (APTA) held the annual Legislative Conference in Washington DC.
- Board Directors Dene Bustichi, Ellen Pirie and General Manager Leslie R. White participated in the APTA Legislative Conference and met with Members of Congress and Congressional Staff to discuss pending legislation that would affect METRO. Legislative Advocates Carolyn Chaney and Chris Giglio accompanied METRO representatives.
- The Transportation Authorization Bill, SAFETEA-LU that was enacted in 2005 contained the High Intensity Transit Tier (now renamed the Small Cities Transit Intensive Tier/STIC) provision that has provided supplemental federal formula funds for METRO. The SAFETEA-LU Bill expires on September 30, 2009 and needs to be reauthorized.
- On February 17, 2009 President Barack Obama signed the American Recovery and Reinvestment Act (ARRA) into law.
- The formula used in the ARRA for the distribution of the transit funds did not use the STIC portion of the formula. The STIC formula factors were specifically excluded by the House Transportation and Infrastructure Committee in the "Save Energy through Public Transportation Act" (HR 6052).



- METRO should take a leadership role in organizing the STIC communities to outline the benefits of this program to Members of Congress in order to ensure that the program is continued in the next Authorization Bill.
- METRO is currently seeking “earmarked” federal funds in an amount of \$3 million for the implementation of a Solar Panel Program at the MetroBase Operations Building Construction Project. The Solar Panel Project could reduce the power consumption at the Operations Building by 30-40%.

### III. DISCUSSION

Annually the Board of Directors adopts Legislative Agendas that reflect goals for the coming year for both federal and state legislation. For the calendar year 2009 the Board adopted the Federal Legislative Agenda on December 19, 2008.

On March 7-11, 2009 the American Public Transportation Association (APTA) held its annual Legislative Conference in Washington DC. This Conference brings together Board and staff members from throughout the United States to meet with key individuals from Congress and the Administration. The Conference also offers the opportunity for individual transit system representatives to advocate for programs or projects that they would like the Congress and the Administration to consider. METRO Directors Dene Bustichi, Ellen Pirie, and General Manager Leslie R. White represented METRO at the 2009 APTA Legislative Conference. METRO Representatives were accompanied by Legislative Advocates Carolyn Chaney and Chris Giglio from Chaney and Associates.

Information regarding the MetroBase Solar Panel, and the Small Transit Intensive Cities (STIC) Program was provided in meetings with staff members from Senator Feinstein’s office and Senator Boxer’s office, as well as meetings with Congressman Sam Farr and Congresswoman Anna Eshoo. The majority of the responses to the information that was presented were positive. The majority of the individuals in the Congressional offices that were visited during the Conference committed to support funding for the MetroBase Solar Panel Project and the continuation of the STIC program in the next authorization bill. However, METRO representatives were cautioned that the Congress might decide to modify or end the practice of “earmarking” projects due to the negative publicity that this practice has received and due to opposition to earmarking by President Obama.

The House and Senate Transportation Appropriations Bills are expected to receive legislative attention through the spring of 2009. Staff recommends that METRO continue to monitor the House and Senate Appropriations Bills and provide information to Members of Congress and their staff members, as needed, in order to be of assistance to them in the process.

The passage and enactment of the American Recovery and Reinvestment Act (ARRA) provided over \$5 million in supplemental funding to METRO this year. However, the STIC factors were

specifically excluded for the ARRA Transit Formula distribution. If the STIC factors had been used METRO would have received approximately \$1.2 million more in ARRA funds. The larger concern is that the new Transportation Authorization Bill is currently being developed. It is essential for METRO that the STIC Program be retained in the new bill. Staff recommends that METRO take a leadership role in coordinating the advocacy efforts of the 132 communities in 37 states that receive STIC funds. METRO will have received over \$3 million in STIC funds at the expiration of SAFETEA-LU. These funds have been used to support the MetroBase Project construction. If the new Transportation Authorization Bill includes the STIC, I anticipate recommending that the Board of Directors use the funds beginning in FY11 for fixed route bus replacement in order to offset the devastating effects of the withdrawal of state transit funding for the next 5 years by the Governor and Members of the Legislature.

#### **IV. FINANCIAL CONSIDERATIONS**

The approval of funding for the MetroBase Solar Panel Project would provide \$3 million in funds to METRO. The continuation of the STIC Program in the next Transportation Authorization Bill would provide approximately \$4.5 million in funding to METRO.

#### **V. ATTACHMENTS**

**Attachment A: STIC Funding Position Paper**

**Attachment B: Solar Panel Project Information Paper**

**SANTA CRUZ, CALIFORNIA**

**SMALL TRANSIT**  
**INTENSIVE CITIES PROGRAM**  
**(STIC)**

**MARCH 2009**

## **Santa Cruz Metropolitan Transit District SMALL TRANSIT INTENSIVE CITIES (STIC) PROGRAM**

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### **Issue**

The American Recovery and Reinvestment Act included \$5.4 billion in funding for urbanized area formula grants at the Federal Transit Administration (FTA). However, the legislation also specifically instructs FTA to apportion the funds without using the SAFETEA-LU mandated formula that includes a one percent set-aside of Section 5307 funds for the Small Transit Intensive Cities (STIC) program. Had the provision not been included, an additional \$54 million in funding would have been distributed to STIC communities in FY 2009.

Now that Congress is beginning the process of reauthorizing SAFETEA-LU, it would be in the best interest of STIC communities to protect the program given the slight in the stimulus bill, and perhaps even discuss proposals to grow the program. In many ways the STIC has been a victim of its own success -- as new communities qualify, the apportionment per service factor is reduced.

### **Background:**

For many years, transit agencies from smaller urbanized areas were concerned that the formula for distributing FTA assistance did not fully recognize the unique needs of communities between 50,000 and 200,000 in population that provide a higher level of transit service than their size would suggest.

In response to those concerns, Congress mandated a study of the issue in the 1998 TEA-21 law. In September 2000, FTA released "The Urbanized Area Formula Program and the Needs of Small Transit Intensive Cities," which concluded that "sufficient issues exist to suggest that changes to the existing urbanized area formula grants program should be considered..." The full study can be found on the FTA website at:

[http://www.fta.dot.gov/news/colleague/news\\_events\\_7918.html](http://www.fta.dot.gov/news/colleague/news_events_7918.html)

Using the results of the study, small transit agencies were successful in convincing Congress of the importance of the matter, and Section 3034 of the 2005 SAFETEA-LU created the STIC program, to be funded with one percent of the funds made available to the urbanized area formula grant program each year (\$39.1 million in FY 2008). The funds are apportioned to smaller urbanized areas that have levels of service that are higher than the average service levels for agencies serving areas between 200,000 and 999,999 in population.

The service factors used by FTA are: passenger miles traveled per vehicle revenue mile; passenger miles traveled per vehicle revenue hour; vehicle revenue miles per capita; vehicle revenue hours per capita; passenger miles traveled per capita, and passengers per capita. In FY 2008, eligible transit agencies received \$125,348 for each service level category that exceeded the industry average for their larger counterparts.

### **The Future of the STIC Program**

The idea of the STIC program was to encourage and reward local investment in smaller urbanized area transit agencies by providing a federal incentive tier for those committed to increasing service levels. Such an incentive system seems to have worked, as 129 communities in 38 states and Puerto Rico have benefitted from the program at least once since its inception in federal FY 2006. In its 2000 study, FTA had identified 90 communities that might be eligible for the program.

These funds have been successfully used to expand service and upgrade and modernize major facilities in order to improve the quality of public transit service in these communities. In Santa Cruz, the STIC Program has assisted in funding new operating facilities that have allowed the conversion of the diesel fleet to Compressed Natural Gas power as well as improved operational efficiency.

As a part of the new Transportation Authorization Bill, the Santa Cruz Metro supports the continuation and expansion of the Small Transit Intensive Cities (STIC) Program as a part of the 5307 Formula Grant Program. As Congress considers to successor to SAFETEA-LU, we believe the following issues should be addressed:

- The 2000 FTA study should continue to be the basis for the STIC funding tier within the 5307 Formula Program and should continue to reward service/ridership in urbanized areas of 50,000-200,000.
- The list of systems receiving funds from the STIC should be updated annually and specific STIC apportionments should continue to be published in the Federal Register.
- The most recent NTD information should continue to be used for determining the average performance, by factor, for the small urbanized area systems.
- The funds made available from the STIC should continue to be distributed on the basis of the six service factors mentioned in the previous section and distribution of funds should continue to be based upon a formula that assigns a dollar value to system factors.
- Funds apportioned under the STIC may be used for the same purposes as funds apportioned under the Section 5307 Program for smaller urbanized urbanized areas.
- Funds apportioned under the STIC should be allocated directly to the eligible systems as a sub-apportionment contained in the Governor's Apportionment. Funds that are apportioned to eligible recipients may not be reassigned to other recipients by either the Governor or the recipient.

### **Contacts:**

Les White, General Manager  
Santa Cruz Metro  
[lwhite@scmtd.com](mailto:lwhite@scmtd.com)  
(831) 426-6080

Carolyn Chaney, Washington Representative  
Santa Cruz Metro  
[chaney@capitaleedge.com](mailto:chaney@capitaleedge.com)  
(202) 842-4930

**Santa Cruz Metropolitan Transit District  
 Small Transit Intensive Cities Program  
 SAFETEA-LU  
 FY 2006 – FY 2009\***

<b>Year</b>	<b>Santa Cruz Urbanized Area</b>	<b>Watsonville Urbanized Area</b>	<b>Total</b>	<b>STIC Amount</b>	<b>Project</b>
FY 2006	2,917,354	1,005,143	3,922,497	<b>792,001</b>	MetroBase Construction
FY 2007	2,952,024	1,053,998	4,006,022	<b>723,646</b>	MetroBase Construction
FY 2008	2,292,810	1,090,826	3,383,636	<b>752,084</b>	MetroBase Construction
FY 2009 (est.)	3,281,550	1,438,840	4,720,390	<b>811,805</b>	MetroBase Construction
<i>TOTAL</i>	<b>\$ 11,443,738</b>	<b>\$ 4,588,807</b>	<b>\$ 16,032,545</b>	<b>\$ 3,079,536</b>	

\* Safe, Accountable, Flexible Efficient Transportation Act –A Legacy for Users appropriated Surface Transportation funds for the period of FY 2006 – FY 2009.

3/10/2009

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**SANTA CRUZ, CALIFORNIA**

**METROBASE**  
**OPERATING FACILITY SOLAR**  
**PROJECT**

**MARCH 2009**

## METROBASE SOLAR PROJECT

The 1989 Loma Prieta earthquake was a tragic event for Santa Cruz County, especially, in terms of the community's sustainability. The destruction of a major portion of the Santa Cruz Metropolitan Transit District's (METRO) infrastructure left the bus system without adequate facilities to maintain, operate and fuel its fleet. The state of the art maintenance and operations facility in Watsonville could not be salvaged. The earthquake left the transit district with few options to run daily bus service. As a result METRO scattered its remaining resources to seven different locations. Maintenance of the bus fleet required much creativity for workers at the converted food processing facility in Harvey West Park that replaced the Watsonville facility. Fueling for every bus became a costly expense because METRO had lost its own fueling capabilities.

In January 2001 METRO responded to the Urban Transit Bus Rule issued by the California Air Resources Board (CARB) by adopting a fifteen (15) year commitment to pursue a Compressed Natural Gas (CNG) fueling path. The adoption of the CNG fuel path required that METRO modify the fueling component of the Operating facility that was planned to replace the facility in Watsonville that was destroyed by the Loma Prieta Earthquake.

In 2006 METRO broke ground on the initial phases of construction of the new operating facility that was named the MetroBase Project. The construction of MetroBase Project has continued over the past three years. At this point in time the Service/Fueling Facility is complete and the first half of the Maintenance Building is complete and in operation. The final portion of the Maintenance Building will be completed in January 2010. METRO has purchased an existing building adjacent to the new MetroBase Maintenance Building for the purpose of housing the Administration and facilities maintenance functions. METRO is currently soliciting bids for the renovation of the Administration and Facilities Maintenance Building and occupancy is anticipated to take place in September 2009.

The final phase of the MetroBase Project is the construction of the Operations Building and Bus Parking Facilities. METRO is finalizing the specifications and construction documents for this portion of the MetroBase Project.



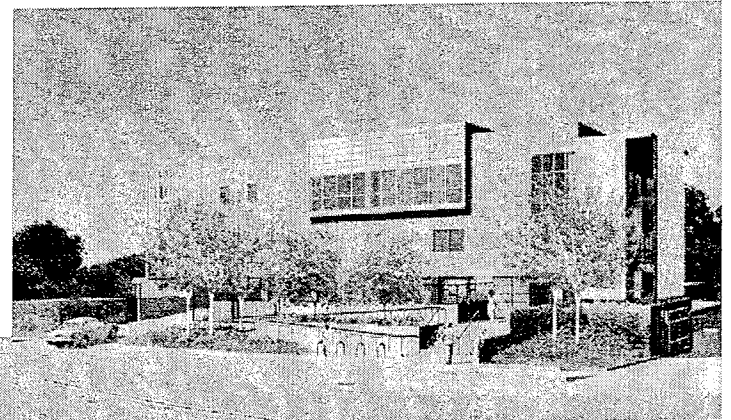
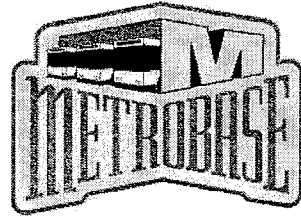
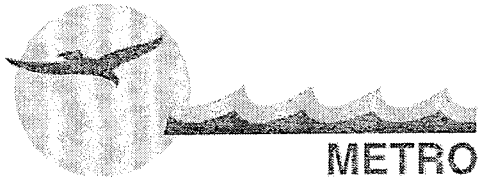
In finalizing the construction plans for the bus parking component of the MetroBase Operations Facility METRO would like to include the installation of solar photovoltaic panels to cover the bus parking area. This addition would provide METRO with dual benefits. The solar photovoltaic panels would cover the buses when they are parked in storage thus providing protection from the elements. This protection will extend the exterior paint and panel life of the buses and thereby reduce bus maintenance costs. Additionally, covered parking for buses in warm weather reduces the interior heat gain and allows buses to be deployed with minimal amount of interior cool down time, thus saving energy by minimizing the amount of time that the air conditioning system has to be activated. The energy generated by the installation of the solar photovoltaic panels is anticipated to reduce the utility operating cost of the Operations and bus parking Facility by over 30%.

The installation of the photovoltaic panels needed for the MetroBase Bus Parking area is estimated to cost approximately \$4.8 million. METRO is requesting that the Appropriations Committees of the United State House of Representatives and the United States Senate direct \$3 million in federal funds to the Santa Cruz Metropolitan Transit District for the purpose of purchasing and installing solar photovoltaic panels over the Bus Parking component of the MetroBase Facility.

The installation of solar photovoltaic panels has already taken place in Santa Cruz with the installation at the City Hall Annex. This 14kW system generates 25,000kW/year and provides 7% of the building energy needs. The Soquel High School in Santa Cruz installed a 315kW system that generates enough energy to meet 40% of the school's power needs.

The implementation of the solar photovoltaic project at METRO will improve the efficiency of the Operations and Bus Parking Facility in an environmentally supportive manner.

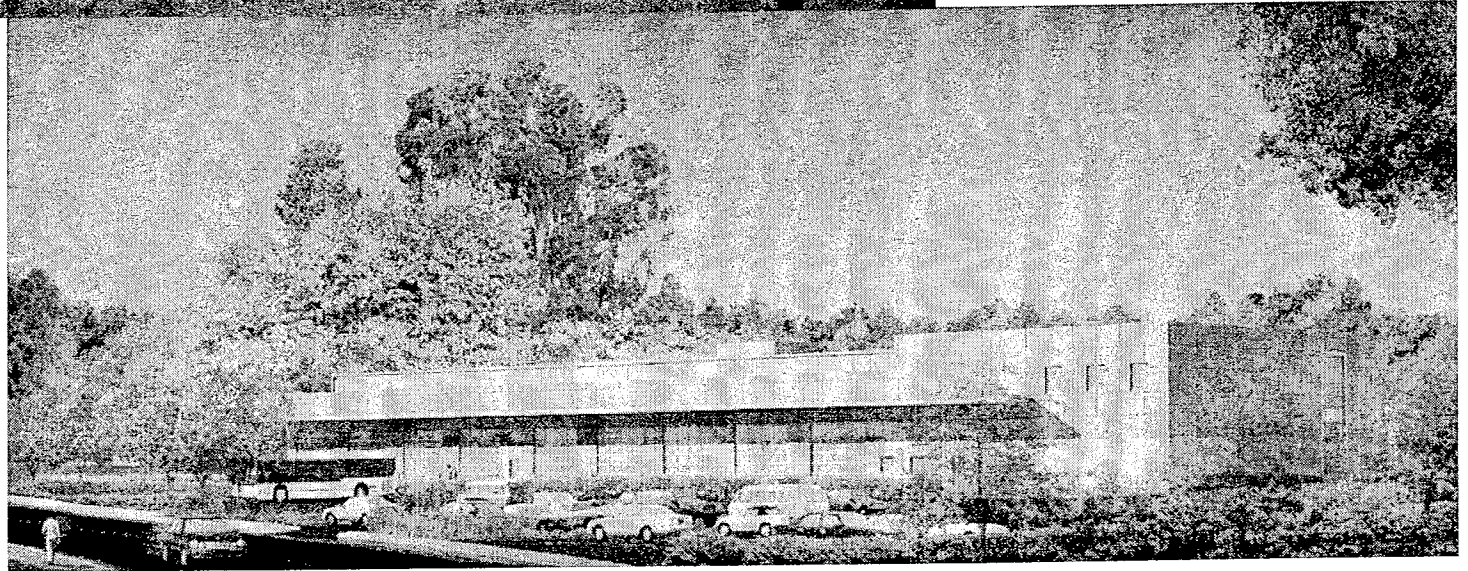




Operations Building

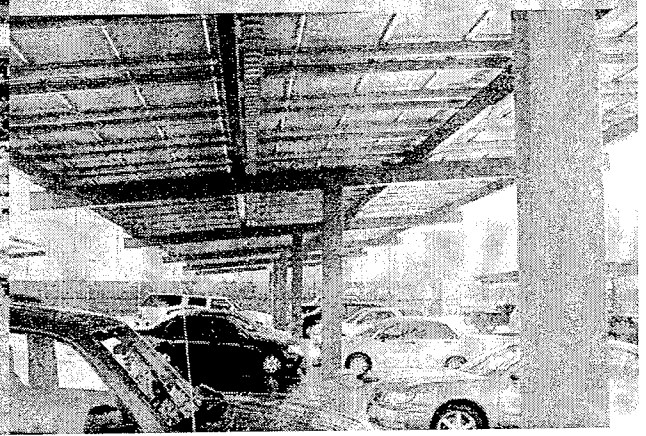
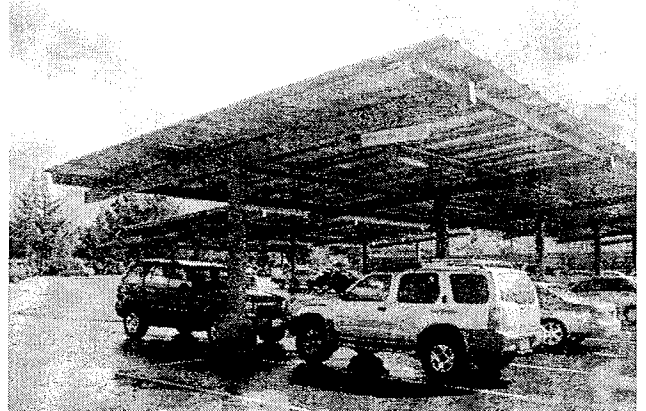
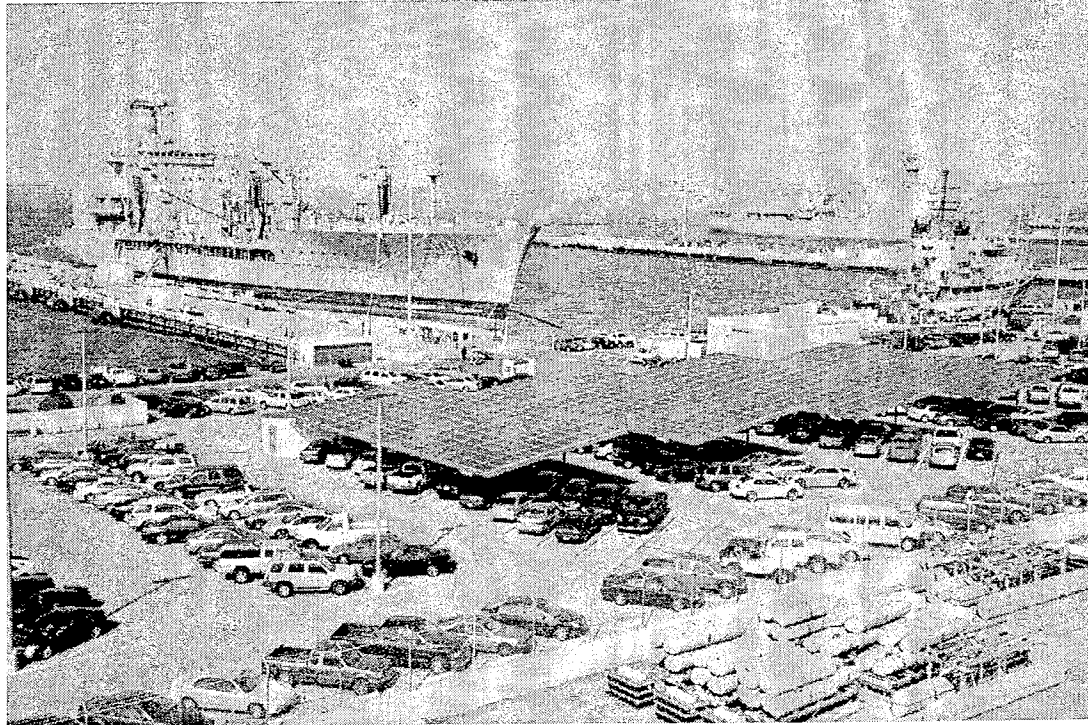


Maintenance Building



# SOLAR PHOTOVOLTAIC SYSTEMS

(three on right) Leland High School, San Jose, CA  
(below) San Diego Naval Base for 32nd Street, San Diego, CA



12.66