

September 9, 1991  
RADIOELE.ORD (NM:clt

Introduced by: Sullivan  
Pullen/Sims

Proposed No.: 91-698

ORDINANCE NO. **10093**

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AN ORDINANCE providing for the submission to the qualified electors of King County at a special election to be held in conjunction with the general election on November 5, 1991 of a proposition authorizing the issuance by King County of unlimited general obligation bonds in the principal amount not to exceed \$49,085,000, to provide funds for the development, acquisition and installation of a regional emergency radio communication system.

FINDINGS OF FACT

The council finds as follows:

Currently, many emergency radio communication systems within King County lack the capacity to manage normal daily operations and many others are unable to accommodate any growth in their existing operations. None of the existing systems could manage the additional radio traffic which would occur in the event of a large or widespread disaster. Communication links between jurisdictions are practically nonexistent, making coordination of a response to a major emergency difficult or impossible. Existing communication systems are also physically vulnerable to earthquakes or other natural catastrophes. Major dispatch centers currently have no backup facilities and if one of these dispatch centers is destroyed during a major disaster, emergency-911 response in the affected area would be drastically curtailed.

The emergency radio communication system (the "System") required by the county to meets its needs and the needs of the jurisdictions within King County and which is authorized to be acquired and installed by this ordinance represents recent technological advances which will allow an integrated emergency communications system to be implemented on a county-wide basis. This new radio communication technology will increase communication capacity within each jurisdiction and also allow different governmental agencies throughout King County to communicate directly with each other. This technology should dramatically improve the ability of government agencies throughout King County to respond in a coordinated manner to a major disaster and would enhance the safety of front-line emergency response personnel. The new technology, will also provide a highly reliable communications network that is better able to withstand damage resulting from an earthquake, as well as backup dispatch communication capacity to be shared by all emergency response agencies within King County.

1 The City of Seattle and the Port of Seattle, along  
2 with several other governmental entities, have  
3 considered acquisition of such systems on their own  
4 behalf. These systems include a microwave  
5 transmission network, an 800 MHz trunked two-way  
6 radio system, and related equipment, materials and  
7 services. These entities have prepared their  
8 procurement documents in such a manner as to allow  
9 participation in the acquisition and maintenance of  
10 such systems, if it occurs, by all other entities in  
11 King County needing such systems.

12 Access to the System may also be made available, as  
13 capacity allows, through contractual agreements with  
14 subregional management groups which may provide for  
15 reimbursement of all costs arising from the provision  
16 of such access, to other entities, including without  
17 limitation, city and county public works agencies,  
18 parks departments, animal control agencies, public  
19 schools, utilities, private hospitals, private  
20 ambulance services.

21 The System, which has been proposed for acquisition  
22 and installation, satisfies the above-described  
23 criteria and meets the needs of the county and the  
24 jurisdictions within King County. The proposed System  
25 contemplates an 800 megahertz "trunked" radio  
26 communications system, with compatible mobile and  
27 portable radios, and microwave transmission network.  
28 The components of the proposed System and cost  
29 estimates for such components are described in more  
30 detail in attachment 1 to this ordinance.  
31 Refinements to the proposed System and to its cost  
32 estimates may be necessary; however, the council is  
33 satisfied that the information available to it at  
34 this time is sufficient to submit a ballot  
35 proposition to the qualified electors of King County  
36 for their approval and that for the health, welfare,  
37 benefit, and safety of King County residents and  
38 front-line public safety personnel, enactment of this  
39 ordinance is necessary.

40 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

41 SECTION 1. Subject to the approval of the qualified  
42 electors of King County, the county council hereby authorizes  
43 the issuance of unlimited tax general obligation bonds (the  
44 "Bonds") in an aggregate principal amount not to exceed  
45 \$49,085,000 for the purpose of providing funds to pay the  
46 capital costs of the Emergency Radio Communication Project (the  
47 "Project"). The primary purpose of the Project is to design,  
48 acquire and install a fully integrated emergency radio  
49 communications network, together with the radio units necessary  
50 to provide emergency radio communications access among and to  
51 all police agencies authorized under the provisions of RCW  
52 Titles 35, 35A and 36 and all fire agencies authorized under  
53 the provisions of RCW Titles 35, 35A and 52 and public

1 emergency medical services and public hospital entities within  
 2 King County.

3 The term "capital costs", as used herein, shall be  
 4 construed consistent with the term "capital purposes" as it  
 5 appears in Article VII, Section 2(b) of the Washington  
 6 Constitution and R.C.W. 84.52.056, but subject thereto and  
 7 without the replacement of any equipment, may include the costs  
 8 of purchase and installation of equipment and material as part  
 9 of the Project, the purchase of 800 megahertz trunked radio  
 10 communication systems from cities within King County which have  
 11 previously acquired such systems in whole or in part; Project  
 12 planning, engineering, design and management; Project system  
 13 integration and, to the extent legally permissible,  
 14 implementation of the System. The term shall also include the  
 15 costs of financial and legal services lawfully incurred  
 16 incident to the Project and its development and financing, as  
 17 well as costs related to the sale and issuance of the Bonds and  
 18 the costs of debt service on the Bonds. The term shall also  
 19 include the funding, refunding, financing or refinancing of  
 20 debt already incurred by government agencies within King County  
 21 to acquire components of the Project prior to the availability  
 22 of Bond proceeds.

23 SECTION 2. If bonds are approved and issued the  
 24 allocation of Bond proceeds for the Project shall be in amounts  
 25 not to exceed the following:

26 For the year in which the bonds are first issued;

27	King County	\$ 950,969
28	Eastside Cities	650,563
29	Seattle	\$4,306,089
30	Valley Communications	\$2,947,018
31	Central Allocation	\$2,167,732

32 For the second year after bonds are first issued;

33	King County	\$6,885,066
34	Eastside Cities	\$4,458,821
35	Seattle	\$4,369,122

1	Valley Communications	\$1,689,690
2	Central Allocation	\$1,620,135
3	For the third year after bonds are first issued;	
4	King County	\$4,095,238
5	Eastside Cities	\$3,135,319
6	Seattle	\$4,250,102
7	Valley Communications	\$959,292
8	Central Allocation	\$2,434,510
9	For the fourth year after bonds are first issued;	
10	King County	\$1,555,727
11	Eastside Cities	\$746,297
12	Seattle	\$1,670,687
13	Central Allocation	\$ 192,623

14 If the actual cost of the Project is lower than currently  
 15 estimated, the above amounts may be revised by the county to  
 16 reflect the changes from the estimates.

17 It is the intent of the county to have each subregional  
 18 management group implement and own their portion of the radio  
 19 system and equipment funded by bond proceeds, consistent with  
 20 interlocal cooperation agreements to be executed between the  
 21 county and the subregional management groups . It is also the  
 22 intent of the county that, subject to county approval, issues  
 23 regarding project revisions, implementation, and operation of  
 24 the network be addressed by the Regional Advisory Board.

25 Funds may be reallocated or the Project may be revised by  
 26 the county, but only after it has asked for a recommendation  
 27 from the Regional Advisory Board, established as described in  
 28 Section 4, regarding revisions to the Project. In no case  
 29 shall the primary purpose of the Project, as described in  
 30 Section 1, be altered.

31 If actual Project costs are lower than currently  
 32 estimated, the County may either reduce the amount of Bonds to  
 33 be issued to support the Project, use Bond proceeds to retire  
 34 Bonds already issued to support the Project, or apply Bond  
 35 proceeds to provide enhancements to the System, which are

1 compatible with the purpose of the Project. Any proposal for  
2 Project enhancement shall be treated as a proposal for Project  
3 revision and shall be subject to the procedure specified in  
4 this section for such Project revision.

5 SECTION 3. The county shall not be obligated to provide  
6 funding for the Project or Project enhancements beyond the  
7 proceeds of the Bonds issued as authorized in this ordinance.

8 SECTION 4. A Regional Advisory Board shall be appointed  
9 by the county legislative authority to advise the county  
10 regarding the distribution of Bond proceeds, Project revisions  
11 and other administrative matters. Representation on this board  
12 shall be equitably distributed among the subregional management  
13 groups. Subregional management groups shall nominate their own  
14 representatives.

15 Not more than four subregional system management groups  
16 may be established to receive funds and manage portions of the  
17 Project as further delineated in interlocal cooperation  
18 agreements approved by the County.

19 SECTION 5. Bond proceeds shall be distributed in  
20 accordance with the allocation described in Section 2 above or  
21 as modified or revised pursuant to Section 2 above.  
22 Distribution of Bond proceeds other than to the County shall be  
23 pursuant to written interlocal cooperation agreements between  
24 the county and subregional management groups or other qualified  
25 public entities, which agreements shall define the rights and  
26 duties of the respective parties with respect to the  
27 administration of the Project and the use of Bond proceeds,  
28 including the timing of expenditures. These agreements shall  
29 encourage the establishment of replacement or maintenance and  
30 operation reserves from funds other than Bond proceeds to  
31 guarantee repair of and replacement of the radio equipment at  
32 the end of its useful life.

33 The County shall determine the manner in which federal  
34 arbitrage requirements relating to the bond proceeds will be  
35 satisfied.

1           SECTION 6. The Bonds shall bear such date or dates; shall  
2 mature at such time or times not to exceed 8 years from the  
3 date of the issuance thereof; shall be issued in such  
4 denominations; shall bear such terms, conditions and covenants;  
5 shall be in such form; shall bear interest at such fixed or  
6 variable rate or rates; shall bear such redemption and  
7 registration privileges; and shall be sold in such manner, at  
8 such time or times, in such amounts and at such price or prices  
9 as the county council shall hereafter determine by ordinance.  
10 The Bonds may be issued in one or more series, either  
11 separately or in combination with other authorized general  
12 obligation bonds of King County.

13           The Bonds shall be general obligations of King County and,  
14 unless paid from other sources, both the principal thereof and  
15 the interest thereon shall be payable from annual property tax  
16 levies, without limitation as to rate or amount, upon all  
17 taxable property within King County in excess of regular  
18 property tax levies.

19           SECTION 7. The county council finds that an urgent need  
20 exists for the Emergency Radio Communications Project and  
21 declares that an emergency exists requiring submission to the  
22 qualified electors of King County of a proposition authorizing  
23 the issuance of the Bonds and the levy of excess property taxes  
24 for the purposes described in this ordinance at a special  
25 election to be held in conjunction with the general election to  
26 be held on November 5, 1991.

27           The clerk of the council is hereby authorized and  
28 directed to certify said proposition to the King County manager  
29 of records and elections in substantially the following form,  
30 with such additions, deletions or modifications as may be  
31 required by the King County Prosecutor:

KING COUNTY

EMERGENCY RADIO COMMUNICATIONS PROJECT

PROPOSITION NO. \_\_\_\_\_

Shall King County finance a county-wide emergency radio communications system, allowing police, fire and other emergency services throughout King County to communicate directly with each other in emergencies by the issuance of up to \$49,085,000 of unlimited tax general obligation bonds with a maximum term of 8 years, payable from annual property tax levies in excess of regular property tax levies, as provided in King County Ordinance \_\_\_\_\_

BONDS, YES.....[ ]

BONDS, NO .....[ ]

Certification of such proposition by the clerk of the council to the King County manager of records and elections, in accordance with law, prior to the date of such election on November 5, 1991, and any other act consistent with the authority of and prior to the effective date of this ordinance, are hereby ratified and confirmed.

SECTION 8. Should any section, subsection, sentence, clause or phrase of this ordinance be declared unconstitutional or invalid for any reason, that determination shall not affect the validity of the remaining parts of this ordinance.

INTRODUCED AND READ for the first time this 26<sup>th</sup> day of August 1991.

PASSED this 9<sup>th</sup> day of September, 1991.

KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

Lois North  
Chair

ATTEST:

Gerald A. Peterson  
Clerk of the Council

APPROVED this 9<sup>th</sup> day of September, 1991.

Jim Hill  
King County Executive

**Attachment One: Cost Allocation Methodology**

Assumptions used in preparing the attached cost tables are as follows:

1. Cost figures are based on consultant recommendations with adjustments made to equalize the 3 subregional consultant reports.
2. One time capital expenditure for Countywide Public Safety Radio Networks with 800 MHz radio and transmission backbone are included. Capital funding for network infrastructure and public safety radios is also included.
3. Each subregion will own and implement the infrastructure within the subregion and each public safety agency within King County will be entitled to new radios.
4. The ongoing cost of network and radio maintenance and operations as well as site rental, will be shared in agency annual budgets.
5. MDT, AVL, laptop, data communications equipment for individual agencies are not part of the scope of the radio project. (But these technologies could use the spare capacity of the planned microwave backbone.)
6. Kent's citizens will only fund the 800 MHz trunked system once. An \$850,000 contingency will be used to purchase Kent's 800 MHz system if it is not fully compatible, or only partially compatible, with the regional system.

If Kent's system is fully compatible, these funds will remain in unallocated central contingency.

7. Two (2) network controllers are funded and will be placed in the most technically logical location and can be accessed fully by each of the subregional centers.



# 10093

I. Basic Backbone Transmission

Subregional Management Group	<u>King County</u>	<u>East Side Cities</u>	<u>Seattle</u>	<u>Valley Communications</u>
A. Microwave	7	4	2	
1. 8DS1 @ 130K each	\$ 910,000	\$520,000	\$ 260,000	
2. 4DSI @ 110K each	4 + 2 \$ 660,000			3 \$330,000
3. DS3 @ 150K each		2 \$ 300,000	1 \$ 150,000	
B. Fiber Link @ 50,000 each	1 \$ 50,000		2 \$ 100,000	
C. Site Improvement	\$ 490,000	\$ 306,000	\$ 220,000	\$110,000
D. Transmission Network Management System Loop Equipment	\$ 250,000 \$170,000	---> \$100,000	\$ 250,000 \$100,000	Incl. in KC \$30,000
<b>Subtotal</b>	<b>\$2,530,000</b>	<b>\$1,226,000</b>	<b>\$1,080,000</b>	<b>\$ 470,000</b>
<b>II. <u>Public Safety Radio</u></b>				
A. Portable and Mobile @ \$2,300 each	2,526 \$5,809,800	1,368 \$3,146,400	2,890 \$6,647,000	1,056 \$2,428,800
B. Portable Accessory @ \$300 each	274 \$82,200	300 \$90,000	550 \$165,000	226 \$67,800
<b>Subtotal</b>	<b>\$5,892,000</b>	<b>\$3,236,400</b>	<b>\$6,812,000</b>	<b>\$2,496,600</b>

**Subregional  
Management  
Group**

King County

East Side Cities

Seattle

Valley  
Communications

**III. 800 MHz Infrastructure**

A. Base Station @ \$35,000 each	36 \$1,260,000	58 \$2,030,000	81 \$2,835,000	21 \$735,000
B. Misc. Receivers	\$200,000			
<b>Subtotal</b>	<b>\$1,460,000</b>	<b>\$2,030,000</b>	<b>\$2,835,000</b>	<b>\$735,000</b>

\*Kent has 2 sites with 6 base stations each.

**IV. Communications Center Radio Equipment**

A. P.S. Control Consoles @ 30,000 each	24 \$720,000	12 \$360,000	13 \$390,000	7 \$210,000
B. P.S. RF Control Stations @ 6,000 each	18 \$108,000	27 \$162,000	40 \$240,000	34 \$204,000
C. Desk Top				
D. Network Access Terminals @ 20,000 each	2 \$40,000	4 \$80,000	4 \$80,000	2 \$40,000
<b>Subtotal</b>	<b>\$868,000</b>	<b>\$602,000</b>	<b>\$710,000</b>	<b>\$454,000</b>

<b>P.S. Grand Total</b>	<b>\$10,750,000</b>	<b>\$7,094,400</b>	<b>\$11,437,000</b>	<b>\$4,155,600</b>
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**Subregional  
Management  
Group**

King County

East Side Cities

Seattle

Valley  
Communications

Grand Total P.S.	\$10,750,000	\$7,094,400	\$11,437,000	\$4,155,600
System Integration	\$1,075,000	\$709,440	\$1,143,700	\$415,560
Architectural, Design, Structural Engineering, Soil Testing	\$150,000	\$100,000	\$150,000	\$30,000
Radio Engineering Design	\$60,000	\$60,000	\$120,000	\$60,000
Implementation Support	<u>\$150,000</u>	<u>\$150,000</u>	<u>\$150,000</u>	<u>\$150,000</u>
Subtotal	\$12,185,000	\$8,113,840	\$13,000,700	\$4,811,160
Contingency	\$1,218,500	\$811,384	\$1,300,070	\$481,116
Subtotal	\$13,403,500	\$8,925,224	\$14,300,770	\$5,292,276
Subtotal plus sales tax @ 8.2%	\$14,502,580	\$9,657,089	\$15,473,429	\$5,726,239

**Total Bond Calculation:**

King	\$14,502,580
ES	\$ 9,675,089
Seattle	\$15,473,429
ValleyCom	\$ 5,726,239
County-Wide Contingency (5%)	\$ 2,267,966
Kent Contingency	\$ 850,000
2 Network Controllers	\$ 1,500,000
Regional Backup Dispatch Center	<u>\$ 2,000,000</u>
<b>GRAND TOTAL</b>	<b>\$51,977,303</b>

# 10093

	<u>Unallocated</u>	<u>King County</u>	<u>East Side Cities</u>	<u>Seattle</u>	<u>Valley Communications</u>
992 (Engineering)		309,452	249,942	380,864	166,628
(Microwave)		641,517	400,621	1,413,956	615,333
(Network)	750,000	--	--	1,237,213	481,137
(Console)		--	--	--	594,385
(Radio)		--	--	1,274,056	1,089,534
(Kent Cont.)	850,000				
Debt Service	122,000				
Contingency	422,732				
<b>Subtotal</b>	<b>\$2,155,732</b>	<b>950,969</b>	<b>650,563</b>	<b>4,306,089</b>	<b>2,947,017</b>
993 (Engineering)		119,020	119,020	119,020	119,020
(Microwave)		2,670,808	1,204,482	--	--
(Network)	750,000	955,730	1,328,858	1,237,212	482,138
(Console)		568,201	394,075	464,773	--
(Radio)		2,571,307	1,412,386	2,548,117	1,089,532
Contingency	870,135				
<b>Subtotal</b>	<b>1,620,135</b>	<b>6,885,066</b>	<b>4,458,821</b>	<b>4,369,122</b>	<b>1,689,690</b>
994 (Network)		955,730	1,328,858	1,237,212	--
(Console)		568,201	394,075	464,773	--
(Radio)		2,571,307	1,412,386	2,548,117	1,089,532
(Contingency)	628,510				
(Backup Dispatch Center)	2,000,000				
<b>Subtotal</b>	<b>2,628,510</b>	<b>4,095,238</b>	<b>3,135,319</b>	<b>4,250,102</b>	<b>1,089,532</b>
995 (Radio)		2,571,307	1,412,386	2,548,116	--
Contingency	326,590				
<b>TOTAL</b>	<b>6,730,967</b>	<b>14,502,580</b>	<b>9,657,089</b>	<b>15,473,429</b>	<b>5,726,239</b>

9/05/91 5:30 pm

## EMERGENCY COMMUNICATIONS BOND

ASSUMPTIONS	
ASSESSED VALUATION GROWTH (BIENNIAL)	5.00%
ASSESSED VALUATION NEW CONST	2.50%
INTEREST RATE DEBT SERVICE	5.72%
INTEREST RATE INVESTMENT	5.72%

EXPENDITURE SCHEDULE	1992	1993	1994	1995	TOTAL
KING COUNTY	\$950,969	\$6,885,066	\$4,095,238	\$2,571,307	\$14,502,580
EAST SIDE	\$650,583	\$4,458,821	\$3,135,319	\$1,412,388	\$9,657,089
SEATTLE	\$4,308,089	\$4,389,122	\$4,250,102	\$2,548,116	\$15,473,429
VALLEYCOM	\$2,947,018	\$1,689,690	\$1,089,533	\$0	\$5,726,241
UNALLOCATED	\$1,800,000	\$750,000	\$2,000,000	\$0	\$4,350,000
SUBTOTAL	10,454,639	18,152,699	14,570,192	6,531,809	\$49,709,339
CONTINGENCY	442,732	870,135	828,510	326,590	\$2,267,967
DEBT ISSUANCE	\$125,000	\$0	\$0	\$0	\$125,000
<b>TOTAL</b>	<b>\$11,022,371</b>	<b>\$19,022,834</b>	<b>\$15,198,702</b>	<b>\$6,858,399</b>	<b>\$52,102,308</b>

YEAR	0	1992	1993	1994	1995	1996	1997	1998	1999
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DEBT SIZING		1992	1993	1994	1995	TOTAL
BOND PROCEEDS	\$49,085,000					
RADIO SYSTEM PAYMENTS		\$11,022,371	\$19,022,834	\$15,198,702	\$6,858,399	52,102,308
INVESTMENT EARNINGS		\$1,474,254	\$1,172,598	\$370,856	\$23	3,017,731
RADIO FUND BALANCE		\$39,536,883	\$21,686,648	\$6,858,802	\$425	

DEBT PROCEEDS ALLOCATION		TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4
KING COUNTY		13,487,000	950,969	6,885,066	4,095,238	1,555,727
EAST SIDE		8,991,000	650,583	4,458,821	3,135,319	748,297
SEATTLE		14,596,000	4,308,089	4,389,122	4,250,102	1,870,687
VALLEYCOM		5,596,000	2,947,018	1,689,690	959,292	0
CENTRAL ALLOCATION:						
UNALLOCATED	4,158,000					
CONTINGENCY	2,134,000					
DEBT ISSUANCE	125,000					
CENTRAL TOTAL	6,415,000	2,167,732	1,620,135	2,434,510	192,623	
<b>TOTAL</b>	<b>\$49,085,000</b>	<b>\$11,022,371</b>	<b>\$19,022,834</b>	<b>\$14,874,461</b>	<b>\$4,165,335</b>	

DEBT SERVICE CASH FLOW	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
TOTAL DEBT SERVICE PAYMENTS	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$62,526,878
PRINCIPAL	\$5,010,125	\$5,296,507	\$5,599,280	\$5,919,317	\$6,257,670	\$6,615,363	\$6,993,502	\$7,393,256	\$49,085,000
INTEREST	\$2,805,735	\$2,519,352	\$2,216,600	\$1,896,542	\$1,558,190	\$1,200,497	\$822,358	\$422,604	\$13,441,878
REMAINING PRINCIPAL	\$44,074,875	\$38,778,388	\$33,179,108	\$27,259,791	\$21,002,121	\$14,388,758	\$7,393,256	\$0	

EXCESS LEVY RATE	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
ASSESSED VALUATION (000'S)	\$101,497,465	\$103,019,927	\$110,746,421	\$113,515,082	\$122,028,713	\$125,079,431	\$134,460,388	\$137,821,898	\$148,158,540
LEVY RATE/THOUSAND AV	\$0.0759	\$0.0759	\$0.0708	\$0.0689	\$0.0640	\$0.0625	\$0.0581	\$0.0567	\$0.0528
ANNUAL COST/150,000 AV	\$11.38	\$10.59	\$10.33	\$9.81	\$9.37	\$8.72	\$8.51	\$7.91	
LEVY REVENUE	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$7,815,860	\$62,526,878

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