



# CITY OF KENT, OHIO

## DEPARTMENT OF FINANCE

**To:** Dave Ruller, City Manager

**From:** David A. Coffee, Director of Budget and Finance

**Date:** September 14, 2017

**Re:** FY2017 Appropriation Amendments, Transfers, and Advances

A handwritten signature in blue ink that reads "David A. Coffee".

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**The following additional appropriation amendments for September City Council approval are hereby requested:** Subsequent to my August 29, 2017 memo requesting Council Finance Committee agenda time at the September 6<sup>th</sup> Committee Meeting, actionable information became available on a pending critical public safety project for enhanced MARCS radio communications. Consequently, I am respectfully requesting a special Finance Committee Meeting preceding the September 20<sup>th</sup> City Council Meeting for the purpose of introducing an additional appropriation amendment request to fund this project.

**Fund 301 – Capital**

Increase      \$    547,000      Capital / Public Safety-Capital – Additional funding for emergency MARCS radio communications project per Chief Lee and Chief Tosko 9/14/17 memo.

# KENT POLICE DEPARTMENT

319 SOUTH WATER STREET KENT, OHIO 44240  
330-673-7732

**MICHELLE A. LEE**  
Chief of Police

TO: Dave Ruller, City Manager  
Kent City Council

FROM: Michelle Lee, Chief of Police  
John Tosko, Fire Chief

DATE: 09/14/17

SUBJECT: Public Safety MARCS Radio Project

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As you may recall, in December 2016, Mr. Ruller provided an update on the state of our safety forces' VHF radio system. At that time, the police and fire departments were near exhausting the available options for improving our current radio system performance to a safe, acceptable level. The City has suffered poor radio coverage in several areas of town since the system was installed over 30 years ago, but the coverage problems became a safety issue in 2012, when all VHF radio systems were forced to comply with the FCC's narrow-band mandate. While in theory, the range of our radios was supposed to remain the same, after narrow-banding our system, we found that the strength and quality of our radio coverage was seriously degraded. In the simplest of terms, the strength of our radio signals was cut in half, while the level of static noise and interference inherent in any analog radio system remained the same as always. Over large parts of our response area, our police officers and firefighters can no longer rely upon their radios to send and receive messages properly, and this poses a serious risk to the safety of both the public and our first responders.

Over the past 5 years, we have exhausted the available options for improving our current system. These steps have included replacement of aged equipment, remote receiver sites, preventative maintenance and fine tuning the equipment for optimal performance, antenna relocations, and in-car repeaters – none of which have improved our radio performance to a safe, effective level. At this time, we have arrived at our last, best option to provide our first responders the reliable radio coverage they need, which is switching onto the Multi-Agency Radio Communications System (MARCS).

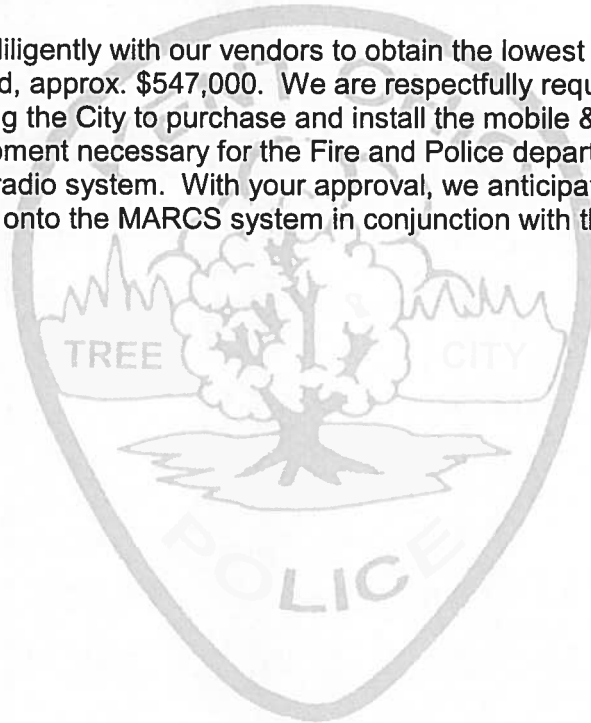
MARCS is a 700/800MHz digital radio system owned and operated by the State of Ohio. MARCS operates and maintains the "backbone" of the system, and subscribing agencies receive dedicated "talk groups" upon which to conduct daily and emergency operations. The system features seamless interoperability between all users across the local, county, state and federal levels, and it is anticipated that eventually most public safety forces in Ohio will operate on it. Field testing has shown that MARCS currently provides an effective level of coverage across our response area, and there are additional antenna towers being constructed at locations in Stow and on the KSU campus that will provide excellent coverage throughout our response area in the near future.

In order for our police and fire departments to switch onto MARCS, we must replace our current equipment, which is designed to operate in the older VHF frequency range, with new 800 MHz radios capable of connecting to it. The cornerstone of the switch is the Dispatch Center, which has already been planned for the upgrade to MARCS as part of the new police facility.

This project to complete the switch involves:

- Replacing 33 mobile radios in the police marked cruiser fleet and fire apparatus
- Replacing approx. 100 portable radios that most police and fire personnel carry
- Replacing the radio-controlled station alerting system used to dispatch Fire & EMS to calls for service
- Purchase of a cross-band radio repeater for the FD that will ensure continued direct radio communications with our neighboring communities' first responders who remain on the older VHF systems

We have worked diligently with our vendors to obtain the lowest possible costs for the equipment required, approx. \$547,000. We are respectfully requesting that Council approve authorizing the City to purchase and install the mobile & portable radios, and related radio equipment necessary for the Fire and Police departments to join the MARCS 800MHz radio system. With your approval, we anticipate we can complete the project and switch onto the MARCS system in conjunction with the opening of the new police facility.





Dave Ruller &lt;rullerd@kent-ohio.org&gt;

## Public Safety Radio Upgrades

2 messages

Dave Ruller <rullerd@kent-ohio.org>

Thu, Dec 15, 2016 at 12:52 PM

To: "'wallach@math.kent.edu'.GWIA.Kent\_PD\_Domain" <wallach@math.kent.edu>, Dave Ruller <RullerD@kent-ohio.org>, "garrettferrara@att.net" <garrettferrara@att.net>, Heidi Shaffer <hshaffer1@neo.rr.com>, Jack Amrhein <Jamr964@aol.com>, Jerry Fiala <javerage@att.net>, John Kuhar <j.kuhar@att.net>, Melissa Long <mimionthego@neo.rr.com>, Mike Deleone <mdeleone@kent.edu>, Robin Turner <robing13@hotmail.com>, Roger Sidoti <rsidoti@sbcglobal.net>, Suzanne Robertson <RobertsonS@kent-ohio.org>, Linda Jordan <kentclerk@kent-ohio.org>, John Tosko <Toskoj@kent-ohio.org>, Michelle Lee <lee@kent-ohio.org>, David Coffee <coffeed@kent-ohio.org>, Gary Bishop <bishopg@kent-ohio.org>, Melanie Baker <mbaker@kent-ohio.org>, Jayme COLE <COLE@kent-ohio.org>, Peeps <Peepsc@kent-ohio.org>

Good Afternoon,

Since we haven't had a chance to talk about our public safety radio needs in Committee yet I wanted to try to fill in some of the gaps in this morning's Record Courier article (attached) regarding Council's approval of the radio grant application that you authorized us to submit for State funding last night.

Our current public safety radios (used by Fire, Police, Health, Public Service and Parks and Rec, approximately 150 units) use the old VHF band that most of us remember from the days of television before cable.

From your own VHF TV experience you may remember moving your TV antenna around trying to get a better reception. Sometimes that would work but other times no matter how hard you worked different sources of interference kept the images pretty fuzzy.

A fuzzy TV is frustrating but a fuzzy connection on public safety radios can be a matter of life and death -- for residents and our employees -- so as a result of changes enacted by the FCC over the last 5 years, more and more cities, counties and state agencies are abandoning the VHF format and moving into the 700/800/900 bandwidth which solves most of the shortcomings of VHF. (<https://800mhz.summitoh.net/>)

VHF has always had some communication limitations in clarity and line of site connectivity but when the FCC mandated "narrow-banding" (FCC summary attached) in the VHF frequency range in 2012-13 the limitations became magnified. Our Safety crews have experienced a noticeable drop in radio performance resulting in more frequent inability to connect from inside buildings or over short distances; for example, our med units can no longer rely on radio contact when they are taking patients to area hospitals.

Years ago the State of Ohio built a more powerful radio platform (MARCS) in the 800 megahertz range to serve their agencies that required a strong signal to carry over long distances in order to ensure radio service for employees who often work in remote

areas in the state. (<http://das.ohio.gov/Divisions/InformationTechnology/MARCSServices.aspx>).

Without getting too detailed in radio science, the 800 megahertz radio waves are more adept at getting out of ravines, around structures and getting into buildings. That characteristic translates into better reliability and clarity for public safety personnel that are dispatched to respond to calls for help in ravines, around structures and inside of buildings.

The State is working towards getting all public agencies in Ohio to share their MARCS platform -- or a compatible 800 MHz system -- so after the FCC narrowed the commonly used VHF frequency, the State responded by incentivizing jurisdictions to convert to the MARCS through grants for the capital purchases of portables and in-vehicle MARCS radios, and they've also been discounting the monthly "tower fees" that they charge cities to access to the MARCS radio towers (reduced from \$20/radio/month to \$10/radio/month).

The MARCS radio platform does everything we need to ensure our communications systems support the safety of our residents and our employees. The trouble is, even with the State incentives, it's rather expensive. We have not completed a full analysis of our radio investment but we anticipate a cost of approximately \$500,000 in one-time costs for the City to make the transition to the MARCS system -- and an estimated \$25,000 a year in tower fees.

We do anticipate some savings from making the switch but we don't have enough information yet to calculate those out.

In the meantime, we discovered the State grant opportunity which could help us defray some of the capital costs. The grant awards are capped at \$100,000 -- and they require a 1:1 match -- so if we're awarded \$100,000 we'll have to come up with \$100,000 in City matching funds. That still leaves another \$300,000 to fully outfit the City but our plan is to look at a phased conversion over a three year period to minimize the impact on our finances.

The State grant awards will likely be announced in the first or second quarter of 2017 and they allow the City 12 months to use those funds. With that in mind, we're talking about looking to either defer some purchases or find some savings in 2017 that would free up funds that we could then allocate towards our matching contribution that we'd likely expend in 2018. Whatever we can't come up with savings or deferrals, we'd look to include in the 2018 capital plan.

If we were lucky enough to get the full grant amount, that would allow us to take the State \$100,000 and the City \$100,000 match to essentially outfit the Fire Department with the new radios in 2018.

Keep in mind that in 2017 we'll be moving the Police Department into the new Police Station and part of the existing budget for the new building includes outfitting the new dispatch center with the latest communications technology so we anticipate purchasing the dispatch radio system in the summer of 2017 using funds in the budget for the new building.

That leaves us in 2018, 2019, and 2020 with the task of coming up with funds to outfit the Police officers, patrol cars, and the remainder of the City employees. With that cost in the range of \$250,000 we think we'll be able to build that into our capital plan over 1 to 2 years which right now seems like it could fit without disrupting other important projects.

We believe that the estimated \$25,000 in annual operating costs would be covered through a combination of cost savings from the elimination of our current VHF equipment, possible cost discounts from shared tower agreements, and routine operating budgets for the departments.

Sorry for the length of this email but unfortunately we had to react quickly to the grant which didn't allow us to fully brief you in Committee on what is a significant and meaningful investment that we've been working on creating a plan for implementing. I've tried to rough-out that plan for you in this email but certainly more discussions will follow over the next couple of years.

Keep in mind that we can always decline the grant if we are awarded funds so we are not "locked-in" -- but given the large cost of this project we didn't want to pass up any opportunity to leverage outside funds.

We have to submit the grant by January 6th so if you feel that our strategy is flawed or you would like more time in Committee to formally deliberate on the matter, please let me know and we'll hold off on the grant application.

It's possible that the grant funding will continue next year but we don't know for sure which is why we felt it was worth the risk of trying to submit something in case this is the last year, despite the fact that we had not had a more formal discussion with you yet.

Dave

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2 attachments

 Kent seeking grant for radio upgrades.pdf  
85K

 FCC Narrowbanding\_Booklet.pdf  
538K

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Dave Ruller <rullerd@kent-ohio.org>

Tue, Jul 18, 2017 at 5:42 PM

To: "Ferrara@kentohio.org".GWIA.Kent\_PD\_Domain" <ferrara@kent-ohio.org>, Jack Amrhein <amrhein@kent-ohio.org>, Jerry Fiala <fialaj@kent-ohio.org>, John Kuhar <kuhar@kent-ohio.org>, Melissa Long <longm@kent-ohio.org>, Michael DeLeone <deleone@kent-ohio.org>, "Shaffer@kentohio.org" <Shaffer@kentohio.org>, sidoti <sidoti@kentohio.org>, Tracy Wallach <wallach@kent-ohio.org>, "turner@kentohio.org" <turner@kentohio.org>

Cc: "Tara Grimm, Clerk of Council" <grimmt@kent-ohio.org>, John Tosko <Toskoj@kent-ohio.org>, Michelle Lee <lee@kent-ohio.org>, Gary Bishop <bishopg@kent-ohio.org>, David Coffee <coffeed@kent-ohio.org>, Melanie Baker <mbaker@kent-ohio.org>

Bcc: Dave Ruller <rullerd@kent-ohio.org>, Harrison Wicks <Wicksh@kent-ohio.org>

Good Evening,

I wanted to let you know that after submitting for grant funding to help underwrite our emergency radio needs (see the email description that I sent you on Dec 15, 2016 below), we got word that our grant request was not approved.

It turns out that the grant agency prioritized projects that were countywide and as a result our individual application didn't make the cut.

We've have plenty of conversations with our peer cities in Portage about making the conversion to the State MARCS radio platform together but it's been hard to get the commitments needed to make that happen.

In the meantime, we feel that we can no longer wait for grant funds and we are planning to build the costs of the conversion into our 2018 Capital Improvement Plan that we'll present to you in September.

We're still looking at the options to finance the approximate \$750,000 in costs but with the new Police Station coming on line at the end of the year, and given the vulnerability of our current radio system, we have made this a top priority.

It's great news for our police and fire employees, and it's great news for our residents that rely on them for their safety -- it's just not great news for our finances -- but Dave Coffee and I agree that the time is right to make this critical investment.


We'll be spending the next couple of months trying to work out all of the details but I wanted to give you an update.

Dave

[Quoted text hidden]

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#### 2 attachments

 **Kent seeking grant for radio upgrades.pdf**  
85K

 **FCC Narrowbanding\_Booklet.pdf**  
538K

## KENT HEALTH DEPARTMENT STATISTICAL REPORT 2017

3. A.

	Aug 2017	YTD 2017	Aug 2016	YTD 2016
<b>HEALTH DEPT. \$ COLLECTED</b>				
FamAbuse fund	\$ 1,300.52	\$ 9,681.03	\$ 1,173.00	\$ 9,156.04
Vital Stats Rev.	\$ 7,369.50	\$ 54,842.00	\$ 6,647.00	\$ 51,926.50
Child Abuse	\$ 2,600.98	\$ 19,355.97	\$ 2,346.00	\$ 18,326.46
State VS	\$ 7,803.00	\$ 58,068.00	\$ 7,038.00	\$ 54,990.00
B Perm Rev	\$ 27.00	\$ 227.00	\$ 22.50	\$ 225.50
B Perm State	\$ 135.00	\$ 1,135.00	\$ 112.50	\$ 1,130.00
Food Estab.	\$ 553.00	\$ 38,502.00	\$ 200.00	\$ 24,821.25
Food Service	\$ 4,202.00	\$ 75,754.50	\$ 1,910.00	\$ 73,596.75
SolWst Tickets	\$ 20.00	\$ 420.00	\$ 0.00	\$ 410.00
Housing	\$ 17,153.75	\$ 86,366.25	\$ 13,770.00	\$ 83,310.00
Swim Pools	\$ 0.00	\$ 8,565.00	\$ 0.00	\$ 8,102.50
SolWst(Trks)	\$ 0.00	\$ 1,575.00	\$ 0.00	\$ 2,350.00
Tattoo Parlors	\$ 0.00	\$ 885.00	\$ 700.00	\$ 800.00
*Misc	\$ 0.00	\$ 125.00	\$ 0.00	\$ 750.00
	\$ 0.00	\$ 41,004.22	\$ 60.00	\$ 14,681.50
MAC Claiming	\$ 5,801.90	\$ 16,404.24	\$ 5,452.32	\$ 15,917.94
Tobacco Grant	\$ 0.00	\$ 41,222.54	\$ 0.00	\$ 14,300.00
**ST Subsidy	\$ 0.00	\$ 26,176.00	\$ 0.00	\$ 22,882.00
<b>TOTAL COLLECTED</b>	<b>\$ 46,966.65</b>	<b>\$ 480,308.75</b>	<b>\$ 39,431.32</b>	<b>\$ 397,676.44</b>
<b>TO STATE</b>				
FamAbuse fund	\$ 1,261.49	\$ 9,387.63	\$ 1,137.80	\$ 7,916.62
Food Estabs	\$ 28.00	\$ 1,344.00	\$ 0.00	\$ 1,540.00
Bur.Permits	\$ 135.00	\$ 1,135.00	\$ 112.50	\$ 1,130.00
Child Abuse	\$ 2,522.95	\$ 17,035.34	\$ 2,275.60	\$ 17,775.65
State VS QTRLY	\$ 7,803.00	\$ 58,068.00	\$ 7,038.00	\$ 54,990.00
Food Service	\$ 112.00	\$ 4,086.00	\$ 0.00	\$ 4,030.00
Food Vendors*	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Swim Pools	\$ 0.00	\$ 1,185.00	\$ 0.00	\$ 1,365.00
Wells	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
<b>TOTAL</b>	<b>\$ 11,862.44</b>	<b>\$ 92,240.97</b>	<b>\$ 10,563.90</b>	<b>\$ 88,747.27</b>
<b>TOTAL ASSETS</b>	<b>\$ 35,104.21</b>	<b>\$ 388,067.78</b>	<b>\$ 28,867.42</b>	<b>\$ 308,929.17</b>
+Admin fee to Vital Stats	\$ 117.07	\$ 871.07	\$ 105.59	\$ 824.64
-3% FamAbuse	\$ 39.04	\$ 290.42	\$ 35.21	\$ 274.84
-3% ChildAbuse	\$ 78.03	\$ 580.65	\$ 70.38	\$ 549.80



**STATISTICAL REPORT Cont.****Aug 2017****YTD 2017****Aug 2016****YTD 2016****PERMIT/lic.**

Food Estabs	1	42	0	49
Food Service (6)	4	117	0	135
FS Vending	0	23	0	23
Home Sewage	0	0	0	0
Housing	27	226	31	224
Solid Waste	0	35	0	42
Swim Pools	0	17	0	18
Septic Haul.	0	0	0	0
Tattoo Parlors	0	2	0	4
Other	0	0	0	0
<b>TOTAL</b>	<b>32</b>	<b>462</b>	<b>31</b>	<b>495</b>

**MOSQ.CONT.**

Larvacide Hrs.	0.0	0.0	0.0	0.0
Adulticide Hrs.	0.0	0.0	0.0	0.0
Tot Man Hrs	82.0	251.8	0.0	268.5

**COMPLAINTS**

Received	12	75	6	56
Abated	6	63	8	53

**LEGAL.COMPL.**

Filed	0	0	0	0
Pre-trials	0	0	0	0
Trials	0	0	0	0

**COMM.DISEASE**

0	0	20	77
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**IMMUNIZATIONS**

27	95	54	179
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**BIRTH Copies issued**

425	2689	382	2651
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**DEATH Copies issued**

442	3763	400	3458
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