

# CLACKAMAS C800 RADIO GROUP

## BOARD OF DIRECTORS MEETING

July 17, 2019 / 10:00AM

Meeting to be held at: CCOM/Disaster Management EOC - 2200 Kaen Rd Oregon City

Call In 800-704-9804 / Access Code: 345832#

1. Call the C800 / Board of Directors meeting to Order - Chair Deputy Chief Ryan Hari
2. Roll Call of Partners: (18/10)

a. City of Canby	g. City of Sandy	m. Hoodland Fire District
b. City of Gladstone	h. City of West Linn	n. Molalla Fire District
c. City of Lake Oswego	i. Canby Fire District	o. Sandy Fire District
d. City of Milwaukie	j. Clackamas County Fire District #1	p. Tualatin Valley Fire & Rescue
e. City of Molalla	k. Colton Fire District	q. Clackamas County Sheriff
f. City of Oregon City	l. Estacada Fire District	r. Clackamas County Health
3. \*Approval of Minutes of: June 19, 2019 Board Meeting
4. Public Comment
5. Communications
6. Financial Report - June 2019 - John Hartsock
7. Committee Reports
  - a. Executive Committee - Ryan Hari
  - b. Technical Committee - John Hartsock
  - c. Citizen Accountability - John Hartsock - Next Meeting September 17, 2019 6:30P  
Lake Oswego Main Fire Station 300 B Ave Lake Oswego
8. Old Business: (\* Action Item)
  - a. System Management: - John Hartsock
  - b. System Upgrade/Replacement
    - i. Project Status / Procurement - Bjorn Morfin / John Hartsock
    - ii. Fire Station Alerting / Paging - John Hartsock
    - iii. Portable/Mobile Radio Deployment - Todd Matsuo
    - iv. Radio Templates - John Hartsock
    - v. Use of Bond Premium Funds - Jim Davis
9. New Business: (\* Action Item)
  - a. \* Award a Construction Contract for paving at the Damascus site.

b. **Next Board Meeting September 25, 2019 10:00A @ CCOM - EOC**

**(Note no August Meeting)**

10. Open Agenda

11. Adjournment

# **CLACKAMAS C800 RADIO GROUP**

## **BOARD OF DIRECTORS MEETING**

**Meeting Minutes of the June 19, 2019 Meeting**  
**Clackamas County Design Services Building, 150 Beaver Creek Rd., Rm. 119**  
**Oregon City, OR 97045**

**1. C800 Board Meeting Called to Order at 1000**

**2. The following were in attendance:**

City of Canby / Chief Bret Smith	Molalla Fire District / Chief Vince Stafford
City of Gladstone / Chief Rick Huffman / Chief John Schmerber / Randy Hopperstad	Sandy Fire District / Chief Phil Schneider
City of Lake Oswego / Scott Thran / Sue Scobert	Clackamas County Sheriff / Capt James Rhodes
City of Milwaukie / Luke Strait	Aurora Fire / Chief Joshua Williams / Greg Dyke
City of Molalla / Chef Frank Schoenfeld	CCOM / Cheryl Bledsoe / Tony Collins
City of Oregon City / Chief Jim Band	CC Disaster Mgmt: Jamie Poole
City of Sandy / Sean Lundry	Clackamas County / Brian Nava / Kevin Moss
Canby Fire / Chief Jim Davis	WCCCA / Ron Polluconi
Clackamas Fire District #1/ Deputy Chief Ryan Hari / Div Chief Mike Corless / Rachel Trotman	C800 / John Hartsock / Bjorn Morfin
Estacada Fire District / Richard Anderson	Motorola / Todd Matsuo
Hoodland Fire District / Joe Schwab	Day Wireless / Chris Tate

**3. Approval of Minutes – May 15, 2019 Board Meeting**

- a. Jim Davis made a motion to approve the minutes of the March 20<sup>th</sup> Board meeting as submitted and the motion was seconded by Brett Smith. A unanimous vote was cast in favor.

**4. Public Comment:** None

**5. Communications:**

- a. John shared that in the packet, he included an email from Russ Reese, our auditor, answering to the letter that John had presented last month from the Secretary of State, advising where the state either read the audit incorrectly, or some minor changes need to be made next year.

**6. Financial Report**

- a. John noted that he had handed out the April report at the last meeting, but he has included it in this packet. The May financial report is also in the in packet.
- b. Tracking on budget and doing fine for closing out year.

**7. Committee Reports**

**a. Executive Committee**

- i. Did not meet. Nothing to report.

**b. Technical Committee-John Hartsock**

- i. Met on the 29<sup>th</sup> of May and spent the bulk of the time talking about a fire station alerting plan and putting that together.
- ii. Next meeting will be on June 26<sup>th</sup>.

**c. Citizen Accountability-Ryan Hari**

- i. Chief Hari noted that he was not able to attend. Sue Scobert and John Hartsock were able to attend.
- ii. The meeting was held on June 18, 2019 at the West Linn Police station. Five members turn out for the meeting. The committee had good questions and is satisfied with the project. John shared that it is an impressive group of committed citizens.
- iii. Next meeting will be in September at Lake Oswego's main fire station.

**8. Old Business:**

**a. System Management**

- i. Ron noted that the project is moving through the upgrades at all existing sites. They are working through bringing the generators back online and tank monitoring. Other than that, the upgrades are going well. No substantial outages.
- ii. Ron shared that they have been experiencing unusual interference in both counties for almost three weeks. The Clackamas systems haven't been taken out. However, a couple of Washington county sites have been taken out for a few seconds at a time.
- iii. Ron noted that they have continued increased fall out in our repeaters but have adequate spares.
- iv. Ron explained that we are losing about a channel a month between the two systems but are able to replace with spares..
- v. Ron said the sysetm is holding together, but not as stable as it was a couple years ago.

**b. System Upgrade/Replacement**

**i. Project Status/Procurement**

Bjorn reviewed project status:

- 1. Barton: Construction is complete. It is looking good.
- 2. Cooks Butte: Working on land use preparation. Looking to submit for land use in late July.
- 3. Kerr Parkway: Looking for other locations; have about six letters out.
- 4. Damascus/Canby/Sandy: All construction complete.
- 5. Wilsonville: John shared that they went ahead and followed through with the eminent domain plan. Our attorney/appraiser sent a 15-day notice and the land owner became interested and called John to talk. Last Monday, John met with the property owner. John shared that the owner felt that we could work something out. John has not called off the eminent domain/appraisal yet. John and Bjorn are working on drafting an Access Agreement and Road Maintenance Agreement. They are targeting to get this signed in early July, so they can contact the city of Wilsonville on the lease. Moving forward with the site.
- 6. Crutcher Bench: Couple more weeks before it is construction complete.
- 7. Highland Butte: Expecting to start work sometime in July. Waiting on the go ahead from BLM.
- 8. Four Forest Service Sites: Should go into construction in a couple weeks.
- 9. Hoodland Fire: Bjorn is to pick up permits for this site after this meeting and start construction in the next couple weeks or so.
- 10. Existing sites: All are moving along nicely with upgrades.

**c. Fire Station Alerting/Paging**

- i. John shared that they are ready to kick off fire station alerting. In the packet, he has included an organization chart of what the organizational structure will look like. He shared that their theory is that we need someone at the top to play leader. Working to get a kick off meeting scheduled.
- ii. He needs to work with Molalla on paging. They are the last ones to get on the 900 system.

**d. Portable/Mobile Radio Deployment**

- i. Todd shared that they are on a new subscriber program for deployment and working through this. There are a few small Agencies that they are working on; but radios have been deployed to most fire and law Agencies. There are also some add on orders have come in that they have those on our radar.
- ii. Todd noted that they are now largely focused on starting the process of upgrading the existing fleets right now. They have finished the existing fleets at West Linn PD and Molalla PD. They are working at Sandy PD today.
- iii. Todd shared that the point of contacts for each Agency will be getting a call from Motorola if they haven't received one already.
- iv. Joe Harris has taken over Lenny's position. If you don't have Joe's information, reach out to Todd and he can get you his name and contact information. John shared that he is working with Darin at WCCCA and Darren will be coming out with him to do the training at the Agencies.
- v. Richard shared that last month, he asked about the antenna upgrades and was wondering if Todd had an update on this. Todd said that, for all the existing local radio installs, they have to install the GPS/Wi-Fi antenna. He added that they are trying to reach out to see the quantities or antennas that are needed so they can order them.

**e. Radio Templates**

- i. James Rhodes provided a handout to the group. He noted that last month, he shared the concerns that Detective Burlew had. The main concern was sharing tactical channels with non-law enforcement, non-fire and non-medical groups.
- ii. The handout had three attachments, template A, template B and template C. Attachment A is the current template. The request is that we adopt a template B. The main difference between A and B are primarily in zone H and A. It removes all the tactical channels. This change would only affect three zones. Attachment C is what it would look like if you removed everything law related. He believes this would be too much. He thinks that attachment/template B is a happy medium.
- iii. Detective Jeff Burlew is willing to tweak this if people see think there are things that need to be changed. James thinks this is in a good place. His recommendation would be that this board adopts template B.
- iv. Brett Smith asked if this went through the Law Services group. He would like to run it through the Law Services group before he makes a decision. It was shared that the next law meeting is the second week of July. James noted that he can make the same presentation to that group. James brought up the concern of time, making sure this decision was made before radios were issued due to the cost of re-flashing radios.
- v. Sue mentioned that none of the Lake Oswego channels are listed in his template.

- vi. John shared that they made the comment that channels A, B and C aren't changing. However, the descriptor changed, especially in the Portland talk groups. Everyone gets to name their own. The other comment they made, was that the back end of the radios was the same in all the radios. He added that he thinks this lead to everyone thinking that they were going to get the full spectrum. John doesn't think this is too far from where we are right now.
- vii. This topic will be returned at next C800 Board meeting.
- viii. It was noted that the drive for this change is for operational security.
- ix. Group discussion followed.
- x. There will be no changes to the Fire channels
- xi. John will send this handout to the group via email.

**f. Use of Bond Premium Funds**

- i. Jim Davis passed out a draft of the results from the survey regarding the use of the bond premium funds. He shared the goal is to get this survey wrapped up by August.
- ii. The survey was done and tallied by Survey Monkey. Jim shared that the front sheet lists each question across as far as responses go. On the front where it says, "final order", it lists the questions in order of preference from the surveys, for example: question one was number one, question four was number two. He went on to share that what he did from there, was create a "final count," where he listed the questions in numerical order, and then listed how they finished so far on preference, as to how to use the funds.
- iii. Jim shared that in August, this will go in front of C800, to approve and recommend how to use these funds.
- iv. Jim shared that these were the questions that were approved to send out, and these are the results so far.
- v. Leanna from Canby will send to an Agency, if you haven't received it. Jim stated that there is a list on front page is the missing Agencies. Send Jim a card or email with contact info if your Agency hasn't received the survey.
- vi. Jim shared that he will also send this out prior to the August meeting, so folks will have time to review it before the meeting.
- vii. It was asked about other options for using the money that came in after the survey went out. John mentioned two other options that have been discussed are: 1) new speaker mic that is also a camera. 2) Replacing 6000 series radios. Some 6,000 series radios, the earlier addition, don't have WI-FI in them and they will quit supporting them by the end of 2020. Discussion followed.

**9. New Business: (\*Action Item)**

**a. \* Aurora Fire radio stipend for new radios**

- i. John shared that at Aurora Fire, questioned about getting a stipend for new radios they are going to order. Wondering about getting a stipend to get new radios. John shared that for the radio count done May 2016, it included mutual aid Agencies in the county. The question came up, post the bond being approved, if we could spend money on Agencies outside of the county, if they are paying a portion of the tax. John went back and looked at the mutual aid agencies of Monitor, Aurora and Silverton. Aurora has 21% of their area within the county, Monitor is 93%, and Silverton is 15/16%.

- ii. John shared that Aurora Fire came forward, because they are thinking about joining CCOM and C800.
- iii. John noted that they are still planning on doing a connection to MET CCOM via Eagle Crest site, and then onto Salem.
- iv. Joshua Williams from Aurora shared that he submitted a letter formally to CCOM, asking to become a member. He explained that the Agency that he interacts with the most for mutual aid is Canby Fire followed by TVF&R in Wilsonville. He shared that with the current radio system, there have been some major communication issues. He said that getting over to the 800 radios is quite a challenge.
- v. Joshua had inquired about the bond stipend, looking for some assistance.
- vi. Ryan Hari asked about the “per radio subscriber fee” and how that will work for the annual cost. John shared that they would have the annual costs for the radios just like any other Agency.
- vii. Jim Davis noted that when they do aid with Aurora Fire and Woodburn Fire, there are communication concerns and it becomes a safety issue. He encouraged the group to approve Chief Williams’ request to become a part of C800.
- viii. Richard Anderson made a motion to authorize the C800 to provide Aurora Fire District a radio stipend of \$40,920 for the purchase of new digital radios for their operations. Randy Hopperstad seconded the motion. A unanimous vote was cast in favor.

**b. \* Award a Construction Contract for the Hoodland Fire/Brightwood Site**

- i. John shared that a number of firms showed interest in bidding the Hoodland site. But only received two bids, both that have either done or are doing other work for us. Summit Construction was the lowest bid. John asked for approval to authorize a contract with them.
- ii. James Rhodes made a motion to authorize C800 to enter into a contract with Summit Construction out of Sisters, OR in the amount of \$321, 329 to construct the communication site at Hoodland-Brightwood. Mike Corless seconded the motion. A unanimous vote was cast in favor.

**c. Open Agenda**

- i. Brian Nava shared that Laurel Butman has resigned from the county last week. He shared that Kevin and Crystal, their Finance Director, will be taking point at this time. He said that Laurel sent a really nice letter to the executive management team, which included her personal contact information. If you are interested in getting this information, let John know, and Brian will get this over to John.
- ii. Brett Smith brought up the tower damage that occurred in Coos county. He shared this incident made him wonder about our vulnerability and security at our sites.
  - a. Ron shared that we have video security in, but this wasn’t a deterrent.
  - b. Ron advised that they started moving the gates a long way away from the site. If someone is trying to vandalize or break in to steal, they want their car close by. Ron noted that this is the best deterrent they’ve had. Since then, there has only been one vandalizing incident. He added that theft has literally has gone to zero.
  - c. John said that in about three months, they will be bringing in a package available for a new system wide surveillance videos system.

- d. Ron shared that we do have an intrusion alarm system. Right now, these are disconnected alarm systems (alarm and video). With the new system, the alarms will be integrated.

**d. Next Board Meeting**

- i. Next meeting July 17, 2019 10:00 AM at CCOM/EOC.

**10. Meeting adjourned at 10:55 AM.**



# RADIO PROJECT STATUS

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## Emergency Communication System Upgrade

C800 Project Leader: John Hartsock

WCCCA Project Leader: Ron Polluconi

C800 Project Manager: Bjorn Morfin

Date: July 17, 2019



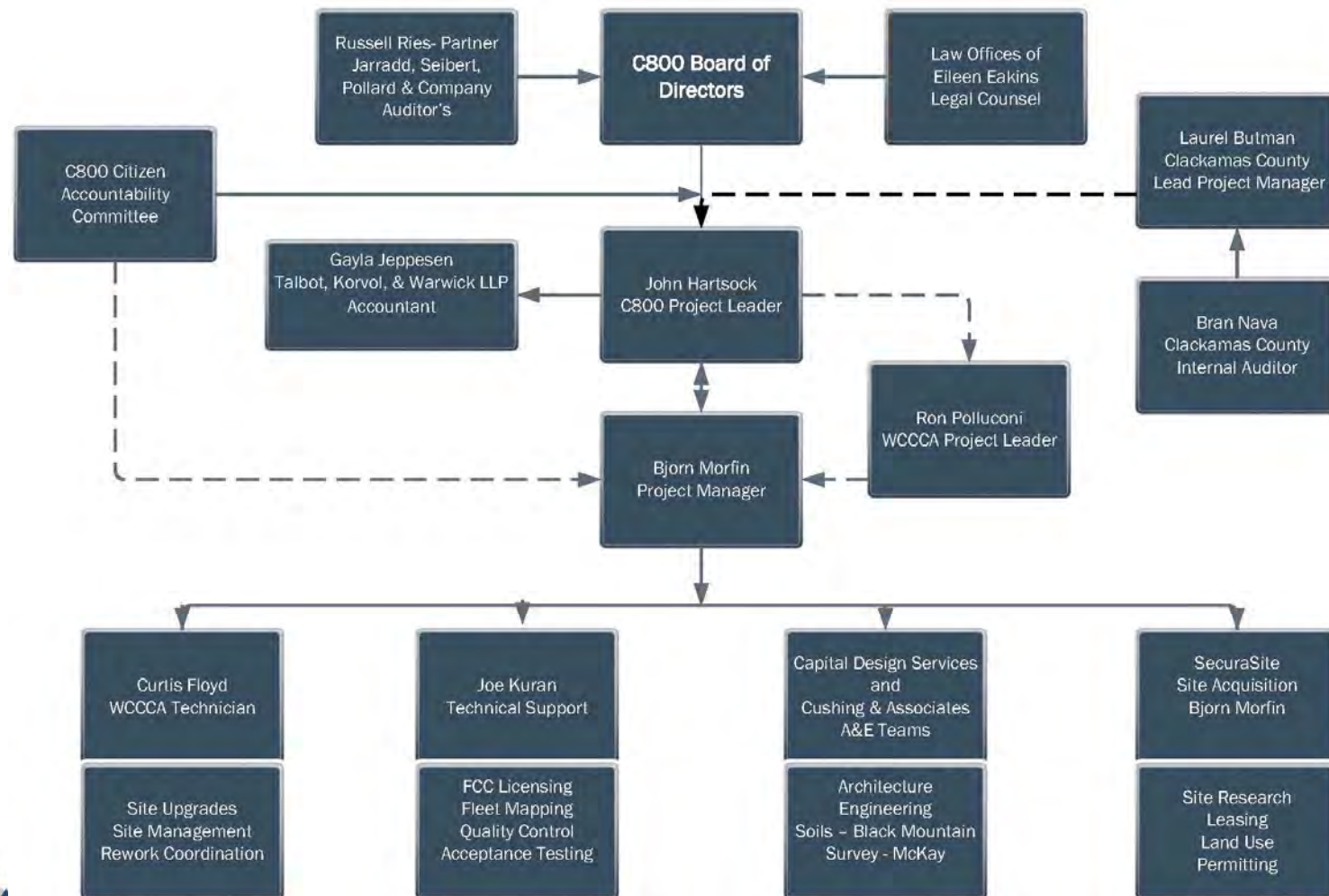
# Resiliency:

## A Primary Objective of the Upgraded System Design

- New Facilities and Towers - Designed to the Oregon Structural Specialty Code: “Essential Facilities” Risk Category IV: i.e., Essential structures in this category are used for communications across non-redundant and hardened networks such as: rescue or disaster operations, and public safety facilities. They are to withstand a magnitude 9 earthquake and continue to operate.
- Existing Facilities and Towers - Upgraded to Meet the Current Essential Facilities Codes. Includes 6 tower replacements / 5 tower upgrades and 11 building foundation upgrades.
- 48V DC Power Systems Combined with Emergency Generators - Having 1,000 gal propane fuel supply to provide up to 4 weeks of back up power.
- Redundant HVAC units to maintain environmental control.



# C800 Project Team



# Project Status New Sites Summary

Fourteen New Sites  
Acquisition / Design  
/ Construction:

- **Barton:** Construction complete – radio / antenna / 48V battery installation complete, microwave construction underway.
- **Cooks Butte:** Preparing land use submittal including arborist review, sensitive lands review, NEPA, for submittal by late July after the neighborhood meeting.
- **Kerr Parkway Water Tank:** We are researching alternative locations.
- **Damascus / Sandy / Canby:** Construction / radio - antenna installation / 48V battery complete / microwave installation underway.
- **Wilsonville:** Working on access agreement anticipate lease by 8/5 and submit for building permit by 8/6 – construction start 9/1
- **Crutcher Bench (BLM):** Construction complete radio and antenna work being scheduled
- **Highland Butte (BLM):** Construction to begin in late July finalizing tree sale with BLM and additional NEPA work.
- **Tom Dick & Harry / Memaloose / Whale Head / Oak Grove (USFS):** USFS has authorized project. One building permit is available and the other three by July. Construction to begin by July 22.
- **Hoodland Fire/Brightwood:** Land use is approved building permit is complete. Construction to commence by July 22.



# Project Status Existing Sites Summary

	C800
13 Existing Sites Design / Construction	<ul style="list-style-type: none"> <li>• <b>Brightwood / Lenhart / Mt Scott / Pete's / Polivka:</b> Tower replacement / building foundation upgrades / 48V DC power system / new generator and 1,000 gal fuel tank / new HVAC units. Construction underway anticipate completion of all by mid August.</li> <li>• <b>Goat Mtn / Mt View / Redland Rd / Sawtell / View Acres:</b> Tower structural upgrades / building foundation upgrades / 48V DC power system / new generator and 1,000 gal fuel tank / new HVAC units. Mt View/Redland/Sawtell/View Acres complete Goat will begin in July with an anticipated September completion</li> <li>• <b>Day Hill:</b> All work complete radio/antenna/48V battery work underway</li> <li>• <b>Timberline:</b> new generator and 1,000 gal fuel tank scheduled for September</li> <li>• <b>CCOM:</b> New Uninterruptable Power System for Master Site Equipment / revisions to fire suppression system / new cable tray. Work complete.</li> </ul>







# Project Schedule

Task Name	Duration	Start	Finish												
				2016				2017				2018			
				Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half
Paging, Messaging Systems upgrade/replacement	540 days	Mon 2/5/18	Fri 2/28/20	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
IP based Fire Station Alerting System	440 days	Mon 6/4/18	Fri 2/7/20												
Video and Security systems	195 days	Mon 6/17/19	Fri 3/13/20												
Interoperable RF Systems and Links	515 days	Mon 6/4/18	Fri 5/22/20												
System Operational May 22, 2020	0 days	Fri 5/22/20	Fri 5/22/20												

- New Site Design & Construction complete: December 2019
- Existing Sites Upgrade complete: August 2019
- System Operational Date: May 2020



# C800 Radio System Upgrade Budget <sup>(1)</sup>

Project:	<b>C800 Radio System Upgrade</b>		
Date Original:	10/1/2015	Date Updated:	May 31, 2019
Project Manager:	Bjorn Morfin		

Item	Budget	Original Encumbrance	Additional Encumbrance / Change Order	Estimate to Complete	Percent Complete	Estimated Total	(Over) Under Budget	Expended
<b>Soft Cost</b>								
Site Acquisition Consulting - Quest	60,000	25,000	45,000	(2,930)	100.00%	67,070	(7,070)	67,069.81
Site Acquisition Consulting / Permits - Securasite	320,000	321,250	121,300	0	87.21%	442,550	(122,550)	385,943.64
Site Planning A&E - Cushing/Capital/Cundiff/Forensic/KPFF/S DC/ToddHess	725,000	651,781	468,930	(295,500)	95.25%	825,211	(100,211)	785,974.45
Geotechnical / Environmental Consulting - Black Mtn	250,000	443,670	0	25,000	97.92%	468,670	(218,670)	458,934.17
Survey - McKay	75,000	124,240	0	0	68.48%	124,240	(49,240)	85,080.00
USFS Land Use Fees	15,000	10,000	41,000	2,500	62.32%	53,500	(38,500)	33,338.70
Land Use Fees	25,000	9,400	0	15,000	38.27%	24,400	600	9,339.00
Plan Check / Permit Cost	60,000	10,000	0	30,000	23.81%	40,000	20,000	9,525.20
Printing	2,500			2,500	0.00%	2,500	0	0.00
Bid Advertising	3,500	850	0	1,000	57.39%	1,850	1,650	1,061.65
Materials Testing & Inspection	40,000	2,700	0	15,000	14.82%	17,700	22,300	2,623.75
Project Management	300,000	80,000	245,200	0	80.15%	325,200	(25,200)	260,651.13
Legal Fees	30,000	15,000	0	8,000	55.60%	23,000	7,000	12,787.60
Licensing	20,000	69,000		5,000	93.10%	74,000	(54,000)	68,890.50
Miscellaneous	30,000	88,000	70,000	4,000	55.79%	162,000	(132,000)	90,381.88
<b>Sub-Total Soft Cost</b>	<b>1,956,000</b>	<b>1,850,891</b>	<b>991,430</b>	<b>(190,430)</b>	<b>85.66%</b>	<b>2,651,891</b>	<b>(695,891)</b>	<b>2,271,601</b>
<b>Construction Cost</b>								
Site Construction	8,895,000	5,870,634	0	3,545,000	39.49%	9,415,634	(520,634)	3,718,088.78
Buildings	1,350,000	2,018,663	0	40,000	86.46%	2,058,663	(708,663)	1,780,009.60
Towers	660,000	1,383,357	0	90,000	61.02%	1,473,357	(813,357)	899,038.14
Generator	500,000	513,196	0	35,000	72.31%	548,196	(48,196)	396,420.21
48VDC	1,065,000	1,443,767	0	15,000	24.75%	1,458,767	(393,767)	361,024.82
Lake Oswego Antenna	18,000	17,500	0	0	100.07%	17,500	500	17,511.75
<b>Sub-Total Construction Cost</b>	<b>12,488,000</b>	<b>11,247,117</b>	<b>0</b>	<b>3,725,000</b>	<b>47.90%</b>	<b>14,972,117</b>	<b>(2,484,117)</b>	<b>7,172,093.30</b>



# C800 Radio System Upgrade Budget (2)

Project:	<b>C800 Radio System Upgrade</b>		
Date Original:	10/1/2015	Date Updated:	May 31, 2019
Project Manager:	Bjorn Morfin		

Item	Budget	Original Encumbrance	Additional Encumbrance / Change Order	Estimate to Complete	Percent Complete	Estimated Total	(Over) Under Budget	Expended
<b>Equipment Costs</b>								
Simulcast Equipment	20,726,000	\$19,592,515		200,000	72.08%	19,792,515	933,485	14,265,838.02
Paging	373,000	7,523		365,000	5.96%	372,523	477	22,208.31
Subscriber Radios	5,000,000	6,303,129		500,000	49.21%	6,803,129	(1,803,129)	3,347,748.70
Asset Management	119,000			119,000	0.00%	119,000	0	0.00
Post Warranty / System Refresh	5,800,000	5,812,058		0	100.00%	5,812,058	(12,058)	5,812,058.44
Test Equipment	100,000			100,000	0.00%	100,000	0	0.00
Microwave	3,368,000	0	2,349,951	250,000	95.17%	2,599,951	768,049	2,474,410.91
Security System	1,364,000			500,000	0.22%	500,000	864,000	1,079.96
Fire Station Alerting	0			1,470,000		1,470,000	(1,470,000)	
<b>Subtotal Equipment Costs</b>	<b>36,850,000</b>	<b>31,715,226</b>	<b>2,349,951</b>	<b>3,504,000</b>	<b>69.00%</b>	<b>37,569,177</b>	<b>(719,177)</b>	<b>25,923,344</b>
Bond Cost	300,000	290,372		0	111.43%	290,372	9,628	323,547
<b>Subtotal Project Cost</b>	<b>51,594,000</b>	<b>45,103,605</b>	<b>3,341,381</b>	<b>7,038,570</b>	<b>64.33%</b>	<b>55,483,556</b>	<b>(3,889,556)</b>	<b>35,690,587</b>
<b>Additional Proceeds</b>	<b>4,875,000</b>					<b>(4,875,000)</b>	<b>4,875,000</b>	
<b>Adjusted Project Costs</b>	<b>56,469,000</b>	<b>45,103,605</b>	<b>3,341,381</b>	<b>7,038,570</b>	<b>64.33%</b>	<b>50,608,556</b>	<b>985,444</b>	
<b>Contingency</b>	<b>7,406,000</b>			<b>7,406,000</b>	<b>0.00%</b>	<b>7,406,000</b>	<b>0</b>	
<b>Total Project Cost</b>	<b>63,875,000</b>	<b>45,103,605</b>	<b>3,341,381</b>	<b>14,444,570</b>	<b>61.52%</b>	<b>58,014,556</b>	<b>985,444</b>	<b>35,690,586.55</b>

<b>Bond Proceeds</b>	5,845,000	Taxable
	53,155,000	Non Taxable
	<b>59,000,000</b>	
<b>Additional Proceeds</b>	2,200,000	Subscriber Radio Payments
	2,675,000	PGE Payment
	<b>4,875,000</b>	
<b>Total Proceeds</b>	<b>63,875,000</b>	

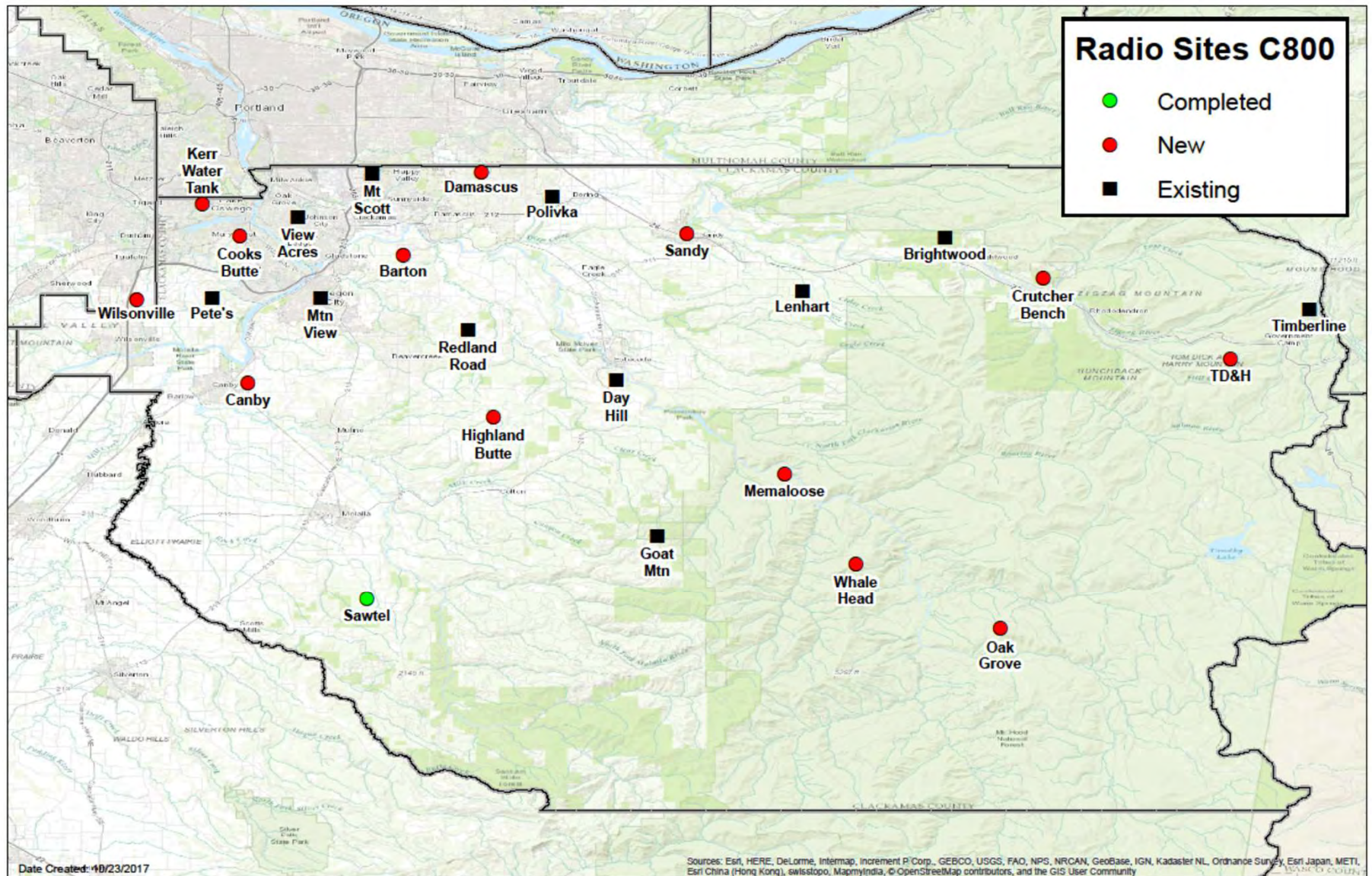
<b>Premium Bond Proceeds</b>	<b>7,165,794</b>
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## Q3 - 2019 Quarterly Outlook

	<b>C800</b>
<ul style="list-style-type: none"> <li>• Procurement</li> </ul>	<ul style="list-style-type: none"> <li>• Bid and award asset management system</li> <li>• Bid and award security/CCTV system</li> </ul>
<ul style="list-style-type: none"> <li>• Leases &amp; Land Use Applications</li> </ul>	<ul style="list-style-type: none"> <li>• Complete Cooks land use and submit for building permits</li> <li>• Submit Wilsonville site for building permits</li> </ul>
<ul style="list-style-type: none"> <li>• Existing Site &amp; Building Upgrades</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to construct civil work relating to shelter/generator foundation upgrades, doors, electrical, and related site compound renovations.</li> <li>• Construct tower upgrades at existing sites</li> </ul>
<ul style="list-style-type: none"> <li>• Radio / Microwave</li> </ul>	<ul style="list-style-type: none"> <li>• Continue radio infrastructure install</li> <li>• Begin microwave system install</li> <li>• Finalize subscriber radio distribution and existing radio upgrades</li> </ul>



# C800 Site Locations





# Project Summary:

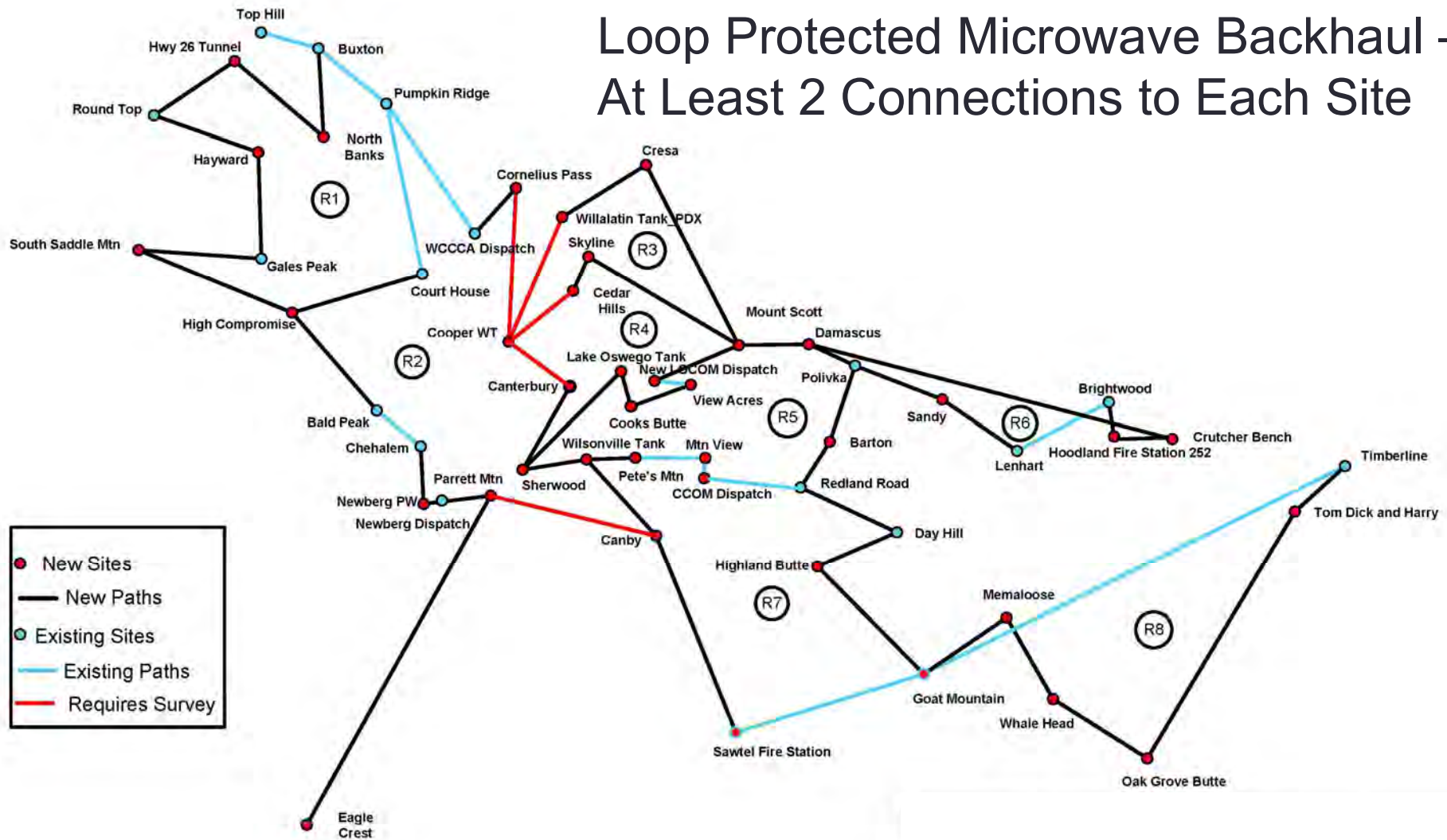
To create an efficient, dependable public safety radio communications system that works in all parts of Clackamas County!

**What's Happening With the  
Communications Upgrade  
Project?**



# Resiliency: A Primary Objective of the Upgraded System Design

Loop Protected Microwave Backhaul –  
At Least 2 Connections to Each Site









CRUTCHER







## Pete's Mountain







11300 SE Fuller Rd  
Milwaukie, Oregon 97222  
(503) 780-4806  
C800.ORG

## Board of Directors Action Request

**To:** C800 Board of Directors  
**From:** John Hartsock, Manager  
**Date:** July 17, 2019  
**Re:** Approval of Law Enforcement Radio Template

**REQUEST:** It is hereby requested that the C800 Board of Directors approve the attached law enforcement radio template dated July 9, 2019

**DESCRIPTION:** Clackamas County Sheriff's office personnel, Detective Jeff Burlew and Captain James Rhodes have developed a proposal for the appropriate use of Law enforcement talkgroups. This was presented at the June 19, 2019 C800 Board Meeting. After review and discussion they were asked to present the template to the CCOM Law Services committee for input and approval. Detective Burlew presented this to the CCOM Law Services committee on July 9, 2019 and received unanimous support.

**RECOMMENDATION:** It is hereby recommended that the C800 Board of Directors approve the attached law enforcement radio template dated July 9, 2019.

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CRAIG ROBERTS, Sheriff

# Clackamas County Sheriff's Office

July 9, 2019

**To:** CCOM Law Services

**From:** James Rhodes, Captain, CCSO  
*Care of* – Jeff Burlew, Detective, CCSO

**RE:** Radio Templates with limited law enforcement access for non-LEA groups

**Request:**

It is requested the CCOM Law Services group make a recommendation for the adoption of limited access radio templates for radios issued to non-LEA/non-Fire/non-medical groups.

**Discussion:**

Attachment A is the current Radio Template as issued by C-800 to all LEA, Fire and Medical groups. Template B is intended for non-LEA/non-Fire/non-medical groups that have a quasi/para LEA association. Those include, but are not limited to, Clackamas County Animal (Dog) control, Code Enforcement (Happy Valley Code Enforcement), and Clackamas County Weighmasters. The proposed Template C is intended for non-LEA/non-Fire/non-medical group that have no quasi/para LEA needs. Those include but are not limited to Public Works, Public Health, and Public Transportation as well as any private entities sharing the system.

**Attachments:**

- A – Current full LEA template (abbreviated)
- B – Proposed template for limited LEA access
- C – Proposed template for NO LEA access

**Recommendation:**

It is recommended the CCOM Law Services group vote to support and endorse these radio templates; and further to make a recommendation for the C800 Board of Directors to adopt the recommended limited LEA access radio templates as attached and detailed above.

# A

CC ME/DA APX 6000 Template \* **POST CUTOVER** (activated pushing the MS1 button for 1/4 second)

TOP ZONE NAME	*ZONE A*		*ZONE B*		*ZONE C*		*ZONE G*		*ZONE H*		*ZONE I*	
ZONE NAME	*ZONE A*		*ZONE B*		*ZONE C*		G-*CLACK FIRE*		H-*CLACK LAW*		I-*CLACK MISC*	
	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH
1	CC DISP 1*	CC DISP1	SE DISP*	SE DISP	CC COURT*	CCCOURT	CCOM DISP*	CCOM	CC DISP 1*	CC DISP1	CLACK A*	CLACK A
2	CC DISP 2*	CC DISP1	SE T2*	SE T2	MCSO*	MCSO	LOCOM*	LOCOM	CC DISP 2*	CC DISP2	CLACK B*	CLACK B
3	CC DISP 3*	CC DISP3	EA DP*	EA DP	MCSO T1 x*	MCSO T1x	OPS 22*	OPS 22	CC DISP 3*	CC DISP3	CLACK C*	CLACK C
4	CC SERV*	CC SERV	EA T2*	EA T2	WCSO1*	WCSO1	OPS 23*	OPS 23	CC LAW 1*	CK LAW 1	CLACK D*	CLACK D
5	CC TAC 1*	CC TAC 1	NE DP*	NE DP	WCSO TAC 1*	WCSOTAC1	OPS 24*	OPS 24	CC LAW 2*	CK LAW 2	BRNGWTR1*	BRNGWTR1
6	CC TAC 2*	CC TAC 2	NE T2*	NE T2	SC1*	SC1	OPS 25*	OPS 25	CC SERV*	CC SERV	CAPW*	CAPW
7	CC TAC 3*	CC TAC 3	CE DP*	CE DP	SOUTH TAC*	SOUTH TAC	OPS 26*	OPS 26	LOPD DP1*	LOPD DP1	CC EOC*	CC EOC
8	OSP PTLD*	OSP PTLD	CE T2*	CE T2	WEST TAC*	WEST TAC	OPS 27*	OPS 27	LOPD DP2*	LOPD DP2	CCROAD1*	CCROAD1
9	OSP I-5S*	OSP I-5S	NO DP*	NO DP	BV1*	BV1	OPS 28*	OPS 28	MILW DP*	MILW DP	CR WATER DP*	CRW DP
10	OSP I-84*	OSP I-84	NO T2*	NO T2	BV TAC 1*	BV TAC 1			MILW TAC 1*	MILWTAC1	DAMASC PW*	DAMAS PW
11	LOPD DP1*	LOPD DP1	RRT X*	RRT X	USCG*	USCG			CC TAC 1*	CC TAC 1	GLAD PW*	GLAD PW
12	MILW DP*	MILW DP	SHE 1*	SHE 1	MCSO MAR*	MCSO MAR			CC TAC 2*	CC TAC 2	HVPW*	HVPW
13	MILW TAC 2*	MILWTAC2	GPD SWT1*	GPD SWT1	CC MARINE*	CC MAR			CC TAC 3*	CC TAC 3	LO EOC*	LO EOC
14	CCSO DESK*	CCSODESK	TNT*	TNT	MCSO SAR*	MCSO SAR			CCSO SAR*	CCSO SAR	LO PW1*	LO PW1
15	CC JAIL*	CC JAIL	CCSO SWAT*	CCSOSWAT	WCSO SAR*	WC SAR			CC MARINE*	CC MAR	MILW PW1*	MILW PW1
16	SIMPLEX1*	SIMPLEX1	OROPS5 *	OROPS5	CCSO SAR*	CCSO SAR			CC JAIL*	CC JAIL	MOLPW*	MOLPW
17	TEST WCCCA3*	WCCCA3							CAPD CITY*	CAPDCITY	OC EOC*	OC EOC
18	TEST ENCR3x*	ENCR3x							CAPD DET*	CAPD DET	OC PW*	OC PW
19	SIMPLEX8*	SIMPLEX8							CC COURT*	CCCOURT	SANDY PW1*	SAN PW1
20	SIMPLEX9x*	SIMPLX9x							CC LE TRNG*	CCLETRN	SUNRISE1*	SUNRISE1
									CC WEIGHMSTR*	CCWEIGH	WLINN PW1*	WL PW1
									CCSO 10*	CCSO 10	WLINN EOC*	WLINNEOC
									CCSO DESK*	CCSODESK	WV BUS1*	WV BUS1
									CCSO DET*	CCSO DET	WV PW1*	WV PW1
									CCSO ITF*	CCSO ITF	WV SEWER1*	WVSEWER1
									CCSO SWAT*	CCSOSWAT		
									CLACK DOG*	CC DOG		
									GLPD CITY*	GLPDCITY		
									LAKE CORP*	LAKECORP		
									LOPD T1*	LOPD T1		
									LOPD T2*	LOPD T2		
									LOPD DET*	LOPD DET		
									MILW DET*	MILW DET		
									MILW P2*	MILW P2		
									MILW TAC 2*	MILWTAC2		
									MOPD CITY*	MOPDCITY		
									OC PD CITY*	OC PD CITY		
									OC PD DET*	OC PD DET		
									PSAP*	PSAP		
									SN DY CITY*	SN DY CITY		
									SN DY DET*	SN DY DET		
									WLINN DET*	WLINN DET		

Wccca talkgroup -digital system
Clackamas/Lake Oswego talkgroup digital system
Newberg talkgroup digital system
Portland digital talkgroup
800 Interop
VHF
UHF
Backup repeaters
CLARK COUNTY digital talkgroup
W-C-N 800 digital test only (LIMITED COVERAGE)
SALEM 800 analog
700 Interop

\* asterisk indicates you are in the post cutover zones.

B

DISABLED

CC LIMITED LEA (Dog, Weigh, HV Code Enf) APX 6000 Template * <b>POST CUTOVER</b> (activated pushing the MS1 button for 1/4 second)						
TOP ZONE NAME	*ZONE A*		*ZONE B*		*ZONE C*	
ZONE NAME	*ZONE A*		*ZONE B*		*ZONE C*	
	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH
1	CC DISP 1*	CC DISP1	CC DISP 1*	CC DISP1	CLACK A*	CLACK A
2	CC DISP 2*	CC DISP1	SPARE*	SPARE	CLACK B*	CLACK B
3	CC DISP 3*	CC DISP3	SPARE*	SPARE	CLACK C*	CLACK C
4	CC SERV*	CC SERV	SPARE*	SPARE	CLACK D*	CLACK D
5	CC TAC 3*	CC TAC 3	SPARE*	SPARE	CLARKA*	CLARKA
6	CC DOG*	CC DOG	SPARE*	SPARE	CLARKB*	CLARKB
7	MU ANIMAL*	MU ANIML	SPARE*	SPARE	CLARKC*	CLARKC
8	CLRK AN-1*	CLRK A1	SPARE*	SPARE	MULT A*	MULT A
9	CC WEIGHMSTR*	CCWEIGH	SPARE*	SPARE	MULT B*	MULT B
10	ODOT*	ODOT	SPARE*	SPARE	MULT C*	MULT C
11	CCROAD1*	CCROAD1	SPARE*	SPARE	MULT D*	MULT D
12	CCROAD2	CCROAD2	SPARE*	SPARE	WASH A*	WASH A
13	SPARE*	SPARE	SPARE*	SPARE	WASH B*	WASH B
14	SIMPLEX3*	SIMPLEX3	SPARE*	SPARE	WASH C*	WASH C
15	SIMPLEX4*	SIMPLEX4	SPARE*	SPARE	WASH D*	WASH D
16	CC DISP 1	CC DISP1	CC DISP 1	CC DISP1	CC EOC*	CC EOC
17	TEST WCCCA3*	WCCCA3				
18	TEST ENCR3x*	ENCR3x				
19	SIMPLEX8*	SIMPLEX8				
20	SIMPLEX9x*	SIMPLX9x				

SPOC signature and date required here

Wccca talkgroup -digital system
Clackamas/Lake Oswego talkgroup digital system
Newberg talkgroup digital system
Portland digital talkgroup
800 Interop
VHF
UHF
Backup repeaters
CLARK COUNTY digital talkgroup
W-C-N 800 digital test only (LIMITED COVERAGE)
SALEM 800 analog
700 Interop

\* asterisk indicates you are in the post cutover zones.

\*\*\* ZONE W (Washington County LEA) should be empty, just like ZONE Q (PPB LA)  
 \*\*\* CC Dog Control would need to request and receive authorization to have LOPD

*ZONE G*		*ZONE H*		*ZONE I*	
G-*CLACK FIRE*		H-*CLACK LAW*		I-*CLACK MISC*	
FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH
CCOM DISP*	CCOM	CC-DISP-1*	CC-DISP1	CLACK A*	CLACK A
LOCOM*	LOCOM	CC-DISP-2*	CC-DISP2	CLACK B*	CLACK B
OPS 22*	OPS 22	CC-DISP-3*	CC-DISP3	CLACK C*	CLACK C
OPS 23*	OPS 23	CC-LAW-1*	CK-LAW-1	CLACK D*	CLACK D
OPS 24*	OPS 24	CC-LAW-2*	CK-LAW-2	BRNGWTR1*	BRNGWTR1
OPS 25*	OPS 25	CC-SERV*	CC-SERV	CAPW*	CAPW
OPS 26*	OPS 26	LOPD-DP1*	LOPD-DP1	CC EOC*	CC EOC
OPS 27*	OPS 27	LOPD-DP2*	LOPD-DP2	CCROAD1*	CCROAD1
OPS 28*	OPS 28	MILW-DP*	MILW-DP	CR WATER DP*	CRW DP
		MILW-TAC-1*	MILW-TAC1	DAMASC PW*	DAMASC PW
		CC-TAC-1*	CC-TAC-1	GLAD PW*	GLAD PW
		CC-TAC-2*	CC-TAC-2	HVPW*	HVPW
		CC-TAC-3*	CC-TAC-3	LO EOC*	LO EOC
		CCSO-SAR*	CCSO-SAR	LO PW1*	LO PW1
		CC-MARINE*	CC-MAR	MILW PW1*	MILW PW1
		CC-JAIL*	CC-JAIL	MOLPW*	MOLPW
		CAPD-CITY*	CAPD-CITY	OC EOC*	OC EOC
		GAPD-DET*	GAPD-DET	OC PW*	OC PW
		CC-COURT*	CCCOURT	SANDY PW1*	SAN PW1
		CC-LE-TRNG*	CCLETRN	SUNRISE1*	SUNRISE1
		CC-WEIGHMSTR*	CCWEIGH	WLINN PW1*	WL PW1
		CCSO-10*	CCSO-10	WLINN EOC*	WLINNEOC
		CCSO-DESK*	CCSODESK	WV BUS1*	WV BUS1
		CCSO-DET*	CCSO-DET	WV PW1*	WV PW1
		CCSO-ITF*	CCSO-ITF	WV SEWER1*	WVSEWER1
		CCSO-SWAT*	CCSOSWAT		
		CLACK-DOG*	CC-DOG		
		GLPD-CITY*	GLPDCITY		
		LAKE-CORP*	LAKECORP		
		LOPD-T1*	LOPD-T1		
		LOPD-T2*	LOPD-T2		
		LOPD-DET*	LOPD-DET		
		MILW-DET*	MILW-DET		
		MILW-P2*	MILW-P2		
		MILW-TAC-2*	MILW-TAC2		
		MOPD-CITY*	MOPDCITY		
		OCPD-CITY*	OCPDCITY		
		OCPD-DET*	OCPD-DET		
		PSAP*	PSAP		
		SNDY-CITY*	SNDYCITY		
		SNDY-DET*	SNDY-DET		
		WLINN-DET*	WLINN-DET		

These Clackamas zones are here to  
 Delete any desired talk groups from

C

CC NON-LEA APX 6000 Template * <b>POST CUTOVER</b> (activated pushing the MS1 button for 1/4 second)						
TOP ZONE NAME	*ZONE A*		*ZONE B*		*ZONE C*	
ZONE NAME	*ZONE A*		*ZONE B*		*ZONE C*	
	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH
1	CLACK A*	CLACK A	SPARE*	SPARE	SPARE*	SPARE
2	CLACK B*	CLACK B	SPARE*	SPARE	SPARE*	SPARE
3	CLACK C*	CLACK C	SPARE*	SPARE	SPARE*	SPARE
4	CLACK D*	CLACK D	SPARE*	SPARE	SPARE*	SPARE
5	CLARKA*	CLARKA	SPARE*	SPARE	SPARE*	SPARE
6	CLARKB*	CLARKB	SPARE*	SPARE	SPARE*	SPARE
7	CLARKC*	CLARKC	SPARE*	SPARE	SPARE*	SPARE
8	MULT A*	MULT A	SPARE*	SPARE	SPARE*	SPARE
9	MULT B*	MULT B	SPARE*	SPARE	SPARE*	SPARE
10	MULT C*	MULT C	SPARE*	SPARE	SPARE*	SPARE
11	MULT D*	MULT D	SPARE*	SPARE	SPARE*	SPARE
12	WASH A*	WASH A	SPARE*	SPARE	SPARE*	SPARE
13	WASH B*	WASH B	SPARE*	SPARE	SPARE*	SPARE
14	WASH C*	WASH C	SPARE*	SPARE	SPARE*	SPARE
15	WASH D*	WASH D	SPARE*	SPARE	SPARE*	SPARE
16	CC EOC*	CC EOC	SPARE*	SPARE	SPARE*	SPARE
17	TEST WCCCA3*	WCCCA3				
18	TEST ENCR3x*	ENCR3x				
19	SIMPLEX8*	SIMPLEX8				
20	SIMPLEX9x*	SIMPLX9x				

**SPOC signature and date required here**

Wccca talkgroup -digital system
Clackamas/Lake Oswego talkgroup digital system
Newberg talkgroup digital system
Portland digital talkgroup
800 Interop
VHF
UHF
Backup repeaters
CLARK COUNTY digital talkgroup
W-C-N 800 digital test only (LIMITED COVERAGE)
SALEM 800 analog
700 Interop

\* asterisk indicates you are in the post cutover zones.

\*\*\* ZONE W (Washington County LEA) should be empty, just like ZONE Q (PPB La

DISABLED		DISABLED			
*ZONE G*		*ZONE H*		*ZONE I*	
G-*CLACK FIRE*		H-*CLACK LAW*		I-*CLACK MISC*	
FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH	FRONT CH NAME	TOP CH
GCOM-DISP*	GCOM	CC-DISP-1*	CC-DISP1	CLACK A*	CLACK A
LOCOM*	LOCOM	CC-DISP-2*	CC-DISP2	CLACK B*	CLACK B
OPS-22*	OPS-22	CC-DISP-3*	CC-DISP3	CLACK C*	CLACK C
OPS-23*	OPS-23	CC-LAW-1*	CK-LAW-1	CLACK D*	CLACK D
OPS-24*	OPS-24	CC-LAW-2*	CK-LAW-2	BRNGWTR1*	BRNGWTR1
OPS-25*	OPS-25	CC-SERV*	CC-SERV	CAPW*	CAPW
OPS-26*	OPS-26	LOPD-DP1*	LOPD-DP1	CC EOC*	CC EOC
OPS-27*	OPS-27	LOPD-DP2*	LOPD-DP2	CCROAD1*	CCROAD1
OPS-28*	OPS-28	MILW-DP*	MILW-DP	CR WATER DP*	CRW DP
		MILW-TAC-1*	MILW-TAC1	DAMASC PW*	DAMAS PW
		CC-TAC-1*	CC-TAC-1	GLAD PW*	GLAD PW
		CC-TAC-2*	CC-TAC-2	HVPW*	HVPW
		CC-TAC-3*	CC-TAC-3	LO EOC*	LO EOC
		CCSO-SAR*	CCSO-SAR	LO PW1*	LO PW1
		CC-MARINE*	CC-MAR	MILW PW1*	MILW PW1
		CC-JAIL*	CC-JAIL	MOLPW*	MOLPW
		CAPD-CITY*	CAPD-CITY	OC EOC*	OC EOC
		GAPD-DET*	GAPD-DET	OC PW*	OC PW
		CC-COURT*	CC-COURT	SANDY PW1*	SAN PW1
		CC-LE-TRNG*	CC-LE-TRN	SUNRISE1*	SUNRISE1
		CC-WEIGHMSTR*	CC-WEIGH	WLINN PW1*	WL PW1
		CCSO-10*	CCSO-10	WLINN EOC*	WLINNEOC
		CCSO-DESK*	CCSO-DESK	WV BUS1*	WV BUS1
		CCSO-DET*	CCSO-DET	WV PW1*	WV PW1
		CCSO-ITF*	CCSO-ITF	WV SEWER1*	WVSEWER1
		CCSO-SWAT*	CCSO-SWAT		
		CLACK-DOG*	CC-DOG		
		GLPD-CITY*	GLPDCITY		
		LAKE-CORP*	LAKECORP		
		LOPD-T1*	LOPD-T1		
		LOPD-T2*	LOPD-T2		
		LOPD-DET*	LOPD-DET		
		MILW-DET*	MILW-DET		
		MILW-P2*	MILW-P2		
		MILW-TAC-2*	MILW-TAC2		
		MOPD-CITY*	MOPDCITY		
		OCPD-CITY*	OCPDCITY		
		OCPD-DET*	OCPD-DET		
		PSAP*	PSAP		
		SNDY-CITY*	SNDYCITY		
		SNDY-DET*	SNDY-DET		
		WLINN-DET*	WLINN-DET		

These Clackamas zones are here to  
Delete any desired talk groups from



11300 SE Fuller Rd  
Milwaukie, Oregon 97222  
(503) 780-4806  
C800.ORG

## Board of Directors Action Request

**To:** C800 Board of Directors  
**From:** John Hartsock, Manager  
**Date:** July 17, 2019  
**Re:** Award of Construction Contract for Driveway Paving at Damascus Site.

**REQUEST:** It is hereby requested that the C800 Board of Directors authorize C800 to enter into a contract with Alamo Paving Clackamas, OR in the amount of \$123,153 for repaving the driveway at the Damascus site due to construction damage.

**DESCRIPTION:** As a part of the construction of the Damascus site there was considerable damage to the landlord's driveway. This drive from the street to the site is very steep, in the 4% to 5% range, and over 1,200 feet in length. The paving area was 22,500 sf and a concrete area of 3,000 sf. The construction traffic including concrete trucks, a crane, shelter transport, and PGE's extensive work cause significant damage to the drive. We prepared and issued bid documents for bids. Twelve firms were contacted but a number declined to bid when they walked the site. Four firms submitted bid proposals ranging from \$123,153 to \$165,780. The project estimate was \$130,000 and carried in our anticipated site costs.

**FINANCE:** The funds are budgeted in capital outlay as part of the Bond funding.

**LEGAL:** A C800 construction contract will be utilized as approved by legal counsel.

**RECOMMENDATION:** It is hereby recommended that the C800 Board of Directors authorize C800 to enter into a contract with Alamo Paving Clackamas, OR in the amount of \$123,153 for repaving the driveway at the Damascus site due to construction damage.

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