

The New England 700MHz Committee Region 19

October 27, 2015

Marlene H. Dortch Secretary Federal Communications Commission 445 12th Street, SW Washington, DC 20554

RE: WTB Docket No. 02-378, Region 19 - 700MHz Amended Plan

Dear Secretary Dortch:

In accordance with the provisions of WTB Docket Number 02-378 and the FCC's 700MHz Narrowbanding Report & Order (14-172) the New England Region 19 700MHz Planning Committee submits the attached Region 19 -700MHz Plan Amendment (Plan). The Commission's rules require each of the fifty-five Regional Planning Committees (RPC's) to submit its 700MHz Plan Amendment by October 30, 2015. All changes to the Plan are highlighted in yellow.

On October 17, 2014 the Commission adopted a Report and Order revising the rules governing the 700MHz public safety narrowband channels. Specifically, the Commission released the narrowband reserve channels (twenty four 12.5kHz channels for General use under the administration of the RPCs for the benefit of state and local public safety users. In addition, for existing licensed users in the T-Band markets, the Commission released the reserve channels for General Use under RPC administration with priority access given to T-Band incumbents within 128km of the city center coordinates as specified in Section 90.303 and 90.305 of the Commission rules. Outside the T-Band markets the Commission authorized the RPC's to assign (1) up to eight 12.5kHz former reserve channels for deployable trunked systems and (2) sixteen 12.5kHz channels for General use, including vehicular mobile repeaters (MO3). Region 19 700MHz Amended Plan addresses the allocation of the twenty-four 12.5kHz reserve spectrum for T-band incumbents by providing priority access and allocating a set of six former reserve channels (12.5kHz bandwidth) to be allocated for deployable trunked channels outside of the T-band incumbents service area for the New England States. The Plan includes in Appendix A the Table of Deployable Trunked Channels as recommended by NPSTC and NRPC.

C/o Division of Statewide Emergency Telecommunications 1111 Country Club Road Middletown, CT 06457-9294

Phone: (860) 685-8080 E-mail: oset@po.state.ct.us Website: http://www.NER700MHz.org

The Plan has been revised to include methodologies and technologies currently utilized for frequency allocation and coordination in the 700MHz band. Region 19 has spent a considerable amount of time with Region 8 (New Jersey & Southern New York) and Region 30 (Northern New York) in determining the "best engineering practices" to apply to applications received. The same "best engineering practices" will be applied between Regions when concurrence is requested. The two regions adjacent to Region 19, Region 8 and 30 reviewed the Region 19 Plan Amendment and provided letters of concurrence.

The attached Plan was sent to the Tribal Nations in New England, FCC Regional Planning Update Committees of Region 8 and 30 in the original format except for the following changes: Date of Plan sent was June 2015 and current Plan date has been changed to October 2015; Section 2, committee membership has been updated to October 2015 to reflect current membership; Section 6, Technical Requirements; Appendix N, Inter-Regional Dispute Resolution Agreement; and Appendix O was added for concurrence letters from adjacent Planning Regions 8 and 30.

Jung Zerwenskr.

If you have any question regarding our submission please contact me at 860-685-8157, jerry.zarwanski@po.state.ct.us or Vice Chairman Steve Verbil at 860-685-8127, steve.verbil@ct.gov

Sincerely,

Jerry Zarwanski Chairman

CC: John A. Evanoff

The New England 700 MHz Regional Plan Region 19

Plan Amendment October 2015

THE NEW ENGLAND 700 MHZ REGIONAL PLAN - REGION 19 TABLE OF CONTENTS

Introduction and Summary

Part 1, Section	ns 1 - 12
Section 1:	Authority of the Committee and Committee Officers
Section 2:	Regional Planning Committee Membership, Addresses and Contact Information
	and Vote to Accept Plan
Section 3:	By-Laws of the New England 700 MHz Committee / Region 19
Section 4:	Region 19 Area Description and Map
Section 5:	Meeting Notices
Section 6:	700 MHz Channel Application Procedures
Section 7:	Regional Interoperability (I/O) Channel Usage
Section 8:	Additional Spectrum Set Aside for Interoperability within the Region
Section 9:	Allocation of "General Use" Spectrum
Section 10:	Scoring Matrix and Worksheet
Section 11:	Coordination with Adjacent Regions
Section 12:	Certification Regarding Public Access to Planning Committee Meetings
Part 2, Appen	dices A - O
Appendix A:	Spectrum Description:
	Table of Channels
	Table of Interoperability Channels
	Table of Low Power/Itinerant Channels
	Table of Reserve Channels
	Table of Secondary Trunking/Air to Ground Channels
Appendix B:	Memorandum of Understanding for Operating the 700 MHz Interoperability
	Channels for Region 19
Appendix C:	Memorandum of Agreement Regarding Mobil Radio Parameters
Appendix D:	Dispute Resolution Process
Appendix E:	Region 19 County and State Data
Appendix F:	Agencies To Be Considered for Interoperability
Appendix G:	Initial Planning Meeting, Meeting Minutes, Attendance and Notification
Appendix H:	Regional Planning Committee Funding
Appendix I:	National Organizations and Agencies that Were Notified of the First Planning
	Meeting
Appendix J:	FCC Notices and Bulletins
Appendix K:	47 CFR part 90 - Private Land Mobile Radio Services - Subpart R -Regulations
	Governing the Licensing and Use of 769-775 and 799-805 MHz Bands
Appendix L:	Current Channel Allotments
Appendix M:	
Appendix N:	Inter-Regional Dispute Resolution Agreement

Appendix O: Correspondence Regarding Adjacent Region Approval

Appendix P: "U.S. – Canada Coordination of Radio Telecommunications Services" Appendix Q: Certification/Notification to Tribal Nations

NEW ENGLAND REGION 19 700 MHZ PLAN INTRODUCTION AND SUMMARY

The New England 700 MHz, Region 19 Committee was established on December 7, 2000 in response to the Federal Communications Commission's (FCC) announcement of the allocation of 24 MHz in the 700 MHz radio spectrum. The allocation of spectrum was a result of the Public Safety Wireless Advisory Committee (PSWAC) report that established need requirements throughout the country. Interoperability within and among public safety and public service providers was identified in the PSWAC report as a basic minimum essential requirement.

In response to the mandate to develop plans for the allocation of 700MHz spectrum, the FCC established a Federal Advisory Committee called the National Coordination Committee (NCC). The NCC was created to address interoperability, technology and implementation issues to be considered in the development of plans for 700MHz spectrum. The FCC required that a Regional Plan outlining the use of public safety radio frequencies be completed and approved by the FCC before any agency within a region would receive channels for the newly allocated spectrum.

The New England 700 MHz -Region 19 Plan utilized the NCC Planning Guidelines in many of the Plans sections. The New England Region 19 – 700MHz Committee represents a cross section of all public safety services and public service users from the six New England states. No other region covers as many states as the New England Region. The challenges to ensuring that all states are represented and that all state members have an equal opportunity to attend meetings in their respective states have been met. Quarterly meetings are rotated from state to state. Membership has been solicited from each member state. The challenge to finding an equitable process for the distribution of spectrum across a 62,810 square mile region (an area greater than all but 23 single states) with diverse topography and demographics is daunting.

The guidelines established by the NCC for interoperability have been adopted with the New England Regional Plan. The ability to standardize interoperability frequency usage for all New England States as well as adjoining regions is an achievement in of its self.

The purpose of the New England Region 19 – 700 MHz Plan is to provide the maximum utilization and public benefit from the 700 MHz spectrum by eligible entities. The plan serves a as guide book to those eligible entities who apply for 700MHz spectrum and provides for a means of settling disputes concerning frequency allocations should they arise. Eligible agency users are defined by the PSWAC and NCC as follows: Public Safety - the public's right, exercised through Federal, State, or Local government as prescribed by law, to protect and preserve life, property, natural resources and to serve the public welfare. Public safety services – those services rendered by or through Federal, State or Local governmental entities in support of public safety duties. Public safety services providers – governmental and public entities or those non-governmental, private organizations, which are properly authorized by the appropriate government whose primary mission is providing public safety duties. Public services – those services provided by non-public safety entities that furnish, maintain, and protect the nation's basic infrastructures which are required to promote the public's safety and welfare.

Priority is given to those public safety and public service agencies that are primarily responsible for the protection of life and property. Assignment of frequencies is based upon the mandate that the utilization of the spectrum be in the most efficient manner possible through advanced technology.

Adjacent regions (Region 8 and Region 30) are developing 700 MHz plans. It is anticipated that as their Plans are developed, Region 19 will participate in joint discussions to ensure continued coordination, cooperation and concurrence.

All meetings of the New England 700 MHz Committee are open to the general public. Notification of meetings is accomplished by mail, email, fax and posting on the FCC and New England 700MHz Committee web sites (www.NER700MHz.org).

700 MHz Plan for

New England,

Region 19

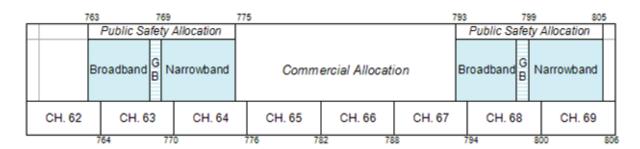
NEW ENGLAND REGION 19 AUTHORITY OF THE COMMITTEE AND COMMITTEE OFFICERS

Authority of the Committee: FCC Gen. Docket No. 96-86, Report & Order

The Federal Communications Commission, in conjunction with the National Public Safety Telecommunications Council and The National Coordinating Committee. established a Regional Planning Committee process in the First Report and Order and Notice of Proposed Rulemaking released (January 17, 2000) in Gen. Docket No. 96-86 Technical and Operational Rules and Policies regarding the use of frequencies in the 764-776 MHz and 794-806 MHz bands (700 MHz). Regional Planning Committees, consisting of local representatives from the Association of Public Safety Communications Officers (APCO), the International Municipal Signal Association (IMSA), the Forestry Conservation Communications Association (FCCA), and American Association of State Highway and Transportation Officials (AASHTO), were established to cover all parts of the United States, Puerto Rico, and the U.S. Virgin Islands. The principal spectrum resource for the Regional Planning Committees is the 764-776 MHz and 794-806 MHz bands which are further divided into General Use Spectrum, Interoperability Spectrum, State Spectrum and Reserved Spectrum. No assignments will be made in the 764-776 MHz and 794-806 MHz bands until a regional plan for the area has been accepted by the Commission.

Authority of the Committee: Resulting from Middle Class Tax Relief and Job Recovery Act of 2012 (Spectrum Act) (Public Law 112-96)

On February 22, 2012, the U.S. Congress enacted the Middle Class Tax Relief and Job Recovery Act of 2012 (Spectrum Act) which revised the 700MHz band plan for Public Safety Services. In 2012 Congress expressly granted the FCC discretion to allow the 700MHz narrowband spectrum "to be used in a flexible manner, including usage for public safety broadband communication" and formed the First Responder Network Authority (FirstNet) as an independent authority. FirstNet is charged with responsibilities for deploying and operating the nationwide public safety broadband network and will hold the license for both the existing public safety broadband spectrum (763-769MHz/793-799MHz) and the reallocated D Block. The Spectrum Act requires the FCC to recover and auction T-Band (470-512MHz) spectrum, currently in use by public safety agencies, for commercial use by February 2021. The following figure depicts spectrum allocated for Public Safety in the 700MHz band after enactment of the Spectrum Act.



FCC Actions to Regional Planning Committees (RPC) as a result of Spectrum Act (Public Law 112 -96)

On October 17, 2014 the FCC released a Report and Order, appearing in the Federal Register on 12/2/2014, "Service Rules Governing Narrowband Operations in the 769-775/799-805MHz Bands" releasing the narrowband reserve channels (twenty four 12.5kHz channels) to general Use under the administration of the RPC for the benefit of state and local public safety users. On January 9, 2015, the FCC issued a Public Notice, announcing the following:

- A five-year priority access window for T-Band incumbents to license the former reserve spectrum (from January 9, 2015 January 9, 2020. The FCC requires that T-Band incumbents seeking reserve channels commit to returning to the FCC an Equal amount of T-Band spectrum and obtain RPC concurrence;
- Date for filing RPC Plan Amendments to incorporate the former reserve spectrum as June 2, 2015, DA 15-476 ¹ extended the filing deadline date to October 30, 2015, by which amended regional plans must be filed with the commission; and
- Date by which certain licensees must reprogram their deployable trunked systems to operate on the former reserve channels is found in FCC Public Notice DA 15-34.

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¹ DA 15-476 Released by the Federal Communications Commission on April 20, 2015

Region 19 – Committee Officers

At the initial December 7, 2000 New England Region 700 MHz Planning Committee meeting, held at the Daniel Webster College in Nashua, New Hampshire, Mr. George Pohorilak, past chair of the Region 19 800 MHz Committee, called the meeting to order.

Mr. Pohorilak was nominated from the floor for the position of Chairperson. His election to the position was unanimous. The following officers were then elected: Mr. Jerry Zarwanski was elected as Vice Chairman, and Mr. Jim Warakois was elected as Recording Secretary.

The names and addresses of current officers are as follows:

Chairman: Mr. Jerry Zarwanski

CT Dept. of Emergency Services & Public Protection Office of Statewide Emergency Telecommunications

1111 Country Club Road Middletown, CT 06457-9294 Phone: (860) 685-8157 Fax: (860) 685-8363

E-mail: jerry.zarwanski@ct.gov

Vice Chairman: Mr. Steve Verbil

CT Dept. of Emergency Services & Public Protection Office of Statewide Emergency Telecommunications

1111 Country Club Road Middletown, CT 06457-9294 Phone: (860) 685-8157

Fax: (860) 685-8363

E-mail: stephen.verbil@ct.gov

Recording Secretary: Mr. James Kowalik

New Hampshire State Police

33 Hazen Dr.

Concord, NH 03305 Phone: (603) 271-2421 Fax: (603) 271-6629

E-mail: james.kowalik@dos.nh.gov

Treasurer: E. Douglas Hackett

(Current Elected APCO Atlantic Chapter Treasurer)

Hanover Police Department

46 Lyme Road

Hanover, NH 03755 Phone: (603) 643-2222

NEW ENGLAND REGION 19 REGIONAL PLANNING COMMITTEE MEMBERSHIP

States	Police	Fire	Emergency Medical Service	Emergency Manage- ment	High- way	APCO	AASHTO	IMSA	FCCA	SWIC	At- Large	Total
Connecticut	X	X			X	X	X			X	X	L
Maine				X	X	X	X			X		5
Massachusetts	X	X	X	X		X				X	X	L
New Hampshire	X		X		X	X	X	X	X	X	X	6
Rhode Island	X	X	X	X		X				X	X	L
Vermont					X	X	X			X		7

X = Agencies/Organizations Represented

Members

39 = Number of Official Members as of June 9, 2015

APCO - Association of Public Safety Officials

AASHTO - American Association of State Highway and Transportation Officials

IMSA - International Municipal Signal Association

FCCA - Forestry Conservation Communications Association

SWIC - Statewide Interoperability Coordinators

REGIONAL PLANNING COMMITTEE MEMBERS & ADDRESSES **NEW ENGLAND REGION 19**

Name	Organization Name	Address	City & State	ZIP	Member Organization
Aiken, Douglas M.	Lakes Region Mutual Fire Aid	62 Communications Drive	Laconia, NH	03246	IMSA
Allen, Angela	Vermont Dept. of Public Safety	409 US Route 2	Montpelier, VT	02602	APCO
Bardwell, Thomas	New Hampshire Department of Safety	39 Hazen Dr.	Concord, NH	03301	Police
Bellen, Justin	NH Division of Forests & Lands	172 Pembrooke Road	Concord, NH	03302	FCCA
Brooks, Joseph	Boston Fire Department	59 Fenway	Boston, MA	02115	Fire
Brown, Stephen	Connecticut Dept. of Transportation	Bradley International Airport	Windsor Locks, CT	96090	Highway
Carbonell, George	AASHTO Advisor	16 Crescent Ct	East Hartford, CT	06118	AASHTO
Chase, David	New Hampshire DOT	110 Smokey Bear Blvd	Concord, NH	90880	AASHTO
Crotty, Thomas	Rhode Island State Police	311 Danielson Pike	N. Scituate, RI	02832	Police
Del Giudice, Joseph	City of Providence, Communications	1 Communications Place	Providence, RI	05803	At-Large
Derdak, Elliot A.	Boston Emergency Medical Services	767 Albany Street	Boston, MA	02118	EMS
Dooley, John	Greater Boston Police Council	2 Winter Street Suite 302	Waltham, MA	01890	At-Large
	State of Maine, Office of Information				
Fisher, Marc	Technology	66 Industrial Drive	Augusta, ME	04333	AASHTO
	Dept. of Emergency Communications				Emergency
Fiske, Richard H., III	and Emergency Management City of	9-11 Lincoln Square	Worcester, MA	01608	Management
Fitzgerald, Bruce	Maine Emergency Management	45 Commerce Drive	Augusta, ME	04333	Emergency Management
Fletcher, Rhonda	Maine Dept. of Transportation	16 State House Station	Augusta, ME	04333	Highway
Glancy, Brian	Retired	P.O. Box 54	Wakefield, RI	02880	APCO
Guthlein, Thomas	Rhode Island Emergency Management	645 New London Ave.	Cranston, RI	02920	SWIC
Kowalik, James R.	New Hampshire State Police	39 Hazen Dr.	Concord, NH	03301	APCO
LaValley, Terry	VT Dept of Public Safety	103 South Main Street	Waterbury, VT	05671	AASHTO

Section 2, Page 2

Part 1, Section 2

Name	Organization Name	Address	City & State	ZIP	Member Organization
Mallory, Steven	Maine Emergency Management	45 Commerce Drive, Suite 2	Augusta, ME	04333	SWIC
Mansfield, William (Bill)	Nashua Police Dept.	0 Panther Drive, PO Box 785	Nashua, NH	03061	At-Large
Otto, Jeffrey	Quinebaug Valley ECC	1249 Hartford Pike	East Killingly, CT	06243	Fire
Ruggiero, John	Massachusetts State Police	470 Worcester Road	Framingham, MA	01702	APCO
Savary, Lee	New Hampshire Dept. of Transportation 110 Smokey Bear Blvd	110 Smokey Bear Blvd	Concord, NH	03305	Highway
Schnell, Jr., David	Lifespan	34 Parsonage St.	Providence, RI	02093	EMS
Smith, Jeff	Windham Police Dept.	375 Gray Road	Windham, ME	04062	APCO
Staffier, Steve	MA Emergency Management	400 Worcester Road	Framingham, MA	01702	SWIC
Stevens, John	New Hampshire Dept. of Safety	33 Hazen Dr.	Concord, NH	03301	SWIC
Stolz, Jessica	Vermont Dept. of Public Safety	103 South Main Street	Waterbury, VT	05671	SWIC
Sutherland, C. Blair	Massachusetts State Police	470 Worcester Road	Framingham, MA	01702	Police
Taylor, James	Providence Fire Dept.	325 Washington St.	Providence, RI	02903	Fire
Varney, Michael	Dept. of Emergency Services and Public Protection	1111 Country Club Road,	Middletown, CT	06457	SWIC
: -	Dept. of Emergency Services and Public Protection, Division of Statewide	1111 Country Club Road,	111.9	7) -
Verbil, Steve	Emergency Lelecommunications		Middletown, C.1	06457	At-Large
White, Robert	Vermont DOT	1 Nation Life Drive	Montpelier, VT	05633	Highway

Part 1, Section 2

Name	Organization Name	Address	City & State	ZIP	Member Organization
Wood, Bill	New Hampshire Dept. of Safety, Bureau of Emergency Medical Service	y, Service 110 Smokey Bear Blvd	Concord, NH	03305	EMS
Woodside, Gilbert	Rhode Island Emergency Management 645 New London Ave.	645 New London Ave.	Cranston, RI	02920	Emergency Management
Wright, Scott	Dept. of Emergency Services and Public 1111 Country Club Road, Protection, Connecticut State Police	1111 Country Club Road,	Middletown, CT	06457	Police
Zarwanski, Jerry	Dept. of Emergency Services and Public Protection, Division of Statewide Emergency Telecommunications	1111 Country Club Road,	Middletown, CT	06457	APCO

APCO - Association of Public Safety Officials

AASHTO - American Association of State Highway and Transportation Officials

EMS - Emergency Medical Services

IMSA - International Municipal Signal Association

FCCA - Forestry Conservation Communications Association

REGIONAL PLANNING COMMITTEE MEMBERS & CONTACT INFORMATION **NEW ENGLAND REGION 19**

)rg	IMSA	APCO	Police	FCCA	Fire	Highway	AASHTO	AASHTO	Police	At-Large	EMS	At-Large	AASHTO	Emerg Mgt	3 Mgt	Highway	APCO	SWIC	APCO	AASHTO	SWIC	At-Large	Fire	APCO	Highway	EMS	Section 2. Page 5
Member Org	I	A	1	I		Hig	AAS	AAS	I	At-		At-	AAS	Emerg	Emerg Mgt	Hig	A	3 1	A	AAS	5 1	At-		A	Hig		
Email Address	daiken@imsasafety.org	(802) 229-4526 angela.allen@state.vt.us	(603) 271-6629 thomas.bardwell@dos.nh.gov	(603) 271-6488 justin.bellen@dred.nh.gov	(617) 343-3060 joseph.brooks@boston.gov	(860) 292-2051 sbrown@bradleyairport.com	(860) 258-0399 george.carbonell@po.state.ct.us	Dchase@dot.nh.gov	(401) 444-1186 tcrotty@risp.state.ri.us	jdelgiudice@providenceri.com	derdak@bostonems.org	jdooley@winchesterpd.org	marc.d.fisher@maine.gov	FiskeR@worcesterma.gov	Bruce. Fitzgerald@maine.gov	rhonda.fletcher@maine.gov	bjglancy @verizon.net	Thomas.Guthlein@ema.ri.gov	james.kowalik@dos.nh.gov	(802) 241-5557 terry.lavalley@state.vt.us	(207) 287 3178 steven.mallory@maine.gov	mansfieldw@pd.ci.nashua.nh.us	<u>jotto@snet.net</u>	(508) 820-2359 john.ruggiero@state.ma.us	(603) 271-6084 Lsavary@dot.state.nh.us	Dschnelljr@lifespan.org	
Fax Number	(603) 528-5989	(802) 229-4526	(603) 271-6629	(603) 271-6488	(617) 343-3060	(860) 292-2051	(860) 258-0399		(401) 444-1186		(617) 343-1199			(508) 799-1718					(603) 271-6629	(802) 241-5557	(207) 287 3178	(603) 594-3615		(508) 820-2359	(603) 271-6084		
Work Phone	(603) 528-9111	(802) 229-0882	(603) 223-8321	(603) 271-2214	(617) 343-2875	(860) 292-2065	(860) 258-0376	(603) 227-0018	(401) 444-1185		(617) 343-1140	(781) 316-4400		(508) 799-1777			(401) 789-2211		(603) 271-2421	(802) 241-5215	(207) 624-4476	(603) 594-3521	(860) 774-7555	508-820-2222	(603) 271-1669		n, October 2015
Name	Aiken, Douglas M.	Allen, Angela	Bardwell, Thomas	Bellen, Justin	Brooks, Joseph	Brown, Stephan	Carbonell, George	Chase, David S.	Crotty, Thomas	Del Giudice, Joseph	Derdak, Elliot A.	Dooley, John	Fisher, Marc	Fiske, Richard H., III	Fitzgerald, Bruce	Fletcher, Rhonda	Glancy, Brian	Guthlein, Thomas	Kowalik, James R.	LaValley, Terry	Mallory, Steven	Mansfield, William (Bill)	Otto, Jeffrey	Ruggiero, John	Savary, Lee	Schnell, Jr., David	he New England 700MHz Regional Plan, October 2015

Name	Work Phone	Fax Number	Email Address	Member Org
Smith, Jeff	(207) 318-5871		smithj@apcointl.org	APCO
Staffier, Steve	(508) 820-2022		steve.staffier@state.ma.us	SWIC
Stevens, John			John.stevens@dos.nh.gov	SWIC
Stolz, Jessica	(802) 241-5094		jessica.stolz@state.vt.us	SWIC
Sutherland, C. Blair	(508) 820-2264	(617) 727-5051	(617) 727-5051 blair.sutherland@pol.state.ma.us	Police
Taylor, James			jtaylor@providenceri.com	Fire
Varney, Michael	(860) 685-8146		michael.varney@ct.gov	SWIC
Verbil, Stephen	(860) 685-8127	(860) 685-8363	(860) 685-8363 stephen.verbil@ct.gov	At-Large
White, Robert			Robert.T.White@state.vt.us	Highway
Wood, Bill	(603) 271-4615	(603) 271-4567	(603) 271-4567 william.wood@dos.nh.gov	EMS
Woodside, Gilbert			Gilbert.Woodside@ema.ri.gov	Emerg Mgt
Wright, Scott	(860) 685-8280	(860) 685-8345	(860) $685-8345$ scott.wright@ct.gov	Police
Zarwanski, Jerry	(860) 685-8157	(860) 685-8363	(860) 685-8363 jerry.zarwanski@ct.gov	APCO

Part 1, Section 2

NEW ENGLAND REGION 19 COMMITTEE VOTE TO ACCEPT 700 MHz PLAN

Name	Member Organization	Vote to Accept June 9, 2015 Draft of Region 19 700MHZ Plan?
Aiken, Douglas M.	IMSA	
Allen, Angela	APCO	
Bardwell, Thomas	Police	
Bellen, Justin	FCCA	
Brooks, Joseph	Fire	
Brown, Stephan	Highway	Yes
Carbonell, George	AASHTO	Yes
Chase, David S.	AASHTO	
Crotty, Thomas	Police	
Del Giudice, Joseph	At-Large	Yes
Derdak, Elliot A.	EMS	
Dooley, John	At-Large	
Fisher, Marc	AASHTO	
Fiske, Richard H., III	Emergency Management	Yes
Fitzgerald, Bruce	Emergency Management	
Fletcher, Rhonda	Highway	
Glancy, Brian	APCO	Yes
Guthlein, Thomas	SWIC	Yes
Kowalik, James R.	APCO	Yes
LaValley, Terry	AASHTO	
Mallory, Steven	SWIC	Yes
Mansfield, William (Bill)	At-Large	
Otto, Jeffrey	Fire	
Ruggiero, John	APCO	Yes
Savary, Lee	Highway	Yes
Schnell, Jr., David	EMS	
Smith, Jeff	APCO	
Staffier, Steve	SWIC	
Stevens, John	SWIC	
Stolz, Jessica	SWIC	Yes
Sutherland, C. Blair	Police	
Taylor, James	Fire	
Varney, Michael	SWIC	Yes

Verbil, Stephen	At-Large	
White, Robert	Highway	
Wood, Bill	EMS	
Woodside, Gilbert	Emergency Management	Yes
Wright, Scott	Police	Yes
Zarwanski, Jerry	APCO	Yes

Totals:

Accept - 15

Reject - 0

Abstain - 0

BY LAWS OF THE NEW ENGLAND 700 MHZ COMMITTEE/REGION 19

ARTICLE I

NAME & PURPOSE

1.1 Name and Purpose.

The name of this Region shall be "The New England 700 MHz Committee/Region 19". Its primary purpose is to foster cooperation, planning, and development of regional plans and the implementation of these plans in the 700 MHz Public Safety Band.

ARTICLE II

MEMBERS

For purposes of this Article, the term "member," unless otherwise specified, refers to both voting and non-voting members.

The areas served by the committee are the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut.

2.1 Number, Election and Qualification.

The Regional Committee shall have two classes of members, "voting members" and "non-voting members." New members may be added at annual, special, or regular meetings.

Voting Members. Voting members shall consist of one representative from any single agency engaged in public safety eligible to hold a license under 47 CFR 90.20, 47 CFR 90.523 or 47 CFR 2.103.

A single agency shall be allowed no more than one vote for each distinct eligibility, category (e.g. police, fire, EMS, Emergency Management/Homeland Security, highway, SWIC, At-large) within the agency's organization or political jurisdiction. In voting on any issue, the individual must identify himself/herself and the agency and eligibility category which he or she represents. Members must be representative of eligible organizations from the member states.

Region 19 RPUC held a quarterly meeting on December 13, 2011 where a motion was approved to amend the bylaws by adding an eligibility category "Statewide Interoperability Coordinators" ("SWIC") for each member state. The U.S. Department of Homeland Security, Office of Emergency Communications, Regional Coordinator for Region I (CT, MA, ME, NH, RI, VT) will appoint with the cooperation of each member state a representative to be a voting SWIC member. SWIC eligibility category is also exempt from a single agency vote rule. All other bylaws apply.

Non-Voting Members. Non-voting members are all others interested in furthering the goals of public safety communications.

2.2 Tenure.

In general, each member shall hold MEMBERSHIP from the date of acceptance until resignation or removal.

2.3 Powers and Rights.

In addition to such powers and rights as are vested in them by law or these bylaws, the members shall have such other powers and rights as the membership may determine.

2.4 Suspension and Removal.

A representative may be suspended or removed with cause by vote of a majority of members after reasonable notice and opportunity to be heard. Failure to attend at least 25% of meetings held in a calendar year shall be a specific cause for removal from the membership. Removal from the membership is subject to the discretion of the committee.

2.5 Resignation.

A member may resign by delivering written resignation to the chairman, vice-chairman, treasurer or secretary of the Regional Committee or to a meeting of the members.

2.6 Annual Meetings.

The annual meeting of the members shall be held during the fall of each calendar year. The Committee will meet on a quarterly basis with the annual meeting serving as one of the quarterly meetings. The meetings will rotate through the member states on an established rotational schedule which shall be set at the annual meeting each year. If an annual meeting is not held as herein provided, a special meeting of the members may be held in place thereof with the same force and effect as the annual meeting, and in such case all references in these bylaws, except in this Section 2.6, to the annual meeting of the members shall be deemed to refer to such special meeting. Any such special meeting shall be called, and notice shall be given as provided in Section 2.7 and 2.8.

2.7 Special Meetings.

Special meetings of the members may be held at any time and at any place within the Regional Committee area. Special meetings of the members may be called by the chairman or by the vice-chairman; or in case of death, absence, incapacity by any other officer or upon written application of two or more members.

2.8 Call and Notice.

A. Annual meetings. Reasonable notice of the time and place of special meetings of the members shall be given to each member. Such notice need not specify the purposes of a meeting, unless otherwise required by law or these bylaws or unless there is to be considered at the meeting (i) amendments to these bylaws, (ii) an increase or decrease in the number of members, or (iii) removal or suspension of a member who is an

- officer. The schedule for the next year's meetings shall be determined at the annual meeting.
- **B.** Reasonable and sufficient notice. Except as otherwise expressly provided, it shall be reasonable and sufficient notice to a member to send notice by mail or by e-mail or facsimile at least ten days before the meeting. Addressed to such member at his or her usual or last known business address or to give notice to such member in person or by telephone at least three days before the meeting.

2.9 <u>Committee Membership/Quorum/Voting.</u>

- **A. Memberships.** One person shall represent each member state from each of the following categories; Police, Fire, EMS, Emergency Management, APCO, AASHTO, IMSA, FCCA, SWIC, an At-Large Representative and a Highway Representative.
- **B.** Quorum. At any meeting of the members, nine eligible members, representing no less than three states, shall constitute a quorum.
- **C. Voting.** No single representative shall be allowed more than one vote, for each distinct eligibility category within the agency's organization or political jurisdiction. No state may represent more than fifty percent of the total quorum for action on a vote.
- **D.** Voting members must attend one scheduled regular meeting annually. In those calendar years when a quarterly meeting is not held in a Region 19 member state the state representative from those states are excused from the rule requiring attendance at 25% of the meetings for that calendar year.
- **E.** Any meeting may be adjourned to such date or dates not more than ninety days after the first session of the meeting by a majority of the votes cast upon the question whether or not a quorum is present, and the meeting may be held as adjourned without further notice.
- **F.** Each representative state organization will appoint members for their respective states. If a state organization does not appoint a member to the 700MHz Committee, that state slot may be filled with additional at-large member(s). Individuals from eligible categories may apply to the committee for vacant at-large position(s).

2.10 Action by Vote.

Each voting member, representing a particular agency (one vote per agency, SWIC eligibility category exempt) shall have one vote; non-voting members have no right to vote. When a quorum is present at any meeting, a majority of the votes properly cast by voting members present shall decide any question, including election to any office, unless otherwise provided by law or these bylaws.

2.11 Action by Writing.

Any action required or permitted to be taken at any meeting of the members may be taken without a meeting if all members entitled to vote on the matter consent to the action in writing and the written consents are filed with the records of the meetings of the members. Such consents shall be treated for all purposes as a vote at a meeting.

2.12 Proxies.

Voting members may vote either in person or by written proxy dated not more than one month before the meeting named therein, which proxies shall be filed before being noted with the secretary or other person responsible for recording the proceedings of the meeting. Unless otherwise specifically limited by their terms, such proxies shall entitle the holders thereof to vote at any adjournment of the meeting but the proxy shall terminate after the final adjournment of such meeting.

2.13 Voting on One's Own Application.

At no time can a voting member vote on his/her application.

2.14 Special Interest Voting.

A voting member cannot have a commercial interest in any of his/her region and/or adjacent region's application(s) on which he/she is reviewing, approving and/or voting.

ARTICLE III

OFFICERS AND AGENTS

3.1 Number and Qualification.

The officers of the Regional Committee shall be a chairman, vice-chairman, treasurer, secretary and such other officers, if any, as the voting members may determine. All officers must be voting members of the Regional Committee.

3.2 Election.

The officers shall be elected by the voting members at their first meeting and, thereafter, at the annual meeting of the members.

3.3 Tenure.

The officers shall each hold office until the annual meeting of the members held within one year from the adoption of these bylaws, or until their successor, if any, is chosen or in each case until he or she sooner dies, resigns, is removed or becomes disqualified.

3.4 Chairman and Vice-Chairman.

The Chairman shall be the chief executive officer of the Regional Committee and, subject to the control of the voting members, shall have general charge and supervision of the affairs of the Regional Committee. The chairman shall preside at all meetings of the Regional Committee.

The Vice-Chairman shall have such duties and powers as the voting members shall determine. The vice-chairman shall have and may exercise all the powers and duties of the chairman during the absence of the chairman or in the event of his or her inability to act.

3.5 Treasurer.

The Treasurer of the Atlantic Chapter of APCO shall serve as the financial officer and the accounting officer of the Regional Committee. The treasurer shall be in charge of its funds and valuable papers, and shall keep full and accurate records thereof.

3.6 Secretary.

The secretary shall record and maintain records of all proceedings of the members in a file or series of files kept for that purpose, such file or files shall be kept within the Region and shall be open at all reasonable times to the inspection of any member. Such file or files shall also contain records of all meetings and the original or attested copies of bylaws and names and addresses of all members (including e-mail address, if available).

If the secretary is absent from any meeting of members, a temporary secretary chosen at the meeting shall exercise the duties of the secretary at the meeting.

3.7 Suspension or Removal.

An officer may be suspended with cause by vote of a majority of the voting members.

3.8 Resignation.

An officer may resign by delivering his or her written resignation to the chairman, vice-chairman, treasurer, or secretary of the Regional Committee. Such resignation shall be effective upon receipt (unless specified to be effective at some other time), and acceptance thereof shall not be necessary to make it effective unless it so states.

3.9 Vacancies.

If the office of any officer becomes vacant, the voting members may elect a successor. Each such successor shall hold office for the remainder of the term, and in the case of the chairman, vice-chairman, treasurer and clerk until his or her successor is elected and qualified, or in each case until he or she sooner dies, resigns, is removed or becomes disqualified.

ARTICLE IV

AMENDMENTS

These bylaws may be altered, amended or repealed in whole or in part by vote. The voting members may, by a two-thirds vote, alter, amend, or repeal any bylaws adopted by the Regional Committee members or otherwise adopt, alter, amend or repeal any provision which by FCC regulation or these bylaws requires action by the voting members.

ARTICLE V

DISSOLUTION

This Regional Committee may be dissolved by the consent of two-thirds plus one of the members in good standing at a special meeting called for such purpose. The FCC shall be notified.

ARTICLE VI

RULES OF PROCEDURES

The Conduct of Regional Meetings including without limitation, debate and voting, shall be governed by Robert's Rules of Order, newly revised, tenth edition, October 2000, Henry M. Robert III, and William J. Evans, et al.

NEW ENGLAND REGION 19 DESCRIPTION AND MAP

New England Region 19 comprises six states: Maine, New Hampshire and Vermont to the north, Massachusetts, Connecticut and Rhode Island to the south. The three northern states border Canada. The western regional border is adjacent to New York state. The eastern and southern borders meet the Atlantic Ocean and Long Island Sound.

The region's topography is diverse. "The key topographic influence are the Appalachian mountains, which run north from western Connecticut and Massachusetts, into the Green Mountains of Vermont, and the White Mountains of New Hampshire, terminating in Maine. The trademark rocky coastline of Maine, sandy beaches and dunes of New Hampshire, Massachusetts, and Rhode Island, and Connecticut, offer the interface between the land mass of New England and the waters of the Atlantic Ocean and Long Island Sound. Bridging the gap between the ocean and mountains" are coastal plain and rolling hills. The highest point is Mount Washington in New Hampshire which rises 6,288 feet above sea level. The lowest elevation is sea level for the states bordering the Atlantic Ocean and Long Island Sound. The region encompasses 62,810 square miles with a population of 14,444,865. Population characteristics very considerably.

The northern states - Maine, New Hampshire, Vermont - are sparsely populated relative to the region as a whole. While these states comprise 78% of the geographical region (49,080 square miles), they account for 23% of the region's population (3, 270,572). The average population density for these three states combined is 67 persons per square mile. Within these states, the population density ranges from four persons per square mile (Piscataquis County, Maine) to 457 persons per square mile (Hillsborough County, New Hampshire). There is one city with a population of over 100,000, Manchester, New Hampshire (population 109,565).

The population of the region's southern states - Massachusetts, Connecticut and Rhode Island reflect a more urban nature. This remaining geographic area comprises 22% of the geographic area (13,730 square miles) but 77% of the population (11,174,293) with an average density of 814 persons per square mile. However, within these states, there is a wide range in population density ranging from 102 persons per square mile (Franklin County, Massachusetts) to 12,238 persons per square mile (Suffolk County, Massachusetts). There are 11 cities with populations of over 100,000 in these states, the most populous being Boston, Massachusetts (population 645,149).

A complete listing of the region's states and counties is found in Appendix E.

Clearly, the geographic and demographic diversity within Region 19 presents both operational and structural challenges in the development and administration of the comprehensive management plan.

1. "The New England Weather Network: A Shared 21st Century Vision For Environmental Monitoring and Science Education In The New England States," University of Maine Robust Instrumentation Laboratory website

http://www.eece.maine.edu/EE/RIL/ updated 08-04-00.

2. County population data taken from:

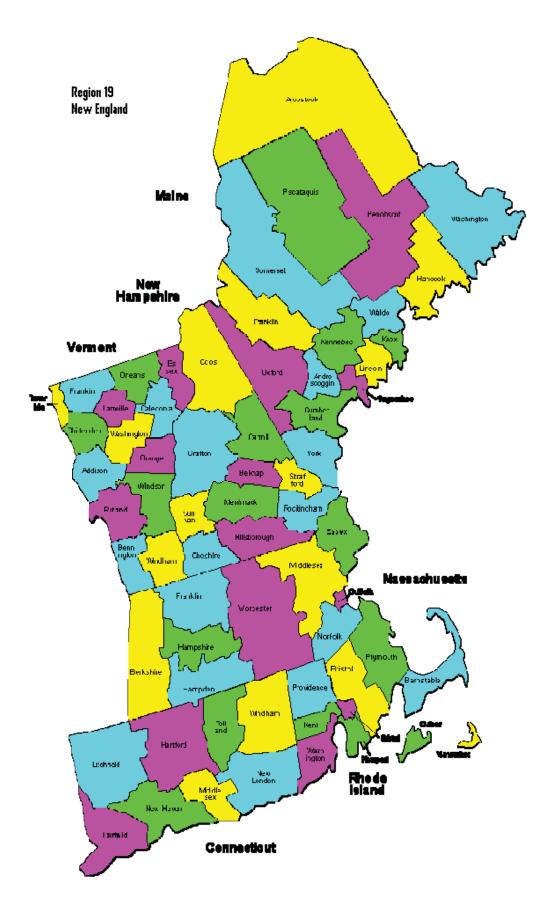
U.S. Census Bureau, Census 2010 Summary file 1, Matrices PCT 12 and 13.

Population density data taken from:

U.S. Census Bureau, Census 2010 QuickFacts state and county tables.

Cities with population over 100,000 data taken from:

U.S. Census Bureau, Table SUB-EST2002-01, City and Town Population Estimates: April 1, 2010 to July 1, 2012.



NEW ENGLAND REGION 19 MEETING NOTICES

The following is a listing of some early Meeting Notices, Dates, and Locations for the New England Region 700 MHz Planning Committee. All meetings were scheduled from 10:00 a.m. until noon. Directions to the individual meetings are posted on the 700 MHz Committee website at http://www.ner700mhz.org. An annual meeting notice is sent to the FCC in advance of the calendar year and posted on the Region 19 700MHz Committee website.

December 7, 2000	Held at the Daniel Webster College, Nashua, New Hampshire
March 29, 2001	Held at the Massachusetts State Police Headquarters, Framingham, Massachusetts
June 20, 2001	Held at the Vermont State Police Barracks, Chester, Vermont
September 26, 2001	Held at the Municipal Police Headquarters, Scarborough, Maine
December 11, 2001	Held at the Emergency Operations Center, Office of Emergency Management, Cranston, Rhode Island
March 12, 2002	Held at the Connecticut Department of Transportation, Rocky Hill, Connecticut
June 11, 2002	Held at the New Hampshire State Police Headquarters, Manchester, New Hampshire
September 10, 2002	Held at the Massachusetts State Police General Headquarters, 470 Worcester Road, Framingham, Massachusetts
December 10, 2002	Held at the Springfield State Office Building, Springfield, Vermont
March 11, 2003	Held at Maine State Police Barracks, Troop B, Gray, Maine
June 10, 2003	Held at the Emergency Operations Center, Office of Emergency Management, Cranston, Rhode Island
September 9, 2003	Held at the Connecticut Fire Academy, 34 Perimeter Road, Windsor Locks, Connecticut
December 9, 2003	Held at the Department of Public Safety, Division of State Police, 10 Hazen Drive, Concord, New Hampshire.

Region 19 has held a quarterly meeting on a State rotational schedule since December 7, 2000. Meetings are held in March, June, September and December on the second Tuesday of the identified month.

The FCC published the following meeting schedule on behalf of Region 19 for 2015.

March 10, 2015

Kennebunkport Fire Department 32 North Main Street Kennebunkport, ME 04046 10:00 a.m. - 2:00 p.m.

June 9, 2015

Rhode Island Emergency Operations Center 645 New London Ave Cranston, RI 02920 10:00 a.m. - 2:00 p.m.

September 8, 2015

Connecticut Fire Academy 34 Perimeter Road Windsor Locks, CT 06096 10:00 a.m. - 2:00 p.m.

December 8, 2015

New Hampshire Department of Public Safety 33 Hazen Drive Concord, NH 03305 10:00 a.m. - 2:00 p.m.

NEW ENGLAND REGION 19 700 MHZ CHANNEL APPLICATION PROCEDURES

Public safety users wishing to apply for channels in the 769-775 MHz and 799-805 MHz bands identified by the Federal Communications Commission must meet eligibility and coordination rules established by the Regional Planning Committee and are listed as:

- Local Government Services and Police Services Association of Public Safety Communications Officials (APCO)
- Fire Service International Municipal Signal Association (IMSA)
- Forestry Conservation Services Forestry Conservation Communications Association (FCCA)
- Highway Maintenance Services American Association of State Highway and Transportation Officials (AASHTO)

REGIONAL PLANNING COMMITTEE APPLICATION PROCEDURES

Applications for frequencies in the 769-775 MHz and 799-805 MHZ spectrum are subject to preapplication review of operational requirements as established by the FCC in the category into which they fall. Each designated committee shall establish the requirements for use of the respective frequency allocations under their jurisdiction. The categories are:

- Interoperability Spectrum
- State Spectrum (State Band Manager)
- Reserved Spectrum (Afford T-Band public safety licensees priority)
- General Use Spectrum.

<u>Interoperability Spectrum</u> - Frequency use in this category will be allocated by each member State's Interoperability Executive Committee, SIEC, if one exists, or by the Region 19 Regional Planning Committee if there is no SEIC. The designated use of the Interoperability Channels will adhere to ANSI Standard APCO ANS 1.104.1-2010 "Standard Channel Nomenclature for the Public Safety Interoperability Channels".

The FCC designated approximately 10 percent (2.6 MHz) of the 700 MHz Public Safety Spectrum for nationwide interoperability communications. State-level organizations are usually in control at large-scale events and disasters or multi-agency incidents. Although the Commission supports the creation of SIECs, some states already have a mechanism in place that is equivalent of an SIEC that could administer the Interoperability channels. The RPC will assist in the development of an Interoperability Plan for a State without a SIEC, review applications for base stations, and provide pre-coordination technical review.

The SIECs first responsibility is to develop an Interoperability Plan. The plan would decide who will hold the license for the Interoperability Spectrum, as well as to resolve licensing issues. Other responsibilities involved in administering the Interoperability channels include the creation and oversight of incident response protocols, creation of chains of command for incident response and

reporting, and executing Memoranda of Understanding and Sharing Agreements. Since Connecticut, Maine, Massachusetts, New Hampshire, Vermont and Rhode Island have a SIEC each state has assumed the responsibility for their respective interoperability plans.

On occasion, the FCC will publish notices and bulletins on their internet website. These FCC "Public Notice" 700 MHz Public Safety Band – Announcement of Updates of Interoperability Spectrum Administration Decisions are found in Appendix J.

The individual State Interoperability Spectrum Points of Contact for the New England Region, Region 19, is found in Table 1.

Connecticut:	Massachusetts:
Department of Emergency Services & Public	Massachusetts Emergency Management Agency
Protection	Steve Staffier
Michael Varney	400 Worcester Road
1111 Country Club Rd	Framingham, MA 01702
Middletown, CT 06457	Phone: (508) 820-2022
Phone: (860) 685-8146	Email: Steve.staffier@.state.ma.us
Email: Michael. Varney@ct.gov	
New Hampshire:	Rhode Island:
New Hampshire Department of Safety	Rhode Island Emergency Management Agency
John T. Stevens	Thomas J. Guthlein
33 Hazen Drive	645 New London Ave.
Concord, NH 03305	Cranston, RI 02920
Phone: (603) 223-8003	Phone: (401) 462-7121
Email: john.stevens@dos.nh.gov	Email: Thomas.Guthlein@ema.ri.gov
Maine:	Vermont:
Maine Emergency Management Agency	Vermont Department of Public Safety
Steven Mallory	Homeland Security Unit
45 Commerce Drive, Suite 2	Jessica Stolz
Augusta, ME 04333	103 South Main St.
Phone: (207) 624-4476	Waterbury, VT 05671
Email: Steven.Mallory@maine.gov	Phone: (802) 241-5094
T-11 1 P - '- 10 I t 1	Email: jstolz@dps.state.vt.us

Table 1: Region 19 Interoperability Spectrum Points of Contact

<u>State Spectrum</u> - Frequency use in this category will be allocated by the State Band Manager of each member State in Region 19 or by the Region 19 Regional Planning Committee, if so designated. State Band Managers shall be responsible for planning and managing the frequency database and shared use of the State Spectrum with the bordering State Band Managers, through the Regional Planning Committee. The designated State Band Manager, or Committee, shall establish the requirements for use of the respective frequency allocations under their jurisdiction and file their plans for approval with the New England Region 19 700 MHz Planning Committee.

The state license is a geographic area license based on state boundaries. It differs from site-based licensing which is the normal type of public safety licensing. State licensees are subject to the

general limits that govern geographic area licenses, including antenna structures and air navigation, international coordination, and environmental requirements including quiet zones. The governor, or designee, of each state had the option to apply for up to 2.4 megahertz of spectrum, all narrowband channels, of the 700 MHz band Public Safety spectrum. The application deadline was December 31, 2001. Whatever spectrum was not applied for by this deadline, reverted to General Use Public Safety Spectrum and will be administered by the Regional Planning Committee, or RPC. All states, and the District of Columbia, were granted licenses on January 18, 2002.

The FCC established certain construction and operation requirements to ensure efficient use of the spectrum, including the provision of service to rural and remote areas. The initial construction/operation benchmark was set at 5 years. However, because broadcasters are not required to complete relocations until December 31, 2006, the starting date for calculating the 5-year benchmark is January 1, 2007. As a practical matter, this means that each state license will be granted subject to the condition that the state is providing, or preparing to provide, substantial service to one-third of their population or territory by January 1, 2012 and to two-thirds by January 1, 2017.

The FCC subsequently changed the filing date of substantial service to one-third of their population or territory by June 10, 2014 and to two-thirds by June 10, 2019. The State of Maine and Vermont have turned in their state license and their State allocated spectrum has reverted to General Use Public Safety Spectrum and will be administered by the Regional Planning Committee.

States may begin using the state license spectrum when:

- Full power TV or DTV stations vacate the 700 MHz spectrum, currently completed and
- Project 25 Phase 1 equipment is available for purchase, currently available and
- The following general operating and technical requirements are met:
 - o Coordinating transmitting sites near the U.S./Canada border (see Appendix P), and
 - o Compliance in quiet zones, and
 - o Registration of antenna structures with the FAA and FCC as required under Part 17 of the Commission's Rules.

For further information about the State license, see the Commission's Rules, refer to Appendix K.

Regional Planning Committee. The FCC's 700MHz Narrowbanding Report & Order (14-172) requires, and the Regional Planning Committee shall, reallocate the reserve channels to General Use Channels. The RPC shall afford T-Band public safety licensees priority for licensing of this spectrum in T-Band areas. The RPC shall apply the same procedures for Reserve Spectrum Applications as applied to general use applications, with the exception of the five –year priority access window for T-Band incumbents to license the reserve spectrum from January 9, 2015 to January 9, 2020, as published in DA 15-34. Upon FCC approval of the Region 19 700MHz Plan, Region 19 will announce a Window Opening for only the T-band incumbents, then after the committee will process applications in the order received. As reserved spectrum is allocated and no longer available to T-Band Licensees, Region 19 will then assign General Use spectrum available at that time. Reserved Spectrum outside the T-Band Licenseed areas will be allocated once all general use spectrum is allocated in the county assignment.

RPC19 will incorporate the 700 MHz Deployable Trunked System Channels as identified in FCC DA 15-483 in areas outside of the T-Band incumbent regions. The FCC nationwide recommended channels are listed in Appendix A: - Table of Deployable Trunk Channels.

<u>General Use Spectrum</u> - Frequency use in this category will be recommended by the Region 19 Regional Planning Committee.

All agencies requesting spectrum during the initial filing window will be allotted channels if all plan requirements are met. Allotments given in the first window period will be made in multiples of 6.25 KHz units to allow for implementation of various technologies. Technologies requiring 25 KHz will be allotted four 6.25 KHz units. Requests for voice/data channels will be allocated on the basis of two 6.25 KHz units to accommodate one 12.5 KHz channel per voice channel. For narrowband mobile data requests, one mobile data channel will consist of two (2) 6.25 KHz units to accommodate one 12.5 KHz channel.

The RPC may request additional information from the requesting agency. This information will aid in the validation of actual spectrum need and help to insure that no requests are duplicated when requests involve multi-agency systems. Small agencies are encouraged to join multi-agency systems, when possible.

REGION 19 REGIONAL PLANNING COMMITTEE PROCEDURES:

To ensure that all eligible agencies have an equal opportunity to apply for the limited 769-775 MHz and 799-805 MHz spectrum approved by the Federal Communications Commission, the Region 19 Regional Planning Committee will accept applications from eligible entities during two application windows per year. The applications windows are established as of May 1 of each calendar year through October 31 of that same year, and November 1 of each calendar year through April 30 of the following year.

Region 19 will announce a Window Opening for only the first Window and then after the committee will process applications as submitted. Reserved Spectrum applications outside the T-Band Licensed areas will comply with the application filing dates identified below.

The application must contain all information requested and postmarked no later than these dates before being accepted for review by the Committee.

Applications received by November 1, will be reviewed at the Committee's December meeting and voted on at the following March meeting.

Applications received by May 1, will be reviewed at the Committee's June meeting and voted on at the following September meeting.

Applicants shall file a completed CAPRAD application at www.caprad.org, and mail one hard copy and one electronic copy of the completed CAPRAD submitted application and any relevant attachments and/or files to:

Mr. Jerry Zarwanski – Chairman, RPC – Region 19 New England Region 19 700 MHz Regional Planning Committee State of Connecticut DESPP/DSET 1111 Country Club Road Middletown, CT 06457

APPLICATION PROCEDURES OVERVIEW

The Committee evaluates and scores each application and compiles a prioritized list of the approved entities and the number of channels they are eligible to receive. The number may be less than the number requested. Channel allocations are approved after analysis by a committee-approved computer engineering program which tests all possible configurations of channels by considering the proposed service area, topography, and the technical parameters and frequency compatibility of existing (incumbent) and proposed systems. (The committee may approve the use of the Computer Aided Pre-Coordination Resource And Database (CAPRAD) system developed and administered by the National Law Enforcement and Corrections Technology Center-Rocky Mountain Region, Denver, CO. This database is designed to facilitate inter-regional coordination of frequencies, provide search and report generating tools, and create a direct interface link to the FCC's Universal Licensing System.)

(The technical parameters and compatibility criteria tested shall be based on those parameters described in TIA Telecommunications Systems Bulletin TSB88B – latest published version, "Wireless Communications Systems - Performance in Noise and Interference-Limited Situations Recommended Methods for Technology-Independent Modeling, Simulation, and Verification." This document seeks to provide guidance to spectrum managers, system designers and system maintainers for a standardized approach to proof-of-performance and acceptance testing of public safety systems.) The analysis process will produce a list of available channels which may or may not be sufficient to meet the requirements of all applicants. It is possible that an applicant low on the priority list will receive an assignment of channels while none is available for an applicant with a higher priority.

TECHNICAL EVALUATION APPROVAL PROCEDURES

All applications or planned use of Region 19 700 MHz spectrum must undergo a technical evaluation examining the proposed use of 700 MHz channels.

Spectrum Allocation Matrix - See Section 10, Scoring Matrix and Worksheet.

Technical Requirements

Spectrum Utilization

The Region 19 Planning committee will adhere to the National Public Safety Telecommunications Council's (NPSTC) 700 MHz General Use Channel sort as shown on the

CAPRAD database for narrowband General Use Channels (See Appendix L). Region 19 will participate in the CAPRAD database and keep the Regional Plan and current frequency allotment/allocation information on the database.

The Region 19 Planning Committee has the ability to accept recommendations from the committee and, if approved, the authority to change the original frequency allotment. In order to keep the most effective frequency allotments within Region 19, a quarterly review of the allotments will be made at the scheduled meetings by the full committee and recommended changes to the plan will be voted on. The majority of members in attendance at a meeting of the full Regional Planning Committee must approve any changes to the Regional allotments.

If at any time a system is allocated channels within Region 19 and the system cannot be developed within the agreed upon guidelines (slow growth), the channels will be returned to the county pool allotments they originated from and again be available to other agencies in the county. If plan modifications are approved, the Chairperson will, if necessary, obtain adjacent Region approval and file a plan amendment indicating the approved changes with the Federal Communications Commission.

In this plan, the 700 MHz committee is striving to utilize the spectrum as efficiently as possible. The total request for general pool voice and narrowband data totals 1,232 channels. Allotments will be made on the basis of one 6.25 channel for each voice channel. For each narrowband data channel (request of less than 19.2 kbps) the allocation of two 6.25 KHz units will be made to accommodate 12.5 kHz of spectrum. This conforms to the FCC intent to recommend use of technology that yields one voice path for each 6.25 kHz of spectrum.

Procedure for Frequency Coordination

Assignments will be based on a defined service area of each applicant. This will normally be an area defined by geographical or political boundaries such as city, county or by a data file consisting of line segments creating a polygon that encloses the defined area. The service contour is normally allowed to extend slightly beyond the geo/political boundaries such that systems can be designed for maximum signal levels within the boundaries, or coverage area. Systems must also be designed to minimize signal levels outside their geo/political boundaries to avoid interference into the coverage area of other co-channel users.

Responsible Radiation

For all proposed facilities within the region, 80% of the 50 dB μ (-82 dBm) Protected Service Area (PSA) must lie within the jurisdictional boundary plus an 8 km buffer zone. The 50 dB μ (-82 dBm) PSA shall be assessed using Longley- Rice analyses.

Interference Protection – Co-Channel

Applications for facilities that have been pre-allotted within CAPRAD are required to provide co- and adjacent-channel interference protection to other CAPRAD assignments.

Each pre-allotted CAPRAD application (which may consist of multiple facilities) must pose no more than 2.5% Area Reliability Degradation (ARD) at 90% reliability levels to any incumbent's

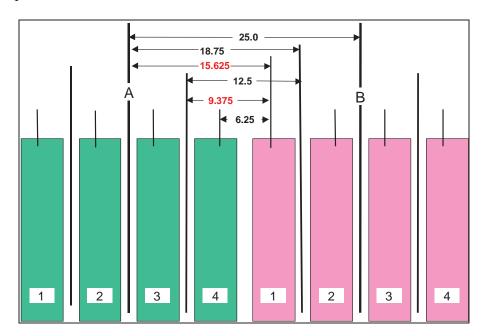
protected service area. All facilities (including licensees and all approved allotments) in aggregate must pose no more than 5.0% cumulative area reliability degradation at 90% reliability levels to any incumbent's protected service area.

Applications for facilities that have not been pre-allotted within CAPRAD are also required to provide co- and adjacent-channel interference protection to other CAPRAD assignments.

Each non-allotted CAPRAD application must pose 0% ARD at 90% reliability levels to any incumbent's protected service area.

<u>Interference Protection – Adjacent Channel</u>

The evaluation of adjacent-channel interference will follow the co-channel procedure above, except that the effective radiated power of the proposed stations shall be de-rated to account for Adjacent- Channel Coupled Power Ratio (ACCPR) effects. Please refer to the table below for the appropriate ACCPR values; note that the channel bandwidth should be larger than the technology-specific emissions bandwidth.



Potential Frequency Separations

Case	Spacing	ACCPR
25 kHz to 25 kHz	25 kHz	65 dB
25 kHz to 12.5 kHz	18.750 kHz	65 dB
25 kHz to 6.25 kHz	15.625 kHz	>40 dB
12.5 kHz to 12.5 kHz	12.5 kHz	65 dB
12.5 kHz to 6.25 kHz	9.375 kHz	>40 dB
6.25 kHz to 6.25 kHz	6.25 kHz	65 dB

ACCPR Values For Potential Frequency Separations

Applicants must provide data showing that practical field tests have been conducted. An overall

system diagram showing the latitude, longitude and elevation (meters) of the site(s), power out, ERP, and antenna height must be provided. In addition, the applicant must provide antenna specifications for each site(s).

Due to the existing TV assignments and HDTV assignments, most of Region 19 cannot use this spectrum until the HDTV implementation is completed. Given this date uncertainty, this plan does not limit an agency from initially planning/implementing a system (if it conforms to FCC rules).

Low Power Assignments

Channel assignments for low power portables shall have a maximum ERP of 2W. Low power mobiles shall be required to operate with an ERP of 2W with an antenna not to exceed seven meters from the ground elevation. An applicant may request, under special circumstances, an ERP of 5W for a mobile unit with the identified antenna restriction of seven meters.

REGION 19 REGIONAL PLANNING COMMITTEE SCORING PROCEDURES

Refer to Scoring Matrix and Matrix Worksheet located in Section 10.

REGION 19 700 MHz RPC APPLICATION PROCEDURES

To ensure that all eligible agencies have an equal opportunity to apply for the limited 769-775 MHz and 799-805 MHz spectrum approved by the Federal Communications Commission, the Region 19 Regional Planning Committee will accept applications from eligible entities during two application windows per year. The applications windows are established as of May 1 of each calendar year through October 31 of that same year, and November 1 of each calendar year through April 30 of the following year.

Application procedures for Region 19 comprise of the following steps:

- 1. Prior to submission of an application for General Use spectrum/reserve spectrum the Regional Planning Committee has adopted a policy that the applicant receives a signed approval letter from the Statewide Interoperability Coordinator (SWIC) of the applicant's State stating that the SIEC concurs that the application is consistent with the SCIP. If a SWIC is not present or appointed by a member state, the designated State Band Manager, or Interoperability Committee Chairman shall have the signature authority. If none exist the RPC will accept the application and decide the validity of the application.
- 2. Eligible Entity Submits Request for Channel Assignment. Eligible entity presents detailed application and request for channel assignment, in writing, to RPC. Proposals will be considered for State Frequencies, General Use Frequencies, or Interoperability Channels.

Each application must, as a minimum, contain:

• Specific Frequency Details

- Justification must show ALL intended system uses
- List of 6.25 KHz channels by number and frequency
- Channel Bandwidth showing each grouping of 6.25 KHz channels (See Appendix L)
- Technical Parameters
- Channel Loading and Use
- Area of Operation Map Detail
- Specific System Design Details
- Existing Allocations of Frequencies in all bands
- Functional Block Diagram of proposed system
- Preliminary Coverage and Interference Analysis
- Frequency givebacks (if applicable)
- An Interference Prediction Map using latest version of TIA/EIA TSB88 Guidelines
- Details of Interference Predictions and Protection

Applications must be submitted with a cover letter on official agency/organization letter head and signed by the chief elected official of the municipality (if a town-wide system) or the head of the organization requesting the frequencies if it is a single agency application.

Applications submitted without official cover letters will be rejected.

Each Applicant may also be required to:

- Present further details, or documentation, as requested by the RPC.
- Give formal presentation of application to the RPC.
- Be present, or have a representative present, during initial application review of the proposal and, if necessary, subsequent reviews by the Regional Planning Committee.
- 2. Planning Committee Reviews Proposal. The RPC begins review of application and proposal material.
- 3. RPC Resolves Proposal Conflicts or Errors and Recommends Frequency Channel Assignments. Intra-regional disputes resolved.
- 4. Regional Planning Committee Scores Application.
- 5. Entity Submits Application to Frequency Coordinator. The RPC reviews the application summary for accuracy and pre-coordination of frequencies and then forwards the application to the coordinator. The coordinator reviews current allotments and eligibility and resolves potential conflicts or issues.
- 6. Frequency Coordinator Resolves Application Conflicts.
- 7. Coordination with Adjacent Regions and Countries:

The regions adjacent to Region 19 are:

- Region 8: Southern New York and New Jersey
- Region 30: Northern New York Albany, except area of Southern New York (Region 8) and

New York – Buffalo (Region 55).

Refer to Appendix E for listing of Region states and counties. See Appendix N for Inter-Regional Dispute Resolution Agreement.

Canada is adjacent to Region 19. Refer to Section 9 for coordination procedures.

8. Coordinator Forwards Application to FCC.

The RPC performs database update.

9. FCC Issues License to Entity.

NEW ENGLAND REGION 19 REGIONAL INTEROPERABILITY (I/O) CHANNEL USAGE

The narrowband voice and data interoperability channels (sixty-four at 6.25 kHz bandwidth) are defined on a nationwide basis. Appendix A shows the designation of these channels as defined by the 700 MHz National Coordination Committee (NCC). Since they are nationwide channels, each channel must have the same usage within each region and across regional borders. They have been sub-divided into different service categories.

The current proposal, adopted by the NCC, is to use the ANSI/TIA 102 Standards (i.e., Project 25 digital protocols) as the Digital Interoperability Standard for the conventional-only mode of operation on the narrowband voice and data interoperability channels. There are two Calling channel sets and 30 Tactical channel sets. Channel Sets are comprised of two 6.25 kHz channels each. The Tactical channel sets are subdivided into the following categories:

- 4 for Emergency Medical Services,
- 4 for Fire Services.
- 4 for Law Enforcement Services,
- 2 for Mobile Repeater operation,
- 2 for Other Public Services.
- 12 for Public Safety General Services.
- 2 for Data.

Calling Channels

Two of the interoperability channels sets are reserved as "Calling Channels". Member states, that have interoperability systems, will define when and where the two calling channels are to be used. These calling channels, which appear in the Table of Interoperability Channels (Appendix A) as Common Name: 7CALL50 and 7CALL70 must be monitored, as appropriate, by licensees who employ interoperability infrastructure in the associated channel group. When calling channels are integrated into infrastructure, their coverage must at least match the coverage of the other interoperability channels in the system. In addition to the usual calling channel functions, the calling channels may to be used to notify users when a priority is declared on one or more of the tactical interoperability channels

Tactical Channels

Tactical channel users will contact a dispatch center on one of the "Calling Channels" and be assigned an available tactical channel. Deployable narrowband operations (voice, data, trunking) shall be afforded access to the same pool of channels used for similar fixed infrastructure operations. In the event of conflict between multiple activities, prioritized use shall occur.

Encryption

Use of encryption is prohibited on calling channels and permitted on all other interoperability channels. A standardized encryption algorithm for use on the interoperability channels must be TIA/EIA IS AAAAA Project 25 AES 256 encryption protocol.

Deployable Systems

Interoperability Public Safety Services Channels shall be made available for "deployable" equipment used during disasters and other emergency events that place a heavy, unplanned burden upon in-place radio systems. States (or Regional Planning Committees) shall consider the need for both "deployable trunked" and "deployable conventional" systems and make those channels available to all entities in their State/region.

Deployable systems are prepackaged systems that can deploy by ground or air to an incident to provide additional coverage and capacity on interoperability channels. This will minimize the expense of installing extensive fixed infrastructure. This Plan strongly supports use of deployable systems, both conventional and trunked, and recognizes the difficulty of providing complete coverage of the region due to environmental constraints.

Agencies are encouraged to have conventional deployable systems capable of being tuned to any of the interoperability channels. Those agencies that are part of a multi-agency trunk system and commonly provide mutual aid to each other are encouraged to have trunked, deployable systems that operate on the interoperability channels designated by the FCC for this use. The SIECs will develop the operational details for deploying these systems.

It is expected that the Reserve Channels identified as deployable outside of the urban areas specified in 90.303 and 90.305 (T-Band designated area) which are be tactical channels set aside for trunked operation will be heavily used by deployable systems.

Trunking on the Interoperability Channels

Trunking the Interoperability channels on a secondary basis shall be limited to operation on eight specific 12.5kHz channel sets. See Appendix A in the Table of Interoperability channels for the specific channel associated with the NCC Name and Common Name. The Common Name associated with these specific 12.5kHz channels is as follows: 7TAC51, 7TAC52, 7TAC53, 7TAC54, 7TAC71, 7TAC72, 7TAC73 and 7TAC74.

Any licensee implementing base station operation in a trunking mode on Interoperability Channels shall provide and maintain on a continuous (24 hr x 7 day) basis at its primary dispatch facility the capability to easily remove one or more of these interoperability channels, up to the maximum number of such trunking channels implemented, from trunking operation when a conventional access priority that is equal to or higher than their current priority is implemented. Use of the interoperability channels for day-to-day operations is not allowed. The RPC limits the number of Interoperability channels that may be integrated into any single trunked system.

For systems having 10 or fewer "general use" voice paths allocated, one (1) trunked Interoperability Channel set is permitted. For systems having more than 10 "general use" voice paths allocated, two (2) trunked Interoperability Channel sets are permitted. States (or Regional

Planning Committees) may consider allotting additional Interoperability Channel set(s) for trunked systems having more than 20 "general use" voice paths allocated upon a showing of need and upon a determination that assignment of the Interoperability Channel set(s) will not adversely impact availability of those channels to other trunked and/or conventional radio systems in the area (e.g. a single consolidated trunked system servicing all public safety agencies in an area might satisfy this criterion). The maximum number of Interoperability channel sets for trunked systems permitted for use by an individual licensee is four.

Standard Operating Procedures on the Trunked I/O Channels For I/O Situations Above Level 4

The safety and security of life and property determines appropriate interoperable priorities of access and/or reverting from secondary trunked to conventional operation. In the event secondary trunked access conflicts with conventional access for the same priority, conventional access shall take precedence. Access priority for "mission critical" communications is recommended as follows:

- 1. Disaster and extreme emergency operations for mutual aid and interagency communications;
- 2. Emergency or urgent operation involving imminent danger to life or property;
- 3. Special event control, generally of a preplanned nature (including Task Force operations);
- 4. Single agency secondary communications. [Priority 4 is the default priority when no higher priority has been declared.]

For those systems employing I/O channels in the trunked mode, the SIECs (or RPC) must set up interoperability talk groups and priority levels for those talk groups so that it is easy for dispatch to determine whether the trunked I/O conversation in progress has priority over the requested conventional I/O use. SIECs (or RPCs) must also determine whether a wide-area I/O conversation has priority over a local I/O conversation.

Standard Nomenclature

Standard nomenclature will be used so that all 700 MHz public safety subscriber equipment using an alphanumeric display is only permitted to show the recommended label from the Table in Appendix A when the radio is programmed to operate on the associated 700 MHz channel set. The Table shows the recommended label for equipment operating in the mobile relay (repeater) mode. When operating in direct (simplex) mode, the letter "D" appended to the end of the label is recommended.

Data Use of the I/O Channels

Narrowband data interoperability operation on the Interoperability channels on a secondary basis shall be limited to two specific 12.5 kHz channel sets. One set is defined by 7DATA69 and the second set is 7DATA89 as referenced in Appendix A. FCC's 700MHz Narrowbanding Report & Order (14-172) now allows voice operations on data interoperability channels on a secondary basis.

NEW ENGLAND REGION 19 ADDITIONAL SPECTRUM SET ASIDE FOR INTEROPERABILITY WITHIN THE REGION

Region 19 shall have the ability to assign additional spectrum for Interoperability. The spectrum will only be available for use within Region 19. Region 19 will designate which channels will be used out of the General Use spectrum and will update the NLECTC database. Region 19 will justify the assignment of this additional spectrum and include operational guidelines as well as user criteria with eligibility requirements. If Region 19 assigns additional spectrum for interoperability, concurrence from adjoining regions will be requested.

State Interoperability Executive Committees

State Interoperability Executive Committees (SIEC) will administer State Interoperability Plans in each of the member states. These plans include, but are not limited to, interoperability operations on the 700 MHz interoperability channels. These committees should include an equal number of representatives each providing regional representation from state, county/parish (where applicable), and local governments, with additional representation from special districts and federal agencies, as appropriate. Such committees may represent all disciplines, in which case emergency medical, fire, forestry, general government, law enforcement, and transportation agencies from each level of government shall be represented equally. Alternatively, Committees may represent a single discipline in which case it is only necessary to have membership from the different levels of government previously described.

The states within Region 19 will use the Incident Command System (ICS) as a guideline in developing their regional interoperability plans. The individual States will hold licenses on interoperability channels for all infrastructure and subscriber units within their state. The States will have oversight of the administration and technical parameters of the infrastructure for the interoperability channels within their state (or region).

Templates for a *Memorandum of Understanding for Operating the 700 MHz Interoperability Channels* and a *Sharing Agreement* are located in Appendices B and C respectively. The MOU shall be typed on appropriate committee letterhead and the Sharing Agreement on agency letterhead. (See Appendices B & C)

Minimum Channel Quantity

The minimum channel quantity for Calling and tactical channel sets requires 8 I/O channel slots in each subscriber unit. Including Direct (simplex) mode on these channel sets, up to 16 slots in each radio will be programmed for I/O purposes. Backbone issues are deferred to the SIECs and/or RPCs. Subscriber units, which routinely roam through more than one jurisdiction up to nationwide travel will require more than the minimum channel quantity.

The "CALL"ing channel sets, 7CALL50 and 7CALL70 shall be implemented in all voice subscriber units in repeat-mode and direct (simplex) mode. "Direct" mode is permitted in the absence of repeat operation or upon prior dispatch center coordination. If the local CALLing

channel set is not known, 7CALL50 shall be attempted first, then 7CALL70. Attempts shall be made on the repeater mode first then on the direct (simplex) mode.

This plan calls for a minimum of eight interoperability channel sets in each subscriber unit. Therefore, in addition to the two calling channel sets a minimum of six sets of tactical channel sets shall be implemented in every voice subscriber unit. Including direct (simplex) mode on these channel sets, 16 sets shall be programmed in each radio for interoperability purposes. Specific channel sets are shown below:

- 7CALL50 and 7CALL70
- 7TAC55 and 7TAC75
- 7TAC56 and 7TAC76
- 7GTAC57 and 7GTAC77

Direct (Simplex) Mode

In direct (simplex) mode, transmitting and receiving on the output (transmit) side of the repeater pair for subscriber unit-to-subscriber unit communications at the scene does not congest the repeater station with unnecessary traffic. However, should someone need the repeater to communicate with the party who is in "direct" mode, the party would hear the repeated message, switch back to the repeater channel, and join the communications. Therefore, operating in direct (simplex) mode shall only be permitted on the repeater output side of the voice I/O channel sets.

Common Channel Access Parameters

Common channel access parameters for all voice I/O shall utilize the default values (ANSI/TIA/EIA-102,BAAC-2000, approved April 25, 2000) provided in every radio regardless of manufacturer. Any common channel access parameters not provided shall be programmed accordingly. These parameters include the following:

- P25 Network Access Code \$293 (default value)
- P25 Manufacturers ID \$00 (default value)
- P25 Designation ID \$FFFFFF (designates everyone)
- P25 Talkgroup ID \$0001 (default value)
- P25 Message Indicator \$000000... 0, out to 24 zeros (unencrypted)
- P25 Key ID \$0000 (default value)
- P25 Algorithm ID \$80 (unencrypted)

Any deviation from P25 Network Access Code - \$293 (default value) will not be permitted unless the SIEC (or the RPC) can demonstrate in a Plan amendment through the FCC-approved process that the intent of P25 Network Access Code - \$293 (default value) will be preserved on ALL conventional voice I/O channels – transmit and receive.

Mobiles and Portables

Vehicular mobile units and hand-held portable units are to be configured for repeater operation on channel sets (769-775MHz receive, 799-805 MHz transmit) and for direct *talk-around* operation on channel sets (769-775 MHz transmit and receive).

Vehicular Repeaters

Vehicular repeaters (MO3 station class) and associated portable radios (MO station class) are to be configured on channel sets 7MOB59 and 7MOB79 as follows:

	<u>7MOB59</u>	<u>7MOB79</u>
MO3 RX	800.89375 MHz	804.50625 MHz
MO3 TX	770.89375 MHz	774.50625 MHz
MO RX	770.89375 MHz	774.50625 MHz
MO TX	800.89375 MHz	804.50625 MHz
MO Direct	770.89375 MHz	774.50625 MHz

These systems must maintain compliance with applicable FCC rules and regulations (47 CFR, Part 90), including but not limited to:

- Digital modulation (analog modulation permitted in a secondary mode in addition to the primary digital mode) per §90.535(a).
- Transmitter minimum data (non-voice) rate of 4.8 kbps per 6.25 kHz of bandwidth per §90.535(b).
- Frequency stability per §90.539(c).
- Mobile radio transmitters must not exceed 30 watts per §90.541 (b). This also associates with the VRS transmitter.
- Portable radio transmitters must not exceed three watts per §90.541 (c).
- Mobile and portable radio transmitters must comply with emission limitations per §90.543
- TV/DTV interference protection criteria per §90.545, as applicable.
- Per §90.547, mobile and portable radios must be capable of operating on all narrowband Interoperability channels, except as provided in §90.547(a)(1), (2), and (3).
- Project 25 FDMA common air interface per §90.548(a)(1).
- Per §90.553, encryption is permitted, but "... must have a readily accessible switch or other readily accessible control that permits the radio user to disable encryption.

NEW ENGLAND REGION 19 ALLOCATION OF "GENERAL USE" SPECTRUM

Region 19 uses the following pre-planning methods to avoid problems with adjacent Region coordination.

- 1. Region 19 will use the NPSTC-CAPRAD pre-designated initial allotments.
- 2. Applications within the Region will be handled on a first-come, first-served basis.

When allocating 700 MHz channels near the Region borders, multiples of 6.25 KHz units will be used to distribute spectrum. The use of 6.25 kHz units will allow for 12.5 and 25 KHz based technology and will allow for technology-neutral pre-planning.

If, after five years, the county or city/town has not built out a system at 700 MHz, its allotted frequencies will be placed back into the Region's 'general use' pool and be available to any applicant on a first-come, first-served basis.

Procedures for use near the Canadian border follow 47 CFR, Part 9, Subpart R - Regulations Governing the Licensing and Use of Frequencies in the 764-776 & 794-806 MHz Bands as excerpted below.

§ 90.533 Transmitting sites near the U.S./Canada or U.S./Mexico border.

This section applies to each license to operate one or more public safety transmitters in the 769-775 MHz and 799-805 MHz bands, at a location or locations North of Line A (*see*§ 90.7) or within 120 kilometers (75 miles) of the U.S.-Mexico border, until such time as agreements between the government of the United States and the government of Canada or the government of the United States and the government of Mexico, as applicable, become effective governing border area non-broadcast use of these bands. Public safety licenses are granted subject to the following conditions (See Appendix P):

- (a) Public safety transmitters operating in the 769-775 MHz and 799-805 MHz bands must conform to the limitations on interference to Canadian television stations contained in agreement(s) between the United States and Canada for use of television channels in the border area.
- **(b)** Public safety facilities must accept any interference that may be caused by operations of UHF television broadcast transmitters in Canada and Mexico.
- (c) Conditions may be added during the term of the license, if required by the terms of international agreements between the government of the United States and the government of Canada or the government of the United States and the government of Mexico, as applicable, regarding non-broadcast use of the 769-775 MHz and 799-805 MHz bands.

[43 FR 54791, Nov. 22, 1978, as amended at 67 FR 76700, Dec. 13, 2002; 72 FR 48861, Aug. 24, 2007

The NLECTC database and application flowchart must be used (see Section 7). The RPC and the frequency coordinators are responsible for ensuring that the information contained in the NLECTC database is updated when licenses are granted or canceled and/or allotments changed.

Low Power Secondary Operations

To facilitate portable operation by any licensee, and to provide channels for such operation without impacting the use of primary channels, certain low power secondary use will be permitted. Any public safety entity otherwise licensed to use one or more channels may receive authorization to license an additional channel for secondary use, subject to the following criteria:

- All operation of units on such authorized channels will be considered secondary to other licensees on both co-channel and adjacent channels.
- No channels on, or adjacent to, those designated in the Plan for wide area operation and/or mutual aid use will be authorized.
- Channels will be authorized for use in specific areas only; such areas to be within the licensees authorized operational area.
- Maximum power will be limited to 6 watts ERP.
- Use aboard aircraft is allowed to support Air-Ground communications by the FCC's 700MHz
 Narrowbanding Report & Order (14-172) for public safety aircraft voice operations at a
 height not to exceed 1500ft (457m) and power not to exceed 2W (ERP). Each applicant for
 Air-Ground spectrum shall notify the relevant State prior to filing a license application with
 the FCC and allow the State the opportunity to review the application and prepare a
 statement of concurrence.
- Applications for channels may be submitted to the RPC for consideration at any time and
 must be accompanied by a showing of need. The RPC may select and authorize licensing of
 these secondary use channels after consideration of potential interference to co-channel and
 adjacent channel allotments, allocations and licensees. Authorization may be granted for use
 of any suitable channel, without prior allotment or allocation to the requesting agency.
- In the event the channels authorized for low power secondary operation are needed by others during any window opening for reassignment, no protection will be afforded to the licensed secondary user, and they may be required to change frequencies or surrender licenses to prevent interference to primary use channels.

Low Power Channels

The FCC in the 700 MHz band plan set aside channels 1-8 paired with 961-968 and 949-958 paired with 1909-1918 for low power use for on-scene incident response purposes using mobiles and portables subject to Commission-approved regional planning committee regional plans. Transmitter power must not exceed 2 watts (ERP).

Channels 9 - 12 paired with 969 - 972 and 959 - 960 paired with 1919 - 1920 are licensed nationwide for itinerant operation. Transmitter power must not exceed 2 watts (ERP).

These channels may operate using analog operation. To facilitate analog modulation, this plan will allow aggregation of two channels for 12.5 kHz bandwidth. On scene temporary base and mobile relay stations are allowed (to the extent FCC rules allow) with an antenna height limit of 6.1-meter (20 feet) above the ground. However, users are encouraged to operate in simplex

mode whenever possible. This plan does not limit use to only analog operations; these channels are intended for use in a wide variety of applications that may require digital modulation types.

In its dialog leading up to CFR 90.531 allocating the twenty-four low power 6.25 kHz frequency pairs (of which eighteen fall under RPC jurisdiction), the FCC suggested that there is a potential for multiple low power applications, and absent a compelling showing, a sharing approach be employed rather than making exclusive assignments for each specific application because low power operations can co-exist [in relatively close proximity] on the same frequencies with minimal potential for interference due to the 2 watt power restrictions.

The following assignments associated with the eighteen narrowband channels are to be used:

- Channel numbers 1 4 and 949 952 are set aside as *generic base* channels for use by public safety agencies operating within Region 19, and the complementary channel #'s 961 964 and 1909 1912 are set aside as *generic mobile* channels also for use by public safety agencies likewise operating within Region 19.
- Channel numbers 5 8 are designated as *Fire Protection base* channels for licensing and exclusive use by the Fire Protection discipline, and the complementary channel #'s 965 968 are set aside as *Fire Protection mobile* channels also for licensing and exclusive use by the Fire Protection discipline.
- Channel numbers 953 956 are set aside as *Law Enforcement base* channels for licensing and exclusive use by the Law Enforcement discipline, and the complementary channel #'s 1913 1916 are set aside as *Law Enforcement mobile* channels also for licensing and exclusive use by the Law Enforcement discipline.
- Channel numbers 957 958 are set aside as *Fire Protection/Law Enforcement base* channels for licensing and use by the Fire Protection <u>and</u> Law Enforcement disciplines, and the complementary channel #'s 1917 1918 are set aside as *Fire Protection/Law Enforcement*.

Simplex operations may occur on either the base or mobile channels. Users are cautioned to coordinate on scene use among all agencies involved. Users should license multiple channels and be prepared to operate on alternate channels at any given operational area.

System Implementation

For the New England States, implementation of general use channels shall be governed by FCC rule 90.531 (b) and (c). (Refer to Appendix L.)

If an agency does not implement in the time frames specified, that agency's allotment may be removed from the allotment list. An Agency may file a request with the Region Chair for an extension of time to implement. The request should include all details describing why the agency has not implemented and a new implementation schedule. The Committee Chair will advertise this request and set a date for the full committee to vote on the request.

NEW ENGLAND - REGION 19 SCORING MATRIX - WORKSHEET

SCORING MATRIX

In order to evaluate competing applications within the Region, applications will be scored utilizing the following criteria:

- service,
- inter-systems communications,
- loading,
- spectrum efficient technology,
- systems implementation factors,
- geographic efficiency, and
- givebacks.

Point values for each criteria have been established and are listed below. For each window period, applications will be scored and listed in order of points awarded. Spectrum allocations will be awarded based upon the priority listing resulting from the award of points. In the event of a tie score, the date of receipt of the application will serve as the tiebreaker.

1. Service (Maximum Score - 720 Points)

The point value for the service category is determined by allocation of points as determined by the scoring for the particular service as listed in Table 1.1. For those multiple agency combinations, the awarded points are a function of the combined points for the respective services. Combined agency systems will be scored with the combined points of the two highest point valued agency scores. A multiple agency system with more than two agencies will benefit from the combination of points. A multiple agency system with more that two agencies will not receive an excessive point value under this approach, thereby minimizing any potential for token agency participation for the purpose of raising the point value. Assuming a hypothetical system of a combined police and fire (each agency categorized as A or 360 points each), the maximum points awarded would be 720 (360 + 360). A multiple agency system with combinations of lower point values would not be able to be scored higher than that single agency public safety system. The combination of D+C- or C-+ C, or D+C would only be, at the highest combination, 180 points (C- + C), which would be less than a B or A- or A single agency system. (See attached point combinations - Table 1.2)

Organizations are categorized by a letter value that equates to points. The letter value point scores are as follows:

A = 360 points

A = 300 points

B = 240 points

B-=180 points

C = 120 points

 $C_{-} = 60 \text{ points}$

D = 30 points

2. Intersystem Communications (Maximum score - 100 points)

Scoring for this section is based upon the degree of interoperability between government hierarchy levels and emergency services during times of an emergency. Applicants will be awarded points for the degree of interoperability demonstrated. Applicants shall indicate how the proposed system will achieve interoperability; specific information regarding the technology or method used must be submitted.

- Proposed systems providing for state, federal and local interoperability will be awarded 100 points;
- Proposed systems providing for state and local interoperability will be awarded 75 points;
- Proposed systems providing for only local interoperability will be awarded 50 points;
- Systems with no proposed interoperability will not receive any points in this category.

3. Loading (Maximum score - 150 points)

Is the system part of a cooperative, multi-organization system? Is the application an expansion of an existing 700, 806 and/or 821MHz system? Have all 806 and/or 821 channels been assigned (where technically feasible)? A showing of maximum efficiency or a demonstration of the system's mobile usage pattern will be required in addition to loading information. Additional factors to be considered are population, number of units, number of talk groups. Points are awarded in this category based upon the following criteria:

- For a statewide system, 150 points;
- For a multi-town system, 100 points;
- For a multi-agency system (single town), 50 points;
- For an all governmental agencies in a single jurisdiction, 125 points;
- For a cooperative system with less than all services, 25 points.

4. Spectrum Efficient Technology (Maximum score - 350 points)

How spectrally efficient is the system's technology? For voice systems the following criteria will be used. Trunked systems are considered efficient as are any technological systems feature which is designed to enhance the efficiency of the system and provide for the efficient use of the spectrum. Points are awarded in this category based upon the following criteria:

- For a trunked system, 150 points;
- For a non-trunked system, no points will be awarded;
- For a system utilizing 6.25kHz spacing, 100 points will be awarded;
- For a system utilizing 12.5kHz spacing, 50 points will be awarded;
- For a system utilizing 25kHz spacing, 0 points will be awarded;
- For a digital system, 50 points will be awarded;
- For an analog system, 0 points will be awarded;
- For a system with a low ERP (less than 200 watts), 50 points will be awarded;
- For a system with a high ERP (greater than 200 watts), no points will be awarded.

For data only systems the following criteria will be used;

- For 50 kHz systems, 200 points will be awarded;
- For 100 kHz systems, 100 points will be awarded;
- For 150 kHz systems, 50 points will be awarded;

- For digital systems, 50 points will be awarded;
- For data analog systems, 0 points will be awarded.

5. Systems Implementation Factors (Maximum score 100 points)

Scoring for this section is based upon funding and system planning. Applicants must provide complete engineering design and a construction/implementation schedule. If the proposed system is intended to be implemented under a slow growth (within the next five years), plan a statement to that effect must be included. If slow growth is not sought, a time table must be included that clearly defines the implementation schedule. The Chief Elected Official or the Chief Executive Officer of the organization submitting the application must submit funding documentation. The funding documentation must clearly state the funding source and must match the implementation schedule. Points in this category are awarded as follows:

- For a complete engineering design, 25 points;
- For an incomplete or no engineering design, minus 25 points;
- For a valid budget commitment, 25 points;
- For no budget commitment minus, 25 points;
- For proof of site acquisition or proof of existing site ownership, 25 points;
- For no site acquisition, minus 25 points;
- For signed CEO letter, 25 points;
- For failure to submit 20 copies, minus 25 points.

6. Geographic Efficient (Maximum Score - 100 points)

Scoring for this section is based upon the ratio of subscriber units (mobiles) to area covered and the channel reuse potential. The higher the ratio (mobiles divided by square miles of coverage), the more efficient the use of the frequencies. Those systems which cover large geographic areas will have a greater potential for channel reuse and will therefore receive a higher score in this subcategory. Points awarded in this category are as follows:

- For a statewide system, 100 points;
- For a county or regional system, 75 points;
- For a city/town system, 50 points;
- For a partial town/city system, minus 50 points.

7. Givebacks (Maximum score - 200 points)

Consider the number of channels given back, frequency band and bandwidth. Consider the extent of availability and usability of those channels to others. Points awarded in this category are awarded as follows:

- For low band givebacks, 50 points;
- For high band givebacks, 100 points;
- For UHF givebacks, 200 points;
- For 800Mhz givebacks, 200 points;
- For no give backs, minus 50 points;
- For long term give backs, minus 25 points.

In no case shall the total exceed the maximum value for this category. In the event the point combinations for givebacks exceed 200 points, only the maximum value of 200 will be assigned.

Point Summary

1.	Service	(Maximum score, 720 points)
2.	Intersystem Communications	(Maximum score, 100 points)
3.	Loading	(Maximum score, 150 points)
4.	Spectrum Efficient Technology	(Maximum score, 350 points)
5.	Systems Implementation Factors	(Maximum score, 100 points)
6.	Geographic Efficient	(Maximum score, 100 points)
7.	Givebacks	(Maximum score, 200 points)
T_{Ω}	tal Possible Points - Sum of All Cate	egories 1 720 points

Total Possible Points - Sum of All Categories

1,720 points

TABLE 1.1 - SERVICE CATEGORY CODES

<u>Service</u>	Code
Police	A
Auxiliary Police	A
Fire	A
	A
Municipal Emergency Medical Volunteer Rescue	A
	A
Ambulance Service - Public Safety	
Highway	A-
Forest Fire	A-
All Government	В
Security Patrol	В
Emergency Management	В
Conservation	В
Hospital	В
Disaster Relief Organizations	В
Transit Systems	B-
All Medical Services	B-
Utility Boards	C
School Boards	C
Invalid Coach	C
Physically Disabled	C
School Buses	C
Private	C
Public	C
OEM Evacuation Transit	C
Beach Patrol	C C
Communications Standby Fac.	C
Repair of Communications	C
Maintenance	C-
Physicians	C-
Veterinarians	C-
Non-Governmental	D

TABLE 1.2 SCORING POINT VALUES

Multiple Agency Combinations	Maximum Points
A+A	720
A+A-	660
A+B	600
A+B-	540
A+C	480
A+C-	420
A+D	390
A- + A-	600
A- +B-	540
A- +B-	480
A- +C	420
A- +C-	360
A- +D	330
B+B	600
B+B-	420
B+C	360
B+C-	300
B+D	270
B- + B-	360
B- + C	300
B- + C-	240
B- + D	240
C+C	180
C+C-	150
D+D	60

NEW ENGLAND REGION 19 COORDINATION WITH ADJACENT REGIONS

New England Region 19 will contact the chairs of the adjacent Regions to determine the status of their respective plans. Prior to submission to the Federal Communications Commission, Region 19 will obtain adjacent region concurrences.

Regions adjacent to Region 19 are Regions 8 and 30. Region 8 is comprised of Metropolitan New York and Region 30 is comprised of the majority of New York State. The contacts for these regions are:

Region 8, Metropolitan New York

Mr. Allen Demcoe
Chief, Office of Emergency Communications
Middlesex County Department of Public Safety and Health
1001 Fire Academy Drive
Sayreville, NJ 08872

Phone: (732) 316-7183 Fax: (516) 571-6407

Email: allen.demcoe@co.middlesex.nj.us

Region 30, New York State, northern and western counties

Mr. Lee Shurtleff 92 Brown Road Ithaca, NY 14850

Phone: (607) 257-3888

Email: lshurtleff@tompkins-co.org

Counties or other geographic subdivisions within 70 miles of the Regional border must share spectrum with the adjacent Region(s). The appropriate ratio of channels shall be allotted to counties/areas in adjacent Regions based upon each county's needs. The Region 19 Committee will use multiples of 6.25 KHz building blocks to conform with the national approach. Multiple blocks of 6.25 kHz may be allotted up to a total of 25 kHz. Since multiple technologies (FDMA, TDMA, etc.), bandwidths (6.25, 12.5, 25 kHz), and modulations will be available, multiple allotments of 6.25 KHz will accommodate users but avoid creation of orphan channels.

New England Region 19 700MHz Committee Certification

Regarding Public Access to Planning Committee Meetings

I hereby certify that all planning committee meetings were open to the public. Annual Meeting Notifications were sent to the Federal Communications Commission (FCC) in advance of the meetings and the FCC published a Public Notice

Notification was provided by mail or email sent to public safety and public service organizations and to organizations representing eligible agencies.

Minutes of some of the meetings are found in Appendix G. Minutes of all the meetings can be found at http://www.NER700MHZ.org

Some Meeting notices are found in Appendix J – FCC Notices and Bulletins. Most meeting notices can be found at http://www.FCC.gov using a word search "Region 19 (New England)".

The meeting email notification list is found in Appendix M – Notification List

Jerry Zarwanski

Chairman, New England Region 19 700MHz Committee

Juny Zerwansky 10/20/2015

Date

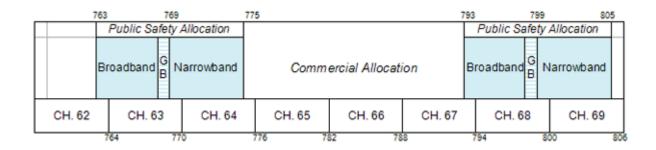
700MHz Spectrum Designation

On February 22, 2012, the U.S Congress enacted the Middle Class Tax Relief and Job Recovery Act of 2012 (Spectrum Act) which:

- Directed the Commission to allocate the D-Block (758-763 MHz / 788-793 MHz) to public safety for use in a nationwide broadband network; and
- Formed the First Responder Network Authority (FirstNet) as an independent authority
 within the U.S. Department of Commerce. FirstNet is charged with responsibilities for
 deploying and operating the nationwide public safety broadband network and will hold
 the license for both the existing public safety broadband spectrum (763-769 MHz/793799 MHz) and the reallocated D Block.
- Allocated up to \$7 billion dollars to FirstNet to construct this nationwide public safety broadband network.

The following figure depicts spectrum allocated for public safety in the 700 MHz band after enactment of the Spectrum Act.

700 MHz Band Plan for Public Safety Services



Narrowband Segment (769-775/799-805 MHz)

Part 2, Appendix A FCC Description of 700MHz Band for Public Safety

The Narrowband segment consists of 1920 6.25 kHz-wide channels operating as 960 pairs. Subject to compliance with spectrum usage efficiency requirements, licensees may combine two to four contiguous narrowband channels (6.25 kHz) to form 12.5 kHz and 25 kHz bandwidth channels. These channels are allocated into seven distinct groups and are governed by rules which are codified at 47 C.F.R. Part 90, Subpart R.

- Narrowband Interoperability Channels: 128 6.25 kHz-wide channels (64 pairs)
 designated for interoperability use, including data Interoperability channels, calling
 Interoperability channels, and trunking Interoperability channels. See 47 C.F.R. §
 90.531(b)(1). Administration of these channels occurs at the state level either by a State
 Interoperability Executive Committee (SIEC) or an equivalent agency. Link:
 http://www.fcc.gov/pshs/public-safety-spectrum/700-MHz/interoperability.html
- 2. General Use Channels: 1232 6.25 kHz-wide channels (616 pairs) designated for general use subject to Commission approved regional planning committee regional plans. See 47 C.F.R. § 90.531(b)(6).
- 3. General Use (Former Reserve Channels): 96 6.25 kHz-wide channels (48 pairs) designated in October 2014 for general use subject to Commission approved regional planning committee regional plans. Public safety incumbents relocating from the 470-512 MHz band (T-Band) in the urban areas specified in Sections 90.303 and 90.305 of the Commission's rules have priority access to these channels. Outside the urban areas specified in Sections 90.303 and 90.305 of the Commission's rules, no more than eight 12.5 kHz-wide channel pairs may be designated for temporary deployable mobile trunked infrastructure (F2BT) that could be transported into an incident area to assist with emergency response and recovery. See 47 C.F.R. § 90.531(b)(2).
- 4. State Channels: 384 channels (192 pairs) directly licensed to each state, territory, district and possession. See 47 C.F.R. § 90.531(b)(5).

- 5. Air-Ground Channels: 32 6.25 kHz-wide channels (16 pairs) reserved for air-ground communications to be used by low-altitude aircraft and ground based stations. See 47 C.F.R. § 90.531(b)(7).
- 6. Narrowband Low Power Channels: 36 channels 6.25 kHz-wide (18 pairs) designated for low power use for on-scene incident response purposes using mobiles and portables. These channels are subject to regional planning. See 47 C.F.R. § 90.531(b)(3).
- 7. Narrowband Low Power Itinerant: 12 6.25 kHz-wide channels (6 pairs) designated for low power use for on-scene incident response purposes using mobiles and portables. These channels are not subject to regional plans. See 47 C.F.R. § 90.531(b)(4).

Applications for the 700 MHz Public Safety General Use channels must be reviewed and approved by the appropriate Regional Planning Committee within the area of proposed operation, prior to submission to a FCC certified public safety frequency coordinator. See http://www.fcc.gov/pshs/public-safety-spectrum/coord.html. For more information on how to apply for and obtain RPC approval for 700 MHz General Use spectrum in your area, see http://transition.fcc.gov/pshs/public-safety-spectrum/700-MHz/regional-planning.html. An interactive map of 700 MHz RPC regions is also available at

700 MHz Regional Planning

The general use channels and some of the narrowband low power channels are subject to regional planning. There are 55 Regional Planning Committees (RPCs), whose task is to create a plan for General Use in their area is used and submit it to the FCC. The Regional Planning page includes information on regional maps and plans, regional planning committees, and the latest information on regional planning committee meetings. Link:

http://transition.fcc.gov/pshs/public-safety-spectrum/700-MHz/regional-planning.html

700 MHz BAND PLAN per Second R&O in PS Docket 06-229

960 Narrowband Base Channels (6.25 kHz each, aggregate to 25 kHz)

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12	191	233	311	393	174 274
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89	148	228	308	388	897
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£9	271 143	224 224	303	383	797 897
79	742	222	302	382	797
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09	140	220	300	380	097
69	139	219	567	6 2 E	697
89	138	218	298	878	458
78	137	217	792	377	754
99 99	136	216 216	262 262	375 375	997
79 79	134	214	205	375	997 797
23	133	213	293	878	423
25	132	212	292	372	452
19	131	211	162	178	197
09	130	210	580	370	d20
67	159	500	580	698	677
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9t	126	202	285	998	<u> </u>
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77	124	204	284	798	777
43	123	203	283	363	443
45	122	202	282	362	442
17 07	121	201	281	198	lbb
	120	500	280	360	044
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532	612	Z69	277	862	633
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230	019	069	022	098	930
629	609	689	694	648	676
828	809	889	894	848	826
527	Z 09	Z 89	494	748	726
979	909	989	994	948	976
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523	603	683	£97	843	923
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929	009	089	094	048	920
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029 619 819 219 819 419 609 809 409 809 409 809 409 809	009 669 869 269 969 969 769 269 169 069 689 889 289	089 649 849 149 949 949 949 849 149 049 899 499	09/ 69/ 89/ 99/ 99/ 99/ 59/ 59/ 19/ 66/ 86/ 86/ 96/ 96/ 96/ 96/ 96/ 96/ 96/ 96/ 96/ 9	048 658 858 658 968 968 968 968 968 968 968 968 968 96	076 616 816 216 916 916 516 516 116 016 606 806 206
079 619 819 219 919 919 719 809 809 209 909 909	009 669 869 269 969 969 769 269 169 069 689 889 289	089 649 849 149 949 949 949 849 149 049 899 499 999	09/ 69/ 89/ 99/ 99/ 99/ 59/ 59/ 69/ 69/ 84/ 44/ 94/ 94/ 94/ 94/ 94/ 94/ 94/ 94/ 9	0†8 658 858 458 958 958 958 958 458 958 458 958 978 978 978	076 616 816 216 916 916 516 516 516 016 606 806 206
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079 619 819 219 819 219 819 719 609 809 809 209 909 909	009 669 869 269 969 969 769 269 169 069 689 889 289	089 649 849 149 949 949 949 849 149 049 899 499 999	09/ 69/ 89/ 99/ 99/ 99/ 59/ 59/ 69/ 69/ 84/ 44/ 94/ 94/ 94/ 94/ 94/ 94/ 94/ 94/ 9	0†8 658 858 458 958 958 958 958 458 958 458 958 978 978 978	026 616 816 216 916 916 716 616 616 616 616 616 616 616 616 6
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029 619 819 219 219 219 219 219 219 219 209 809 209 909 909 909 909 909 909	009 669 869 269 969 969 269 269 689 889 289 989 989 989 589 589	089 629 829 249 829 829 829 829 829 829 829 839 839 839 839 839 839 839 839 839 83	09/ 69/ 89/ 99/ 99/ 99/ 59/ 59/ 69/ 64/ 84/ 74/ 94/ 54/ 54/ 54/ 54/ 54/ 54/ 54/ 54/ 54/ 5	078 628 868 428 968 968 468 468 468 468 468 468 468 468 468 4	026 616 816 916 916 916 216 016 606 906 406 906 906 906 506 606 906
029 619 819 919 919 719 609 809 209 909 909 909 909 909 909	009 669 869 969 969 769 669 689 889 989 989 989 989 189	089 629 829 829 729 829 829 829 829 829 829 829 829 829 8	09/ 69/ 89/ 99/ 99/ 99/ 99/ 69/ 69/ 89/ 49/ 99/ 99/ 99/ 99/ 99/ 99/ 99/ 99/ 9	078 668 968 968 968 968 968 968 968 968 96	026 616 816 916 916 916 716 606 806 906 906 906 506 706 706
029 619 819 219 919 719 819 719 809 809 209 909 909 909 709 809 109 809	009 669 869 869 969 969 969 769 689 889 489 989 489 989 789 889 889 889 889 889 889 889	089 629 829 829 829 829 829 829 829 829 829 8	09/ 69/ 89/ 89/ 99/ 99/ 99/ 69/ 19/ 09/ 64/ 84/ 44/ 94/ 94/ 94/ 94/ 94/ 94/ 94/ 94/ 9	078 608 808 908 908 908 908 908 908 908 908 9	026 616 816 216 916 916 116 016 006 906 906 906 906 106 006
029 619 919 919 919 919 919 119 019 609 809 409 909 409 909 409 909 409 664 864 464 464 464 464 464 464 464 464	009 669 869 869 969 969 769 689 889 889 889 889 889 889 889 889 8	089 629 829 829 829 829 829 829 829 829 839 839 839 839	09/ 69/ 89/ 99/ 99/ 99/ 99/ 79/ 69/ 99/ 99/ 99/ 99/ 99/ 99/ 99/ 99/ 9	078 668 868 968 968 968 968 968 968 968 168 678 978 978 978 978 978 978 978 978 978 9	026 616 816 916 916 916 216 216 116 016 806 906 906 906 206 006 668
029 619 819 219 919 919 919 119 019 609 809 909 909 909 109 009 66b 86b 26b	009 669 869 869 969 969 769 689 889 989 989 989 189 089 649 849	089 629 829 429 929 929 129 629 629 629 629 629 629 629 629 629 6	09/ 69/ 89/ 99/ 99/ 99/ 99/ 69/ 69/ 69/ 99/ 99/ 9	078 668 868 968 968 968 968 968 968 168 678 678 978 978 978 178 978 618 818 818 918	026 616 816 916 916 916 116 016 606 906 906 906 106 006 668 868 868
029 619 819 919 919 719 719 719 719 719 719 719 7	009 669 869 869 969 969 769 769 769 769 769 769 769 7	089 629 829 829 829 829 829 829 829 829 829 8	09/ 69/ 89/ 49/ 99/ 99/ 99/ 69/ 49/ 49/ 49/ 49/ 49/ 49/ 49/ 49/ 49/ 4	078 668 928 928 928 928 928 928 928 928 928 92	026 616 816 916 916 916 516 516 516 516 606 806 506 506 506 506 668 888 468 468 968
029 619 819 219 919 919 819 819 819 819 809 209 809 209 809 209 809 209 864 464 464 464 464 464 464 464 464 464	009 669 869 869 969 969 769 769 769 769 769 769 769 7	629 629 629 629 629 629 629 629 629 629	994 694 894 194 994 994 994 994 194 194 1	078 668 858 958 958 758 958 758 758 958 758 758 758 958 758 978 978 978 978 978 978 978 978 978 97	026 616 816 916 916 916 716 016 606 606 706 906 706 606 608 868 868 468 968 968
029 619 819 919 919 919 619 609 809 809 909 909 909 709 869 869 469 469 869 869 869 869 869 869 869 869 869 8	009 669 869 869 969 969 769 689 889 889 889 889 889 889 889 889 8	089 629 829 829 829 829 829 829 829 829 829 8	09/ 69/ 89/ 99/ 99/ 99/ 99/ 59/ 19/ 09/ 60/ 40/ 40/ 40/ 40/ 40/ 40/ 40/ 40/ 40/ 4	078 668 868 968 968 968 968 968 968 968 96	026 616 816 916 916 916 116 016 606 906 406 906 106 006 106 668 968 968 968 968 968 968
029 619 819 219 919 919 919 919 919 919 919 909 909 9	009 669 869 969 969 769 669 869 869 869 889 889 889 889 889 8	089 629 829 829 829 829 829 829 829 829 829 8	09/ 69/ 89/ 99/ 99/ 99/ 99/ 99/ 99/ 9	948 948 948 948 948 948 948 948	026 616 816 916 916 916 116 016 006 906 206 106 006 668 868 468 968 968 968 968 968 968
029 619 819 919 919 919 719 719 719 719 719 719 7	009 669 869 869 969 969 769 769 769 769 769 769 769 7	089 629 829 829 829 829 829 829 839 839 839 839 839 839 839 839 839 83	994 694 894 198	078 668 828 928 728 728 928 728 728 728 728 728 728 728 728 728 7	026 616 816 916 916 916 516 516 516 516 606 806 506 506 506 668 868 868 968 968 968 968 768 768
029 619 819 919 919 919 919 119 609 109 609 209 909 209 209 809 209 809 209 860 860 860 860 860 860 860 860 860 860	009 669 869 869 969 969 769 769 769 769 889 889 889 889 889 889 889 889 889 8	629 629 629 629 629 629 629 629 629 629	994 694 894 994 994 994 994 994 994 9	018 018 018 018 018 018 018 018 018 018	026 616 816 916 916 916 716 016 606 806 706 906 706 668 868 468 968 968 968 968 968 968 968 968
029 619 819 919 919 919 919 919 919 919 919 9	009 669 869 869 969 969 769 669 869 869 869 869 889 889 889 889 8	089 629 829 829 829 829 829 829 829 829 829 8	994 694 994 994 994 994 994 994	078 668 868 968 968 968 968 968 968 968 96	026 616 816 916 916 916 216 016 016 606 906 406 906 006 608 968 468 968 468 968 468 268 168 868 268 168
029 619 819 219 919 919 919 119 019 609 809 909 909 909 709 600 809 600 806 406 600 806 406 600 806 600 806 600 806 600 806 600 806 806	009 669 869 869 969 969 769 669 869 869 889 889 889 889 889 889 8	089 629 829 829 829 829 829 829 829 839 839 839 839 839 839 839 839 839 83	994 694 894 1994 994 994 994 1994	078 668 868 968 968 968 968 968 968 968 96	026 616 816 916 916 916 716 116 016 606 906 906 706 706 106 908 868 468 968 868 468 968 868 868 868 868 868 868 868 888 88
029 619 819 919 919 919 919 919 919 919 919 9	009 669 869 869 969 969 769 669 869 869 869 869 889 889 889 889 8	089 629 829 829 829 829 829 829 839 839 839 839 839 839 839 839 839 83	994 694 994 994 994 994 994 994	078 668 828 928 428 928 928 428 928 928 928 928 928 928 928 928 928 9	026 616 816 916 916 916 516 516 516 516 606 806 506 506 506 668 888 968 968 968 968 968 968 968 96
029 619 819 919 919 919 719 719 719 719 719 719 7	009 669 869 869 969 769 769 769 769 769 769 769 769 7	089 629 829 829 829 829 829 829 829 839 839 839 839 839 839 839 839 839 83	994 694 994 994 994 994 994 994	078 668 858 958 958 758 958 758 758 758 758 758 758 758 758 758 7	026 616 816 916 916 916 216 016 606 606 906 206 206 006 668 868 968 468 968 968 168 968 168 888 988 988
029 619 819 919 919 919 919 119 609 109 609 209 909 209 209 809 809 809 809 809 809 809 809 809 8	009 669 869 869 869 869 869 869 869 869 86	689 629 829 829 829 829 829 829 839 839 839 839 839 839 839 839 839 83	994 694 994 994 994 994 994 994	078 668 828 928 428 928 928 428 928 928 928 928 928 928 928 928 928 9	026 616 816 916 916 916 516 516 516 516 606 806 506 506 506 668 888 968 968 968 968 968 968 968 96
029 619 819 919 919 919 919 119 019 609 909 909 909 109 909 109 009 860 860 860 860 860 860 860 860 860 860	009 669 869 869 969 969 769 689 889 889 889 889 889 889 889 889 8	089 629 829 829 829 829 829 829 829 829 829 8	994 694 994 994 994 994 994 994	078 668 858 958 768 768 768 768 768 768 768 768 768 76	026 616 816 216 916 216 016 606 606 206 006 608 868 268 268 268 268 268 268 268 268 26

Narrowband Channels

- Two may be combined provided that the lower channel number is odd (e.g., 1, 3, 5)
- Four may be combined provide that the lower channel number is 1 + 4n, n = 0 to 479 (e.g., 1, 5, 1917)
 - Channel numbers for combined channels are designated by the lowest and highest channel numbers separated by a hyphen, e.g., "1-2" and "1-4".
- Narrowband channels must maintain a data throughput efficiency of not less than 4.8 kbps for each 6.25 kHz of bandwidth



960 Narrowband Mobile Channels (6.25 kHz each, aggregate to 25 kHz)

	1040	1120	1200	1280	1360	1440
	1039	6111	1166	1279	1326	1436
		_			1358	1438
	1038	8111	8611	1278	1350	_
	1037	7111	7611	1277	1357	1437
	1036	9111	9611	1276	1326	1436
		_				
	1032	9111	9611	1275	1322	1432
	1034	カルル	†611	1274	1324	1434
	1033	1113	1193	1273	1323	1433
		_				
	1032	1112	1192	1272	1352	1432
	1031	1111	1611	1221	1351	1431
	1030	0111	0611	1270	1320	1430
		_	=			_
	1029	6011	6811	1269	1346	1429
	1028	8011	8811	1268	1348	1428
	1027	7011	7811	1267	1347	1427
				_		
	1026	9011	9811	1266	1346	1426
	1025	9011	1182	1265	1342	1425
	1024	1104	1184	1264	1344	1424
	1023		1183	_		1423
		1103		1263	1343	
	1022	1102	1182	1262	1342	1422
	1021	1011	1811	1261	1341	1421
	1020	1100	1180	1260	1340	1450
		_				
	6101	660 l	6211	1526	1339	6171
	8101	1098	8711	1258	1338	1418
	2101	Z601	2211	1257	1337	ZI 71
	9101	9601	9211	1256	1336	9141
	1015	960 L	9211	1255	1332	1412
	1014	⊅60↓	ヤムトト	1254	1334	カレカレ
	1013	1093	1173	1253	1333	1413
	1012	1092	1172	1252	1332	1412
	101	1601	1211	1251	1331	1171
	1010	1090	0711	1250	1330	0141
	6001	1089	6911	1249	1329	60tl
	1008	1088	1168	1248	1328	1408
		_				_
	7001	7801	7911	1247	1327	7041
	9001	9801	9911	1546	1326	9071
	1002	1082	1165	1542	1325	1402
		_				_
	1004	1084	t911	1244	1324	1404
	1003	1083	1163	1243	1323	1403
	1002	1082	1162	1242	1322	1402
	1001	1801	1911	1241	1321	1011
	1000	1080	1160	1240	1320	1400
	0001 666					
	666	6Z01	6911	1539	1319	1399
	666 866	8701	8911 8911	1238	8151 9151	1398
	866 266	8701 8701	1158 1158	1237 1238	1317 8181 9181	1398 8681
	666 866	8701	8911 8911	1238	8151 9151	1398
	866 266 266 966	8701 8701	1128 1128 1124	1236 1238 1238	81E1 81E1 91E1	8681 2681 9681
	666 866 266 966 966	8701 8701 8701	1128 1128 1129 1129	1236 1237 1238 1239	6181 8181 2181 9181 9181	8681 2681 9681 9681
	666 866 266 966 966 766	9201 9201 8701 8701	6911 8911 9911 9911	1235 1235 1236 1236 1239	6181 2181 9181 9181 9181	6681 8681 2681 9681 9681
	666 866 266 966 966	8701 8701 8701	1128 1128 1129 1129	1236 1237 1238 1239	6181 8181 2181 9181 9181	8681 2681 9681 9681
	666 866 266 966 966 766 \$66	8201 9701 5701 4701 5701	6911 8911 2911 9911 7911	1239 1236 1236 1236 1236 1239	6181 2181 9181 9181 9181	8681 2681 9681 9681 9681 9681
	866 866 266 966 966 766 \$66	2701 8701 6701 8701 8701 8701	2311 2311 2311 3311 6311 8311 6311	1233 1236 1236 1236 1236 1239	2181 8181 8181 7181 8181 8181	2681 2681 2681 2681 2681 2681 2681 2681
	666 866 266 966 966 766 866 766	2701 5701 5701 5701 5701 5701 6701	2911 2911 2911 2911 2911 2911 6911	1233 1233 1236 1236 1238 1238 1238	2181 2181 2181 2181 2181 2181 1181	1981 2981 2981 2981 2981 3981 8981
	866 866 266 966 966 766 \$66	701 701 7701 7701 7701 7701 8701 8701 8701	1311 1311	1230 1231 1232 1236 1236 1238 1238 1238	0161 1161 2161 2161 4161 3161 8161 8161	8681 2681 9681 9681 9681 7681 7681 7681 7681 7681
	666 866 266 966 966 766 866 766	2701 5701 5701 5701 5701 5701 6701	2911 2911 2911 2911 2911 2911 6911	1233 1233 1236 1236 1238 1238 1238	2181 2181 2181 2181 2181 2181 1181	1981 2981 2981 2981 2981 3981 8981
	666 866 266 966 966 \$66 \$66 \$66 \$66 \$66 \$	6201 6201 6201 6201 6201 6201 6201 6201 6301	6511 8911 9911 9911 5911 7911 1911 1911	9221 9221 9221 9221 9221 1236 1236 1236 1236 1239	9081 9181 9181 5181 5181 5181 8181 8181	6851 6861 6861 6661 6661 6661 6661 6661
	666 866 266 966 966 \$66 \$66 266 166 066 686 886	8701 8701 8701 8701 8701 8701 8701 8701	6911 8911 2911 9911 5911 7911 2911 1911 0911 6711 8711	8221 8221 1236 1236 1236 1236 1236 1236 1236 1	9061 9061 9161 9161 9161 9161 9161 9161	1388 1386 1396 1396 1430 1430 1430 1430 1430 1430 1430 1430
	666 866 266 966 966 \$66 \$66 \$66 \$66 \$66 \$	8201 8201 2201 9201 7201 7201 7201 7201 7201 7201 7201 8901 7201	8911 8911 2911 9911 9911 7911 2911 2911 1911 0911 6711 8711	1238 1238 1239 1239 1239 1231 1231 1231 1231 1231	8051 1306	4368 368
	666 866 266 966 966 \$66 \$66 266 166 066 686 886	8701 8701 8701 8701 8701 8701 8701 8701	6911 8911 2911 9911 5911 7911 2911 1911 0911 6711 8711	8221 8221 1236 1236 1236 1236 1236 1236 1236 1	9061 9061 9161 9161 9161 9161 9161 9161	8681 4681 4681 9681 4681
	666 866 266 966 966 \$66 \$66 \$66 \$66 \$66 \$	8201 8201 2201 9201 7201 7201 7201 7201 7201 7201 7201 8901 7201	8911 8911 2911 9911 9911 7911 2911 2911 1911 0911 6711 8711	1238 1238 1239 1239 1239 1231 1231 1231 1231 1231	8051 1306	4368 368
	666 866 266 966 966 666 666 666 886 886 286	8201 2201 9201 9201 9201 9201 2201 1201 1201 1301	6911 8911 2911 9911 9911 7911 2911 2911 1911 8711 2711 2711 8711 9711	1238 1238 1238 1238 1238 1238 1238 1231 1231	1306 1306 1306 1316 1317 1317 1318 1318 1318 1319 1300 1300 1300 1300 1300	43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861 43861
	666 866 266 966 966 \$66 266 166 066 686 886 286 986 \$86	8201 2201 9201 9201 7201	6911 8911 2911 9911 9911 4911 8911 8911 8911 4911 9911 9911	1236 1236 1236 1236 1237 1237 1237 1237 1237 1230 1237 1237 1237 1237 1237 1237 1237 1237	1306 1306 1306 1316 1317 1318 1318 1318 1318 1319 1319 1318 1319 1319	43861 43861
	666 866 266 966 966 \$66 266 166 066 686 886 286 \$986 \$986	6201 8201 2201 9201 9201 9201 5201 5201 1201 6901 8901 2901 9901 9901 5901	6911 8911 2911 9911 9911 6911 6911 6911 8911 2911 9911 9911 9911	1221 1221 1236 1236 1236 1237 1231 1231 1231 1231 1231 1231 1231	1305 1305 1316 1316 1316 1316 1306	9681 9681 9681 9681 9681 9681 6681 6681 6881 8881 2881 9881 9881 9881
	666 866 266 966 966 \$66 266 166 066 686 886 286 986 \$86	8201 2201 9201 9201 7201	6911 8911 2911 9911 9911 4911 8911 8911 8911 4911 9911 9911	1236 1236 1236 1236 1237 1237 1237 1237 1237 1230 1237 1237 1237 1237 1237 1237 1237 1237	1306 1306 1306 1316 1317 1318 1318 1318 1318 1319 1319 1318 1319 1319	43861 43861
	666 866 266 966 966 766 766 686 886 286 986 286	6201 8201 2201 9201 9201 7201 7201 7201 7201 7201 8901 9901 9901 9901 9901 9901 9901	6911 8911 2911 9911 7911 7911 7911 6711 8711 2711 9711 7711 7711	12321 1236 1236 1236 1236 1236 1236 1237 1236 1237 1237 1237 1237 1237 1237 1237 1237	6181 9181 9181 9181 9181 9181 9181 9081 9081 9081 9081 9081 9081 9081	6661 8661 2661 9661 9661 9661 2661 2661 2661 6861 8861 2861 2861 2861 2861 2861
	666 866 266 966 766 766 766 766 886 886 486 986 986 986 986 \$86	6201 8201 2201 9201 9201 7201 7201 7201 7201 7201 8901 7901 7901 7901 7901 7901	6911 8911 9911 9911 7911 7911 7911 8711 9711 9	6521 4521	6181 4181 4181 4181 4181 4181 4181 4181 4081	6681 8681 2681 9681 9681 8681 2681 1681 0681 6881 2881 2881 2881 7881 7881 7881
	666 866 466 966 966 966 966 666 686 886 886 986 486 986 986 186 886	6201 8201 2201 9201 9201 9201 9201 9201 2201 1201 6901 8901 2901 9901 9901 5901 5901 5901 5901 5901	6911 8911 2911 9911 7911 8911 8911 0911 6711 8711 9711 7711 7711 7711 7711	6221 4221	9161 9161	6681 8681 2681 9681 9681 9681 6681 6681 8881 2881 9881 9881 9881 9881 9881 9881 9881
	666 866 266 966 766 766 766 766 886 886 486 986 986 986 986 \$86	6201 8201 2201 9201 9201 7201 7201 7201 7201 7201 8901 7901 7901 7901 7901 7901	6911 8911 9911 9911 7911 7911 7911 8711 9711 9	6521 4521	6181 4181 4181 4181 4181 4181 4181 4181 4081	6681 8681 2681 9681 9681 8681 2681 1681 0681 6881 2881 2881 2881 7881 7881 7881
	666 866 466 966 966 966 966 666 686 886 886 986 486 986 986 186 886	6201 8201 2201 9201 9201 9201 9201 9201 2201 1201 6901 8901 2901 9901 9901 5901 5901 5901 5901 5901	6911 8911 2911 9911 7911 8911 8911 0911 6711 8711 9711 7711 7711 7711 7711	6221 4221	9161 9161	6681 8681 2681 9681 9681 9681 6681 6681 8881 2881 9881 9881 9881 9881 9881 9881 9881
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	6191	6691	6291	6921	9881	6161
	1518	1298	8791	1758	1838	8161
	7131	7631	ZZ91	7371	1837	Z161
	1216	9691	9291	9921	1836	9161
			9291	_		9161
	1919	9691		9971	1835	
	1914	⊅691	4791	₱9Z1	1834	1914
	1513	1293	£791	1753	1833	1913
	1512	1692	1672	1752	1832	1912
	1191	1691	1291	1921	1831	1161
	1210	1290	0291	1750	1830	0161
	6091	6891	6991	6t71	1829	6061
	1508	1588	8991	8471	18281	8061
	1991	1587	7991	7471	1827	۷06۱
	1206	1586	9991	9471	1856	9061
	1202	1282	1992	1745	1825	9061
	1204	1584	1991	1744	1824	1904
	1203	1583	1663	1743	1823	1903
	1502	1582	1662	1742	1822	1902
	1901	1581	1991	1471	1821	1061
	1200	1580	0991	1740	1820	1900
	66†l	6731	6991	1739	6181	1899
	867l	1578	1658	1738	1818	1898
	764r	1577	1657	1737	7181	7681
	9671	9291	1656	9871	1816	9681
	9671	9291	1655	1735	1815	9681
	7671	7231	1991	1734	1814	1891
		1573	1653	1733	1813	1893
	1493				=	
	1492	1572	1652	1732	1812	1892
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	1483	1563	1643	1723	1803	1883
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	1481	1991	1491	1721	1801	1881
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	8741 8741 8741 8741	8991 2991 2991 9991	1635 1636 1636 1636	8121 9121 9121	8671 8671 9671 8671	8781 8781 8781
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	64+1 82+1 42+1 92+1 92+1 92+1 92+1 92+1 92+1 92+1 92+1 93+1	1569 1567 1567 1568 1568 1568 1568 1568 1568 1668 1668	1639 1636 1636 1637 1637 1630 1630 1630 1630 1630 1630 1630 1630	8121 9121	8621 8621 9621 9621 7621	8981 8781 8781 8781 8781 8781 8781 8781
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	6271 8271 8271 8271 9271 9271 9271 9271 9271 9271 9271 9	6991 4991	6291 4291	6121 8121 2121 9121 9121 9121 9121 9121 9121 9121 9121 9091 9691	6621 8621 9621 9621 9621 9621 6621 6621 6821 8821 8821 4821 8821 8821 8821 8821 8221 4821 8221 4221	6281 8281 2281 9281 9281 9281 2281 6981 9981 2981
	62#1 82#1 22#1 92#1 92#1 92#1 92#1 92#1 92#1 9	6991 8991 9991	6291 8291 9291 9291 9291 9291 9291 9291 9	6121 8121 2121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9691	6621 8621 9621 9621 9621 9621 6621 6621 6821 9821 9821 9821 9821 8821 8821 8821 8821 8221	6281 8281 2281 2281 2281 2281 2281 2281 2381
	62tl 82tl 82tl 82tl 82tl 82tl 82tl 92tl 92tl 92tl 92tl 92tl 92tl 92tl 9	6291 4291	6291 8291 9291 9291 9291 9291 9291 9291 9	6121 8121 9121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9691	6621 8621 8621 9621 9621 9621 9621 1621 0621 1621 9821 9821 9821 1821 1821 1821 1821 18	6281 8281 4281 9281
	62#1 82#1 22#1 92#1 92#1 92#1 92#1 92#1 92#1 9	6991 8991 9991	6291 8291 9291 9291 9291 9291 9291 9291 9	6121 8121 2121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9691	6621 8621 9621 9621 9621 9621 6621 6621 6821 9821 9821 9821 9821 8821 8821 8821 8821 8221	6281 8281 2281 2281 2281 2281 2281 2281 2381
	62tl 82tl 82tl 82tl 82tl 82tl 82tl 92tl 92tl 92tl 92tl 92tl 92tl 92tl 9	6291 4291	6291 8291 9291 9291 9291 9291 9291 9291 9	6121 8121 9121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9691	6621 8621 8621 9621 9621 9621 9621 1621 0621 1621 9821 9821 9821 1821 1821 1821 1821 18	6281 8281 4281 9281
z_i	62+1 82+1 82+1 22+1 92+1 92+1 92+1 92+1 92+1 92+1 9	6991 8991 9991 9991 9991 9991 1991 0991 1993 1993 1994	6291 8291 9291 9291 9291 9291 9291 9291 9	6121 8121 2121 9121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9691	6621 8621 8621 9621 9621 9621 9621 1621 9621 1621 9621 1621 9821 1821 1821 9821 1821 9821 1821 9821 1821 921 1921 1	6281 8281 2281 9281 9281 9281 1281 0281 1281 0381 1381
IHz	62tl 82tl 82tl 22tl 92tl 92tl 92tl 92tl 92tl 92tl 9	6991 8991 9991	1629 1629	6121 8121 2121 9121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9691 9891	6621 8621 9621 9621 9621 9621 9621 9621 9621 9	6281 8281 4281 4281 9281 9281 9281 9281 9381 9381 9381 9381 9381 9381 9381 93
MHz	62th 82th 82th 82th 82th 82th 92th 92th 92th 92th 92th 92th 92th 9	6991 8981 9981	6291 8291 9291 9291 9291 9291 9291 9291 9	6121 8121 9121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9691	6621 8621 8621 9621 9621 9621 9621 9621 9621 9621 9	6281 8281 2281 2281 2281 2281 2281 2281
02 MHz	62+1 82+1 22+1 92+1 92+1 92+1 92+1 92+1 92+1 9	6991 8991 9991 9991 9991 9991 9991 9991	6291 8291 9291 9291 9291 9291 9291 9291 9	6121 8121 2121 9121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9031 9691 9891	6621 8621 8621 9621 9621 9621 9621 9621 1621 9621 1621 9821 9821 1821 9821 1821 9821 1821 18	6281 8281 2281 9281 9281 9281 1281 0281 1281
802 MHz	62th 82th 82th 82th 82th 82th 92th 92th 92th 92th 92th 92th 92th 9	6991 8981 9981	6291 8291 9291 9291 9291 9291 9291 9291 9	6121 8121 9121 9121 9121 9121 9121 9121 9121 9121 9121 9031 9691	6621 8621 8621 9621 9621 9621 9621 9621 9621 9621 9	6281 8281 2281 2281 2281 2281 2281 2281

Narrowband Channels

- Two may be combined provided that the lower channel number is odd (e.g., 1, 3, 5) Four may be combined provide that the lower channel number is 1 + 4n, n = 0 to 479 (e.g., 1, 5, 1917)
- Channel numbers for combined channels are designated by the lowest and highest channel numbers separated by a hyphen, e.g., "1-2" and "1-4". Narrowband channels must maintain a data throughput efficiency of not less than 4.8 kbps for each 6.25 kHz of bandwidth

700 MHz Narrowband Public Safety Band Plan

There are 960 6.25 kHz bandwidth channel pairs in the narrowband block of the US 700 MHz public safety band. These are normally aggregated into 480 12.5 kHz bandwidth channel pairs which are used for trunking, conventional interoperability, low power vehicular repeaters, etc.

700 MHz Public Safety Aggregated 12.5 kHz Channels

Base Freq	Mobile Freq	Class	FCC Channel No.
769.00625	799.00625	Low Power (Regional)	1-2 / 961-962
769.01875	799.01875	Low Power (Regional)	3-4 / 963-964
769.03125	799.03125	Low Power (Regional)	5-6 / 965-966
769.04375	799.04375	Low Power (Regional)	7-8 / 967-968
769.05625	799.05625	Low Power (Nationwide Itinerant)	9-10 / 969-970
769.06875	799.06875	Low Power (Nationwide Itinerant)	11-12 / 971-972
769.08125	799.08125	General Use	13-14 / 973-974
769.09375	799.09375	General Use	15-16 / 975-976
769.10625	799.10625	General Use	17-18 / 977-978
769.11875	799.11875	General Use	19-20 / 979-980
769.13125	799.13125	Secondary Trunking	21-22 / 981-982
769.14375	799.14375	Interoperability 7TAC51	23-24 / 983-984
769.15625	799.15625	State License	25-26 / 985-986
769.16875	799.16875	State License	27-28 / 987-988

769.18125	799.18125	State License	29-30 / 989-990
769.19375	799.19375	State License	31-32 / 991-992
769.20625	799.20625	State License	33-34 / 993-994
769.21875	799.21875	State License	35-36 / 995-996
769.23125	799.23125	Reserve	37-38 / 997-998
769.24375	799.24375	Interoperability 7CAL50	39-40 / 999-1000
769.25625	799.25625	General Use	41-42 / 1001-1002
769.26875	799.26875	General Use	43-44 / 1003-1004
769.28125	799.28125	General Use	45-46 / 1005-1006
769.29375	799.29375	General Use	47-48 / 1007-1008
769.30625	799.30625	General Use	49-50 / 1009-1010
769.31875	799.31875	General Use	51-52 / 1011-1012
769.33125	799.33125	General Use	53-54 / 1013-1014
769.34375	799.34375	General Use	55-56 / 1015-1016
769.35625	799.35625	General Use	57-58 / 1017-1018
769.36875	799.36875	General Use	59-60 / 1019-1020
769.38125	799.38125	Reserve	61-62 / 1021-1022
769.39375	799.39375	Interoperability 7MED65	63-64 / 1023-1024
769.40625	799.40625	State License	65-66 / 1025-1026
769.41875	799.41875	State License	67-68 / 1027-1028
769.43125	799.43125	State License	69-70 / 1029-1030
769.44375	799.44375	State License	71-72 / 1031-1032
769.45625	799.45625	State License	73-74 / 1033-1034

769.46875	799.46875	State License	75-76 / 1035-1036
769.48125	799.48125	Reserve	77-78 / 1037-1038
769.49375	799.49375	Interoperability 7MED66	79-80 / 1039-1040
769.50625	799.50625	General Use	81-82 / 1041-1042
769.51875	799.51875	General Use	83-84 / 1043-1044
769.53125	799.53125	General Use	85-86 / 1045-1046
769.54375	799.54375	General Use	87-88 / 1047-1048
769.55625	799.55625	General Use	89-90 / 1049-1050
769.56875	799.56875	General Use	91-92 / 1051-1052
769.58125	799.58125	General Use	93-94 / 1053-1054
769.59375	799.59375	General Use	95-96 / 1055-1056
769.60625	799.60625	General Use	97-98 / 1057-1058
769.61875	799.61875	General Use	99-100 / 1059-1060
769.63125	799.63125	Secondary Trunking	101-102 / 1061-1062
769.64375	799.64375	Interoperability 7TAC52	103-104 / 1063-1064
769.65625	799.65625	State License	105-106 / 1065-1066
769.66875	799.66875	State License	107-108 / 1067-1068
769.68125	799.68125	State License	109-110 / 1069-1070
769.69375	799.69375	State License	111-112 / 1071-1072
769.70625	799.70625	State License	113-114 / 1073-1074
769.71875	799.71875	State License	115-116 / 1075-1076
769.73125	799.73125	Reserve	117-118 / 1077-1078
769.74375	799.74375	Interoperability 7TAC55	119-120 / 1079-1080

769.75625 799.75625 General Use 121-122 / 1081-1082 769.76875 799.76875 General Use 123-124 / 1083-1084 769.78125 799.78125 General Use 125-126 / 1085-1086 769.79375 799.79375 General Use 127-128 / 1087-1088 769.80625 799.80625 General Use 129-130 / 1089-1090 769.81875 799.81875 General Use 131-132 / 1091-1092 769.83125 799.83125 General Use 133-134 / 1093-1094 769.84375 799.84375 General Use 137-138 / 1097-1096 769.85625 799.85625 General Use 137-138 / 1097-1098 769.86875 799.86875 General Use 139-140 / 1099-1100 769.89125 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.991875 799.991875 State License 147-148 / 1107-1108 769.993125 799.91325 State License 151-152 / 1111-1112 769.994375 799.994375 State License 153-154 / 1113-1114 769.995625 799.96875 <t< th=""><th></th><th></th><th></th><th></th></t<>				
769.78125 799.78125 General Use 125-126 / 1085-1086 769.79375 799.79375 General Use 127-128 / 1087-1088 769.80625 799.80625 General Use 129-130 / 1089-1090 769.81875 799.81875 General Use 131-132 / 1091-1092 769.83125 799.83125 General Use 133-134 / 1093-1094 769.84375 799.84375 General Use 135-136 / 1095-1096 769.85625 799.85625 General Use 137-138 / 1097-1098 769.86875 799.86875 General Use 139-140 / 1099-1100 769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.991875 799.991875 State License 147-148 / 1107-1108 769.991875 799.91875 State License 147-148 / 1107-1108 769.994375 799.94375 State License 151-152 / 1111-1112 769.995625 799.95625 State License 153-154 / 1113-1114 769.99375 799.99875 7	769.75625	799.75625	General Use	121-122 / 1081-1082
769.79375 799.79375 General Use 127-128 / 1087-1088 769.80625 799.80625 General Use 129-130 / 1089-1090 769.81875 799.81875 General Use 131-132 / 1091-1092 769.83125 799.81325 General Use 133-134 / 1093-1094 769.84375 799.84375 General Use 135-136 / 1095-1096 769.85625 799.85625 General Use 137-138 / 1097-1098 769.86875 799.86875 General Use 139-140 / 1099-1100 769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.991875 799.90625 State License 147-148 / 1107-1108 769.91875 799.91875 State License 149-150 / 1109-1110 769.93125 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.99375 799.99375 Int	769.76875	799.76875	General Use	123-124 / 1083-1084
769.80625 799.80625 General Use 129-130 / 1089-1090 769.81875 799.81875 General Use 131-132 / 1091-1092 769.83125 799.83125 General Use 133-134 / 1093-1094 769.84375 799.84375 General Use 135-136 / 1095-1096 769.85625 799.85625 General Use 137-138 / 1097-1098 769.86875 799.86875 General Use 139-140 / 1099-1100 769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 TINTERE63 143-144 / 1103-1104 769.90625 799.90625 State License 145-146 / 1105-1106 769.91875 799.91875 State License 147-148 / 1107-1108 769.93125 799.93125 State License 151-152 / 1111-1112 769.94375 799.94375 State License 153-154 / 1113-1114 769.96875 799.96875 State License 157-158 / 1117-1116 769.99375 799.99375 Reserve 157-158 / 1117-1118 769.99375 799.99375 TINTERE64	769.78125	799.78125	General Use	125-126 / 1085-1086
769.81875 799.81875 General Use 131-132 / 1091-1092 769.83125 799.83125 General Use 133-134 / 1093-1094 769.84375 799.84375 General Use 135-136 / 1095-1096 769.85625 799.85625 General Use 137-138 / 1097-1098 769.86875 799.86875 General Use 139-140 / 1099-1100 769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.91875 799.90625 State License 147-148 / 1107-1108 769.91875 799.91875 State License 149-150 / 1109-1110 769.93125 799.93125 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 157-158 / 1117-1118 769.99375 799.99375 Reserve 157-158 / 1117-1118 769.99375 799.99375 FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use </td <td>769.79375</td> <td>799.79375</td> <td>General Use</td> <td>127-128 / 1087-1088</td>	769.79375	799.79375	General Use	127-128 / 1087-1088
769.83125 799.83125 General Use 133-134 / 1093-1094 769.84375 799.84375 General Use 135-136 / 1095-1096 769.85625 799.85625 General Use 137-138 / 1097-1098 769.86875 799.86875 General Use 139-140 / 1099-1100 769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.90625 799.90625 State License 145-146 / 1105-1106 769.91875 799.91875 State License 147-148 / 1107-1108 769.93125 799.93125 State License 151-152 / 1111-1112 769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 799.99375 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Us	769.80625	799.80625	General Use	129-130 / 1089-1090
769.84375 799.84375 General Use 135-136 / 1095-1096 769.85625 799.85625 General Use 137-138 / 1097-1098 769.86875 799.86875 General Use 139-140 / 1099-1100 769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.90625 799.90625 State License 147-148 / 1107-1108 769.91875 799.91875 State License 149-150 / 1109-1110 769.93125 799.93125 State License 151-152 / 1111-1112 769.94375 799.94375 State License 153-154 / 1113-1114 769.95625 799.95625 State License 153-154 / 1113-1114 769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.81875	799.81875	General Use	131-132 / 1091-1092
769.85625 799.85625 General Use 137-138 / 1097-1098 769.86875 799.86875 General Use 139-140 / 1099-1100 769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.90625 799.90625 State License 145-146 / 1105-1106 769.91875 799.91875 State License 147-148 / 1107-1108 769.93125 799.93125 State License 149-150 / 1109-1110 769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.99375 799.99375 Reserve 157-158 / 1117-1118 769.99375 799.99375 TInteroperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.83125	799.83125	General Use	133-134 / 1093-1094
769.86875 799.86875 General Use 139-140 / 1099-1100 769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 143-144 / 1103-1104 769.90625 799.90625 State License 145-146 / 1105-1106 769.91875 799.91875 State License 147-148 / 1107-1108 769.93125 799.93125 State License 149-150 / 1109-1110 769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.99375 799.99375 Reserve 157-158 / 1117-1118 769.99375 799.99375 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.84375	799.84375	General Use	135-136 / 1095-1096
769.88125 799.88125 Reserve 141-142 / 1101-1102 769.89375 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.90625 799.90625 State License 145-146 / 1105-1106 769.91875 799.91875 State License 147-148 / 1107-1108 769.93125 799.93125 State License 149-150 / 1109-1110 769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.85625	799.85625	General Use	137-138 / 1097-1098
769.89375 799.89375 Interoperability 7FIRE63 143-144 / 1103-1104 769.90625 799.90625 State License 145-146 / 1105-1106 769.91875 799.91875 State License 147-148 / 1107-1108 769.93125 799.93125 State License 149-150 / 1109-1110 769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 T99.99375 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.86875	799.86875	General Use	139-140 / 1099-1100
769.89375 799.89375 7FIRE63 143-144 / 1103-1104 769.90625 799.90625 State License 145-146 / 1105-1106 769.91875 799.91875 State License 147-148 / 1107-1108 769.93125 799.93125 State License 149-150 / 1109-1110 769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.99375 799.99375 Reserve 157-158 / 1117-1118 769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.88125	799.88125	Reserve	141-142 / 1101-1102
769.91875 799.91875 State License 147-148 / 1107-1108 769.93125 799.93125 State License 149-150 / 1109-1110 769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 TINteroperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.89375	799.89375	*	143-144 / 1103-1104
769.93125 799.93125 State License 149-150 / 1109-1110 769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.90625	799.90625	State License	145-146 / 1105-1106
769.94375 799.94375 State License 151-152 / 1111-1112 769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.91875	799.91875	State License	147-148 / 1107-1108
769.95625 799.95625 State License 153-154 / 1113-1114 769.96875 799.96875 State License 155-156 / 1115-1116 769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.93125	799.93125	State License	149-150 / 1109-1110
769.96875 799.96875 State License 155-156 / 1115-1116 769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.94375	799.94375	State License	151-152 / 1111-1112
769.98125 799.98125 Reserve 157-158 / 1117-1118 769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.95625	799.95625	State License	153-154 / 1113-1114
769.99375 799.99375 Interoperability 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.96875	799.96875	State License	155-156 / 1115-1116
769.99375 799.99375 7FIRE64 159-160 / 1119-1120 770.00625 800.00625 General Use 161-162 / 1121-1122 770.01875 800.01875 General Use 163-164 / 1123-1124	769.98125	799.98125	Reserve	157-158 / 1117-1118
770.01875 800.01875 General Use 163-164 / 1123-1124	769.99375	799.99375	1 "	159-160 / 1119-1120
	770.00625	800.00625	General Use	161-162 / 1121-1122
770.03125 800.03125 General Use 165-166 / 1125-1126	770.01875	800.01875	General Use	163-164 / 1123-1124
	770.03125	800.03125	General Use	165-166 / 1125-1126

770.04375	800.04375	General Use	167-168 / 1127-1128
770.05625	800.05625	General Use	169-170 / 1129-1130
770.06875	800.06875	General Use	171-172 / 1131-1132
770.08125	800.08125	General Use	173-174 / 1133-1134
770.09375	800.09375	General Use	175-176 / 1135-1136
770.10625	800.10625	General Use	177-178 / 1137-1138
770.11875	800.11875	General Use	179-180 / 1139-1140
770.13125	800.13125	Secondary Trunking	181-182 / 1141-1142
770.14375	800.14375	Interoperability 7TAC53	183-184 / 1143-1144
770.15625	800.15625	State License	185-186 / 1145-1146
770.16875	800.16875	State License	187-188 / 1147-1148
770.18125	800.18125	State License	189-190 / 1149-1150
770.19375	800.19375	State License	191-192 / 1151-1152
770.20625	800.20625	State License	193-194 / 1153-1154
770.21875	800.21875	State License	195-196 / 1155-1156
770.23125	800.23125	Reserve	197-198 / 1157-1158
770.24375	800.24375	Interoperability 7TAC56	199-200 / 1159-1160
770.25625	800.25625	General Use	201-202 / 1161-1162
770.26875	800.26875	General Use	203-204 / 1163-1164
770.28125	800.28125	General Use	205-206 / 1165-1166
770.29375	800.29375	General Use	207-208 / 1167-1168
770.30625	800.30625	General Use	209-210 / 1169-1170
770.31875	800.31875	General Use	211-212 / 1171-1172
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770.33125	800.33125	General Use	213-214 / 1173-1174
770.34375	800.34375	General Use	215-216 / 1175-1176
770.35625	800.35625	General Use	217-218 / 1177-1178
770.36875	800.36875	General Use	219-220 / 1179-1180
770.38125	800.38125	Reserve	221-222 / 1181-1182
770.39375	800.39375	Interoperability 7LAW61	223-224 / 1183-1184
770.40625	800.40625	State License	225-226 / 1185-1186
770.41875	800.41875	State License	227-228 / 1187-1188
770.43125	800.43125	State License	229-230 / 1189-1190
770.44375	800.44375	State License	231-232 / 1191-1192
770.45625	800.45625	State License	233-234 / 1193-1194
770.46875	800.46875	State License	235-236 / 1195-1196
770.48125	800.48125	Reserve	237-238 / 1197-1198
770.49375	800.49375	Interoperability 7LAW62	239-240 / 1199-1200
770.50625	800.50625	General Use	241-242 / 1201-1202
770.51875	800.51875	General Use	243-244 / 1203-1204
770.53125	800.53125	General Use	245-246 / 1205-1206
770.54375	800.54375	General Use	247-248 / 1207-1208
770.55625	800.55625	General Use	249-250 / 1209-1210
770.56875	800.56875	General Use	251-252 / 1211-1212
770.58125	800.58125	General Use	253-254 / 1213-1214
770.59375	800.59375	General Use	255-256 / 1215-1216
770.60625	800.60625	General Use	257-258 / 1217-1218
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770.61875	800.61875	General Use	259-260 / 1219-1220
770.63125	800.63125	Secondary Trunking	261-262 / 1221-1222
770.64375	800.64375	Interoperability 7TAC54	263-264 / 1223-1224
770.65625	800.65625	State License	265-266 / 1225-1226
770.66875	800.66875	State License	267-268 / 1227-1228
770.68125	800.68125	State License	269-270 / 1229-1230
770.69375	800.69375	State License	271-272 / 1231-1232
770.70625	800.70625	State License	273-274 / 1233-1234
770.71875	800.71875	State License	275-276 / 1235-1236
770.73125	800.73125	Reserve	277-278 / 1237-1238
770.74375	800.74375	Interoperability 7DATA69	279-280 / 1239-1240
770.75625	800.75625	General Use	281-282 / 1241-1242
770.76875	800.76875	General Use	283-284 / 1243-1244
770.78125	800.78125	General Use	285-286 / 1245-1246
770.79375	800.79375	General Use	287-288 / 1247-1248
770.80625	800.80625	General Use	289-290 / 1249-1250
770.81875	800.81875	General Use	291-292 / 1251-1252
770.83125	800.83125	General Use	293-294 / 1253-1254
770.84375	800.84375	General Use	295-296 / 1255-1256
770.85625	800.85625	General Use	297-298 / 1257-1258
770.86875	800.86875	General Use	299-300 / 1259-1260
770.88125	800.88125	Reserve	301-302 / 1261-1262
770.89375	800.89375	Interoperability 7MOB59	303-304 / 1263-1264

770.90625 800.90625 State License 305-306 / 1265-1266 770.91875 800.91875 State License 307-308 / 1267-1268 770.93125 800.93125 State License 309-310 / 1269-1270 770.94375 800.94375 State License 311-312 / 1271-1272 770.95625 800.95625 State License 315-316 / 1275-1276 770.96875 800.96875 State License 317-318 / 1277-1278 770.98125 800.98125 Reserve 317-318 / 1277-1278 770.99375 800.99375 Interoperability 7GTAC57 319-320 / 1279-1280 771.00625 801.00625 General Use 321-322 / 1281-1282 771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 327-328 / 1287-1288 771.04375 801.04375 General Use 329-330 / 1289-1290 771.06875 801.05625 General Use 331-332 / 1291-1292 771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 Ge				
770.93125 800.93125 State License 309-310 / 1269-1270 770.94375 800.94375 State License 311-312 / 1271-1272 770.95625 800.95625 State License 313-314 / 1273-1274 770.96875 800.96875 State License 315-316 / 1275-1276 770.98125 800.98125 Reserve 317-318 / 1277-1278 770.99375 800.99375 Interoperability 7GTAC57 319-320 / 1279-1280 771.00625 801.00625 General Use 321-322 / 1281-1282 771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.06875 801.05625 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 331-332 / 1291-1292 771.09375 801.09375 General Use 335-336 / 1295-1296 771.11875 801.10625 General Use 337-338 / 1297-1298 771.113725 801.113725 Gene	770.90625	800.90625	State License	305-306 / 1265-1266
770.94375 800.94375 State License 311-312 / 1271-1272 770.95625 800.95625 State License 313-314 / 1273-1274 770.96875 800.96875 State License 315-316 / 1275-1276 770.98125 800.98125 Reserve 317-318 / 1277-1278 770.99375 800.99375 Interoperability 7GTAC57 319-320 / 1279-1280 771.00625 801.00625 General Use 321-322 / 1281-1282 771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.0875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 341-342 / 1301-1302 771.14375 801.14375 General U	770.91875	800.91875	State License	307-308 / 1267-1268
770.95625 800.95625 State License 313-314 / 1273-1274 770.96875 800.96875 State License 315-316 / 1275-1276 770.98125 800.98125 Reserve 317-318 / 1277-1278 770.99375 800.99375 Interoperability 7GTAC57 319-320 / 1279-1280 771.00625 801.00625 General Use 321-322 / 1281-1282 771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 341-342 / 1301-1302 771.14375 801.13125 General Use 343-344 / 1303-1304 771.15625 801.15625 General Us	770.93125	800.93125	State License	309-310 / 1269-1270
770.96875 800.96875 State License 315-316 / 1275-1276 770.98125 800.98125 Reserve 317-318 / 1277-1278 770.99375 800.99375 Interoperability 7GTAC57 319-320 / 1279-1280 771.00625 801.00625 General Use 321-322 / 1281-1282 771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.11875 801.11875 General Use 337-338 / 1297-1298 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.16875 801.16875 General Use<	770.94375	800.94375	State License	311-312 / 1271-1272
770.98125 800.98125 Reserve 317-318 / 1277-1278 770.99375 800.99375 Interoperability 7GTAC57 319-320 / 1279-1280 771.00625 801.00625 General Use 321-322 / 1281-1282 771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.11875 801.10625 General Use 337-338 / 1297-1298 771.13125 801.11875 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.16875 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use <td>770.95625</td> <td>800.95625</td> <td>State License</td> <td>313-314 / 1273-1274</td>	770.95625	800.95625	State License	313-314 / 1273-1274
770.99375 800.99375 Interoperability 7GTAC57 319-320 / 1279-1280 771.00625 801.00625 General Use 321-322 / 1281-1282 771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.11875 801.10625 General Use 337-338 / 1297-1298 771.13125 801.11875 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	770.96875	800.96875	State License	315-316 / 1275-1276
770.99375 800.99375 7GTAC57 319-320/1279-1280 771.00625 801.00625 General Use 321-322 / 1281-1282 771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	770.98125	800.98125	Reserve	317-318 / 1277-1278
771.01875 801.01875 General Use 323-324 / 1283-1284 771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	770.99375	800.99375		319-320 / 1279-1280
771.03125 801.03125 General Use 325-326 / 1285-1286 771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 339-340 / 1299-1300 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.00625	801.00625	General Use	321-322 / 1281-1282
771.04375 801.04375 General Use 327-328 / 1287-1288 771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 339-340 / 1299-1300 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.01875	801.01875	General Use	323-324 / 1283-1284
771.05625 801.05625 General Use 329-330 / 1289-1290 771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 339-340 / 1299-1300 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.03125	801.03125	General Use	325-326 / 1285-1286
771.06875 801.06875 General Use 331-332 / 1291-1292 771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 339-340 / 1299-1300 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.04375	801.04375	General Use	327-328 / 1287-1288
771.08125 801.08125 General Use 333-334 / 1293-1294 771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 339-340 / 1299-1300 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.05625	801.05625	General Use	329-330 / 1289-1290
771.09375 801.09375 General Use 335-336 / 1295-1296 771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 339-340 / 1299-1300 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.06875	801.06875	General Use	331-332 / 1291-1292
771.10625 801.10625 General Use 337-338 / 1297-1298 771.11875 801.11875 General Use 339-340 / 1299-1300 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.08125	801.08125	General Use	333-334 / 1293-1294
771.11875 801.11875 General Use 339-340 / 1299-1300 771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.09375	801.09375	General Use	335-336 / 1295-1296
771.13125 801.13125 General Use 341-342 / 1301-1302 771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.10625	801.10625	General Use	337-338 / 1297-1298
771.14375 801.14375 General Use 343-344 / 1303-1304 771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.11875	801.11875	General Use	339-340 / 1299-1300
771.15625 801.15625 General Use 345-346 / 1305-1306 771.16875 801.16875 General Use 347-348 / 1307-1308	771.13125	801.13125	General Use	341-342 / 1301-1302
771.16875 801.16875 General Use 347-348 / 1307-1308	771.14375	801.14375	General Use	343-344 / 1303-1304
	771.15625	801.15625	General Use	345-346 / 1305-1306
771.18125 801.18125 General Use 349-350 / 1309-1310	771.16875	801.16875	General Use	347-348 / 1307-1308
	771.18125	801.18125	General Use	349-350 / 1309-1310

771.19375	801.19375	General Use	351-352 / 1311-1312
771.20625	801.20625	General Use	353-354 / 1313-1314
771.21875	801.21875	General Use	355-356 / 1315-1316
771.23125	801.23125	General Use	357-358 / 1317-1318
771.24375	801.24375	General Use	359-360 / 1319-1320
771.25625	801.25625	General Use	361-362 / 1321-1322
771.26875	801.26875	General Use	363-364 / 1323-1324
771.28125	801.28125	General Use	365-366 / 1325-1326
771.29375	801.29375	General Use	367-368 / 1327-1328
771.30625	801.30625	General Use	369-370 / 1329-1330
771.31875	801.31875	General Use	371-372 / 1331-1332
771.33125	801.33125	General Use	373-374 / 1333-1334
771.34375	801.34375	General Use	375-376 / 1335-1336
771.35625	801.35625	General Use	377-378 / 1337-1338
771.36875	801.36875	General Use	379-380 / 1339-1340
771.38125	801.38125	General Use	381-382 / 1341-1342
771.39375	801.39375	General Use	383-384 / 1343-1344
771.40625	801.40625	General Use	385-386 / 1345-1346
771.41875	801.41875	General Use	387-388 / 1347-1348
771.43125	801.43125	General Use	389-390 / 1349-1350
771.44375	801.44375	General Use	391-392 / 1351-1352
771.45625	801.45625	General Use	393-394 / 1353-1354
771.46875	801.46875	General Use	395-396 / 1355-1356

771.48125 801.48125 General Use 397-398 / 1357-1358 771.49375 801.49375 General Use 399-400 / 1359-1360 771.50625 801.50625 General Use 401-402 / 1361-1362 771.51875 801.51875 General Use 403-404 / 1363-1364 771.53125 801.53125 General Use 405-406 / 1365-1366 771.54375 801.54375 General Use 407-408 / 1367-1368 771.55625 801.55625 General Use 409-410 / 1369-1370 771.56875 801.56875 General Use 411-412 / 1371-1372 771.58125 801.58125 General Use 413-414 / 1373-1374 771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.61875 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 421-422 / 1381-1382 771.63125 801.63125 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 427-428 / 1387-1388 771.68125 801.68125 General Use				
771.50625 801.50625 General Use 401-402 / 1361-1362 771.51875 801.51875 General Use 403-404 / 1363-1364 771.53125 801.53125 General Use 405-406 / 1365-1366 771.54375 801.54375 General Use 407-408 / 1367-1368 771.55625 801.55625 General Use 409-410 / 1369-1370 771.56875 801.56875 General Use 411-412 / 1371-1372 771.58125 801.58125 General Use 413-414 / 1373-1374 771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.65625 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 427-428 / 1387-1388 771.68125 801.68125 General Use 427-428 / 1389-1390 771.69375 801.69375 General Use	771.48125	801.48125	General Use	397-398 / 1357-1358
771.51875 801.51875 General Use 403-404 / 1363-1364 771.53125 801.53125 General Use 405-406 / 1365-1366 771.54375 801.54375 General Use 407-408 / 1367-1368 771.55625 801.55625 General Use 409-410 / 1369-1370 771.56875 801.56875 General Use 411-412 / 1371-1372 771.58125 801.58125 General Use 413-414 / 1373-1374 771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 427-428 / 1387-1388 771.68125 801.68125 General Use 427-428 / 1389-1390 771.69375 801.69375 General Use 431-432 / 1391-1392 771.71875 801.71875 General Use	771.49375	801.49375	General Use	399-400 / 1359-1360
771.53125 801.53125 General Use 405-406 / 1365-1366 771.54375 801.54375 General Use 407-408 / 1367-1368 771.55625 801.55625 General Use 409-410 / 1369-1370 771.56875 801.56875 General Use 411-412 / 1371-1372 771.58125 801.58125 General Use 413-414 / 1373-1374 771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.66875 801.65625 General Use 425-426 / 1385-1386 771.68125 801.68125 General Use 427-428 / 1387-1388 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.73125 801.73125 General Use	771.50625	801.50625	General Use	401-402 / 1361-1362
771.54375 801.54375 General Use 407-408 / 1367-1368 771.55625 801.55625 General Use 409-410 / 1369-1370 771.56875 801.56875 General Use 411-412 / 1371-1372 771.58125 801.58125 General Use 413-414 / 1373-1374 771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.66875 801.68125 General Use 427-428 / 1387-1388 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375	771.51875	801.51875	General Use	403-404 / 1363-1364
771.55625 801.55625 General Use 409-410 / 1369-1370 771.56875 801.56875 General Use 411-412 / 1371-1372 771.58125 801.58125 General Use 413-414 / 1373-1374 771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.688125 801.66875 General Use 427-428 / 1387-1388 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.73125 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 439-440 / 1399-1400	771.53125	801.53125	General Use	405-406 / 1365-1366
771.56875 801.56875 General Use 411-412 / 1371-1372 771.58125 801.58125 General Use 413-414 / 1373-1374 771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.68125 801.66875 General Use 427-428 / 1387-1388 771.69375 801.68125 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.73125 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.54375	801.54375	General Use	407-408 / 1367-1368
771.58125 801.58125 General Use 413-414 / 1373-1374 771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.66875 801.66875 General Use 427-428 / 1387-1388 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 439-440 / 1399-1400	771.55625	801.55625	General Use	409-410 / 1369-1370
771.59375 801.59375 General Use 415-416 / 1375-1376 771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.66875 801.66875 General Use 427-428 / 1387-1388 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.56875	801.56875	General Use	411-412 / 1371-1372
771.60625 801.60625 General Use 417-418 / 1377-1378 771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.66875 801.66875 General Use 427-428 / 1387-1388 771.69375 801.69375 General Use 429-430 / 1389-1390 771.70625 801.70625 General Use 431-432 / 1391-1392 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.58125	801.58125	General Use	413-414 / 1373-1374
771.61875 801.61875 General Use 419-420 / 1379-1380 771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.66875 801.66875 General Use 427-428 / 1387-1388 771.68125 801.68125 General Use 429-430 / 1389-1390 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.59375	801.59375	General Use	415-416 / 1375-1376
771.63125 801.63125 General Use 421-422 / 1381-1382 771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.66875 801.66875 General Use 427-428 / 1387-1388 771.68125 801.68125 General Use 429-430 / 1389-1390 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.60625	801.60625	General Use	417-418 / 1377-1378
771.64375 801.64375 General Use 423-424 / 1383-1384 771.65625 801.65625 General Use 425-426 / 1385-1386 771.66875 801.66875 General Use 427-428 / 1387-1388 771.68125 801.68125 General Use 429-430 / 1389-1390 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.61875	801.61875	General Use	419-420 / 1379-1380
771.65625 801.65625 General Use 425-426 / 1385-1386 771.66875 801.66875 General Use 427-428 / 1387-1388 771.68125 801.68125 General Use 429-430 / 1389-1390 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.63125	801.63125	General Use	421-422 / 1381-1382
771.66875 801.66875 General Use 427-428 / 1387-1388 771.68125 801.68125 General Use 429-430 / 1389-1390 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.64375	801.64375	General Use	423-424 / 1383-1384
771.68125 801.68125 General Use 429-430 / 1389-1390 771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.65625	801.65625	General Use	425-426 / 1385-1386
771.69375 801.69375 General Use 431-432 / 1391-1392 771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.66875	801.66875	General Use	427-428 / 1387-1388
771.70625 801.70625 General Use 433-434 / 1393-1394 771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.68125	801.68125	General Use	429-430 / 1389-1390
771.71875 801.71875 General Use 435-436 / 1395-1396 771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.69375	801.69375	General Use	431-432 / 1391-1392
771.73125 801.73125 General Use 437-438 / 1397-1398 771.74375 801.74375 General Use 439-440 / 1399-1400	771.70625	801.70625	General Use	433-434 / 1393-1394
771.74375 801.74375 General Use 439-440 / 1399-1400	771.71875	801.71875	General Use	435-436 / 1395-1396
	771.73125	801.73125	General Use	437-438 / 1397-1398
771.75625 801.75625 General Use 441-442 / 1401-1402	771.74375	801.74375	General Use	439-440 / 1399-1400
	771.75625	801.75625	General Use	441-442 / 1401-1402

771.76875 801.76875 General Use 443-444 / 1403-1404 771.78125 801.78125 General Use 445-446 / 1405-1406 771.79375 801.79375 General Use 447-448 / 1407-1408 771.80625 801.80625 General Use 449-450 / 1409-1410 771.81875 801.81875 General Use 451-452 / 1411-1412 771.83125 801.83125 General Use 453-454 / 1413-1414 771.84375 801.84375 General Use 457-458 / 1417-1418 771.85625 801.85625 General Use 457-458 / 1417-1418 771.86875 801.86875 General Use 459-460 / 1419-1420 771.89375 801.89375 General Use 463-464 / 1423-1424 771.90625 801.90625 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.98125 801.98125 General Use				
771.79375 801.79375 General Use 447-448 / 1407-1408 771.80625 801.80625 General Use 449-450 / 1409-1410 771.81875 801.81875 General Use 451-452 / 1411-1412 771.83125 801.83125 General Use 453-454 / 1413-1414 771.84375 801.84375 General Use 457-458 / 1417-1418 771.85625 801.85625 General Use 457-458 / 1417-1418 771.86875 801.86875 General Use 459-460 / 1419-1420 771.89375 801.89375 General Use 461-462 / 1421-1422 771.90625 801.99375 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 471-472 / 1431-1432 771.94375 801.94375 General Use 473-474 / 1433-1434 771.9625 801.96875 General Use 473-474 / 1433-1434 771.99375 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use	771.76875	801.76875	General Use	443-444 / 1403-1404
771.80625 801.80625 General Use 449-450 / 1409-1410 771.81875 801.81875 General Use 451-452 / 1411-1412 771.83125 801.83125 General Use 453-454 / 1413-1414 771.84375 801.84375 General Use 453-456 / 1415-1416 771.85625 801.85625 General Use 457-458 / 1417-1418 771.86875 801.86875 General Use 459-460 / 1419-1420 771.89375 801.88125 General Use 463-464 / 1423-1424 771.90625 801.90625 General Use 463-464 / 1423-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.98125 801.96875 General Use 475-476 / 1435-1436 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use	771.78125	801.78125	General Use	445-446 / 1405-1406
771.81875 801.81875 General Use 451-452 / 1411-1412 771.83125 801.83125 General Use 453-454 / 1413-1414 771.84375 801.84375 General Use 455-456 / 1415-1416 771.85625 801.85625 General Use 457-458 / 1417-1418 771.86875 801.86875 General Use 459-460 / 1419-1420 771.89375 801.89375 General Use 461-462 / 1421-1422 771.90625 801.90625 General Use 463-464 / 1423-1424 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.98125 801.96875 General Use 475-476 / 1435-1436 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use	771.79375	801.79375	General Use	447-448 / 1407-1408
771.83125 801.83125 General Use 453-454 / 1413-1414 771.84375 801.84375 General Use 455-456 / 1415-1416 771.85625 801.85625 General Use 457-458 / 1417-1418 771.86875 801.86875 General Use 459-460 / 1419-1420 771.88125 801.88125 General Use 461-462 / 1421-1422 771.89375 801.89375 General Use 463-464 / 1423-1424 771.90625 801.90625 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.98125 801.96875 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.03125 802.01875 General Use	771.80625	801.80625	General Use	449-450 / 1409-1410
771.84375 801.84375 General Use 455-456 / 1415-1416 771.85625 801.85625 General Use 457-458 / 1417-1418 771.86875 801.86875 General Use 459-460 / 1419-1420 771.88125 801.88125 General Use 461-462 / 1421-1422 771.89375 801.89375 General Use 463-464 / 1423-1424 771.90625 801.90625 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.81875	801.81875	General Use	451-452 / 1411-1412
771.85625 801.85625 General Use 457-458 / 1417-1418 771.86875 801.86875 General Use 459-460 / 1419-1420 771.88125 801.88125 General Use 461-462 / 1421-1422 771.89375 801.89375 General Use 463-464 / 1423-1424 771.90625 801.90625 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.83125	801.83125	General Use	453-454 / 1413-1414
771.86875 801.86875 General Use 459-460 / 1419-1420 771.88125 801.88125 General Use 461-462 / 1421-1422 771.89375 801.89375 General Use 463-464 / 1423-1424 771.90625 801.90625 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.84375	801.84375	General Use	455-456 / 1415-1416
771.88125 801.88125 General Use 461-462 / 1421-1422 771.89375 801.89375 General Use 463-464 / 1423-1424 771.90625 801.90625 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.85625	801.85625	General Use	457-458 / 1417-1418
771.89375 801.89375 General Use 463-464 / 1423-1424 771.90625 801.90625 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 481-482 / 1441-1442 772.00625 802.00625 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.86875	801.86875	General Use	459-460 / 1419-1420
771.90625 801.90625 General Use 465-466 / 1425-1426 771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.88125	801.88125	General Use	461-462 / 1421-1422
771.91875 801.91875 General Use 467-468 / 1427-1428 771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.89375	801.89375	General Use	463-464 / 1423-1424
771.93125 801.93125 General Use 469-470 / 1429-1430 771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.90625	801.90625	General Use	465-466 / 1425-1426
771.94375 801.94375 General Use 471-472 / 1431-1432 771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.91875	801.91875	General Use	467-468 / 1427-1428
771.95625 801.95625 General Use 473-474 / 1433-1434 771.96875 801.96875 General Use 475-476 / 1435-1436 771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.93125	801.93125	General Use	469-470 / 1429-1430
771.96875 801.96875 General Use 475-476 / 1435-1436 771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.94375	801.94375	General Use	471-472 / 1431-1432
771.98125 801.98125 General Use 477-478 / 1437-1438 771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.95625	801.95625	General Use	473-474 / 1433-1434
771.99375 801.99375 General Use 479-480 / 1439-1440 772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.96875	801.96875	General Use	475-476 / 1435-1436
772.00625 802.00625 General Use 481-482 / 1441-1442 772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.98125	801.98125	General Use	477-478 / 1437-1438
772.01875 802.01875 General Use 483-484 / 1443-1444 772.03125 802.03125 General Use 485-486 / 1445-1446	771.99375	801.99375	General Use	479-480 / 1439-1440
772.03125 802.03125 General Use 485-486 / 1445-1446	772.00625	802.00625	General Use	481-482 / 1441-1442
	772.01875	802.01875	General Use	483-484 / 1443-1444
772.04375 802.04375 General Use 487-488 / 1447-1448	772.03125	802.03125	General Use	485-486 / 1445-1446
	772.04375	802.04375	General Use	487-488 / 1447-1448

772.05625 802.05625 General Use 489-490 / 1449-1450 772.06875 802.06875 General Use 491-492 / 1451-1452 772.08125 802.08125 General Use 493-494 / 1453-1454 772.09375 802.09375 General Use 495-496 / 1455-1456 772.10625 802.10625 General Use 497-498 / 1457-1458 772.11875 802.11875 General Use 499-500 / 1459-1460 772.13125 802.13125 General Use 501-502 / 1461-1462 772.14375 802.14375 General Use 503-504 / 1463-1464 772.15625 802.15625 General Use 507-508 / 1467-1468 772.16875 802.16875 General Use 507-508 / 1467-1468 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.234375 General Use 517-518 / 1477-1480 772.26875 802.26875 General Use				
772.08125 802.08125 General Use 493-494 / 1453-1454 772.09375 802.09375 General Use 495-496 / 1455-1456 772.10625 802.10625 General Use 497-498 / 1457-1458 772.11875 802.11875 General Use 499-500 / 1459-1460 772.13125 802.13125 General Use 501-502 / 1461-1462 772.14375 802.14375 General Use 503-504 / 1463-1464 772.15625 802.15625 General Use 505-506 / 1465-1466 772.16875 802.16875 General Use 507-508 / 1467-1468 772.19375 802.18125 General Use 509-510 / 1469-1470 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 515-516 / 1475-1476 772.21875 802.21875 General Use 517-518 / 1477-1478 772.23125 802.23125 General Use 517-518 / 1477-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.28125 802.26875 General Use	772.05625	802.05625	General Use	489-490 / 1449-1450
772.09375 802.09375 General Use 495-496 / 1455-1456 772.10625 802.10625 General Use 497-498 / 1457-1458 772.11875 802.11875 General Use 499-500 / 1459-1460 772.13125 802.13125 General Use 501-502 / 1461-1462 772.14375 802.14375 General Use 503-504 / 1463-1464 772.15625 802.15625 General Use 505-506 / 1465-1466 772.16875 802.16875 General Use 507-508 / 1467-1468 772.18125 802.18125 General Use 509-510 / 1469-1470 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 517-518 / 1475-1476 772.23125 802.23125 General Use 519-520 / 1479-1480 772.24375 802.24375 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.29375 802.29375 General Use	772.06875	802.06875	General Use	491-492 / 1451-1452
772.10625 802.10625 General Use 497-498 / 1457-1458 772.11875 802.11875 General Use 499-500 / 1459-1460 772.13125 802.13125 General Use 501-502 / 1461-1462 772.14375 802.14375 General Use 503-504 / 1463-1464 772.15625 802.15625 General Use 505-506 / 1465-1466 772.16875 802.16875 General Use 507-508 / 1467-1468 772.18125 802.18125 General Use 509-510 / 1469-1470 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 517-516 / 1475-1476 772.23125 802.23125 General Use 519-520 / 1479-1480 772.24375 802.24375 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use	772.08125	802.08125	General Use	493-494 / 1453-1454
772.11875 802.11875 General Use 499-500 / 1459-1460 772.13125 802.13125 General Use 501-502 / 1461-1462 772.14375 802.14375 General Use 503-504 / 1463-1464 772.15625 802.15625 General Use 505-506 / 1465-1466 772.16875 802.16875 General Use 507-508 / 1467-1468 772.18125 802.18125 General Use 509-510 / 1469-1470 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 515-516 / 1475-1476 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.28125 802.28125 General Use 523-524 / 1483-1484 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875	772.09375	802.09375	General Use	495-496 / 1455-1456
772.13125 802.13125 General Use 501-502 / 1461-1462 772.14375 802.14375 General Use 503-504 / 1463-1464 772.15625 802.15625 General Use 505-506 / 1465-1466 772.16875 802.16875 General Use 507-508 / 1467-1468 772.18125 802.18125 General Use 509-510 / 1469-1470 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 517-516 / 1475-1476 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.10625	802.10625	General Use	497-498 / 1457-1458
772.14375 802.14375 General Use 503-504 / 1463-1464 772.15625 802.15625 General Use 505-506 / 1465-1466 772.16875 802.16875 General Use 507-508 / 1467-1468 772.18125 802.18125 General Use 509-510 / 1469-1470 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 517-516 / 1475-1476 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.11875	802.11875	General Use	499-500 / 1459-1460
772.15625 802.15625 General Use 505-506 / 1465-1466 772.16875 802.16875 General Use 507-508 / 1467-1468 772.18125 802.18125 General Use 509-510 / 1469-1470 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 515-516 / 1475-1476 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.29375 802.29375 General Use 527-526 / 1485-1486 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.13125	802.13125	General Use	501-502 / 1461-1462
772.16875 802.16875 General Use 507-508 / 1467-1468 772.18125 802.18125 General Use 509-510 / 1469-1470 772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 515-516 / 1475-1476 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.14375	802.14375	General Use	503-504 / 1463-1464
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772.19375 802.19375 General Use 511-512 / 1471-1472 772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 515-516 / 1475-1476 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.28125 802.28125 General Use 525-526 / 1485-1486 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.16875	802.16875	General Use	507-508 / 1467-1468
772.20625 802.20625 General Use 513-514 / 1473-1474 772.21875 802.21875 General Use 515-516 / 1475-1476 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.28125 802.28125 General Use 525-526 / 1485-1486 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.18125	802.18125	General Use	509-510 / 1469-1470
772.21875 802.21875 General Use 515-516 / 1475-1476 772.23125 802.23125 General Use 517-518 / 1477-1478 772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.28125 802.28125 General Use 525-526 / 1485-1486 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.19375	802.19375	General Use	511-512 / 1471-1472
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772.24375 802.24375 General Use 519-520 / 1479-1480 772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.28125 802.28125 General Use 525-526 / 1485-1486 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.21875	802.21875	General Use	515-516 / 1475-1476
772.25625 802.25625 General Use 521-522 / 1481-1482 772.26875 802.26875 General Use 523-524 / 1483-1484 772.28125 802.28125 General Use 525-526 / 1485-1486 772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.23125	802.23125	General Use	517-518 / 1477-1478
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772.29375 802.29375 General Use 527-528 / 1487-1488 772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.26875	802.26875	General Use	523-524 / 1483-1484
772.30625 802.30625 General Use 529-530 / 1489-1490 772.31875 802.31875 General Use 531-532 / 1491-1492	772.28125	802.28125	General Use	525-526 / 1485-1486
772.31875 802.31875 General Use 531-532 / 1491-1492	772.29375	802.29375	General Use	527-528 / 1487-1488
	772.30625	802.30625	General Use	529-530 / 1489-1490
772.33125 802.33125 General Use 533-534 / 1493-1494	772.31875	802.31875	General Use	531-532 / 1491-1492
	772.33125	802.33125	General Use	533-534 / 1493-1494

772.34375 802.34375 General Use 535-536 / 1495-1496 772.35625 802.35625 General Use 537-538 / 1497-1498 772.36875 802.36875 General Use 539-540 / 1499-1500 772.38125 802.38125 General Use 541-542 / 1501-1502 772.39375 802.39375 General Use 543-544 / 1503-1504 772.40625 802.40625 General Use 547-548 / 1507-1508 772.41875 802.41875 General Use 547-548 / 1507-1508 772.43125 802.43125 General Use 549-550 / 1509-1510 772.44375 802.43125 General Use 551-552 / 1511-1512 772.45625 802.45625 General Use 553-554 / 1513-1514 772.46875 802.46875 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 557-558 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 567-568 / 1527-1528 772.54375 802.54375 General Use				
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772.38125 802.38125 General Use 541-542 / 1501-1502 772.39375 802.39375 General Use 543-544 / 1503-1504 772.40625 802.40625 General Use 545-546 / 1505-1506 772.41875 802.41875 General Use 547-548 / 1507-1508 772.43125 802.43125 General Use 549-550 / 1509-1510 772.4375 802.44375 General Use 551-552 / 1511-1512 772.45625 802.45625 General Use 553-554 / 1513-1514 772.46875 802.46875 General Use 557-556 / 1515-1516 772.48125 802.48125 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 559-560 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 565-566 / 1525-1526 772.54375 802.534375 General Use 567-568 / 1527-1528 772.55625 802.56875 General Use 571-572 / 1531-1532 772.58125 802.58125 General Use	772.35625	802.35625	General Use	537-538 / 1497-1498
772.39375 802.39375 General Use 543-544 / 1503-1504 772.40625 802.40625 General Use 545-546 / 1505-1506 772.41875 802.41875 General Use 547-548 / 1507-1508 772.43125 802.43125 General Use 549-550 / 1509-1510 772.44375 802.44375 General Use 551-552 / 1511-1512 772.45625 802.45625 General Use 553-554 / 1513-1514 772.46875 802.46875 General Use 555-556 / 1515-1516 772.49375 802.48125 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 559-560 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 567-568 / 1527-1528 772.54375 802.54375 General Use 569-570 / 1529-1530 772.56875 802.56875 General Use 573-574 / 1533-1534 772.59375 802.59375 General Use	772.36875	802.36875	General Use	539-540 / 1499-1500
772.40625 802.40625 General Use 545-546 / 1505-1506 772.41875 802.41875 General Use 547-548 / 1507-1508 772.43125 802.43125 General Use 549-550 / 1509-1510 772.44375 802.44375 General Use 551-552 / 1511-1512 772.45625 802.45625 General Use 553-554 / 1513-1514 772.46875 802.46875 General Use 555-556 / 1515-1516 772.48125 802.48125 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 559-560 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 567-568 / 1527-1528 772.54375 802.54375 General Use 569-570 / 1529-1530 772.56875 802.56875 General Use 571-572 / 1531-1532 772.58125 802.58125 General Use 573-574 / 1533-1534 772.59375 802.59375 General Use 575-576 / 1535-1536 772.60625 802.60625	772.38125	802.38125	General Use	541-542 / 1501-1502
772.41875 802.41875 General Use 547-548 / 1507-1508 772.43125 802.43125 General Use 549-550 / 1509-1510 772.44375 802.44375 General Use 551-552 / 1511-1512 772.45625 802.45625 General Use 553-554 / 1513-1514 772.46875 802.46875 General Use 555-556 / 1515-1516 772.48125 802.48125 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 559-560 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 567-568 / 1527-1528 772.54375 802.54375 General Use 567-568 / 1527-1528 772.56875 802.56875 General Use 571-572 / 1531-1532 772.58125 802.58125 General Use 573-574 / 1533-1534 772.59375 802.59375 General Use 575-576 / 1535-1536 772.60625 802.60625 General Use 577-578 / 1537-1538	772.39375	802.39375	General Use	543-544 / 1503-1504
772.43125 802.43125 General Use 549-550 / 1509-1510 772.44375 802.44375 General Use 551-552 / 1511-1512 772.45625 802.45625 General Use 553-554 / 1513-1514 772.46875 802.46875 General Use 555-556 / 1515-1516 772.48125 802.48125 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 559-560 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 567-568 / 1527-1528 772.54375 802.54375 General Use 567-568 / 1527-1528 772.56875 802.56875 General Use 571-572 / 1531-1532 772.58125 802.58125 General Use 573-574 / 1533-1534 772.59375 802.59375 General Use 575-576 / 1535-1536 772.60625 802.60625 General Use 577-578 / 1537-1538	772.40625	802.40625	General Use	545-546 / 1505-1506
772.44375 802.44375 General Use 551-552 / 1511-1512 772.45625 802.45625 General Use 553-554 / 1513-1514 772.46875 802.46875 General Use 555-556 / 1515-1516 772.48125 802.48125 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 559-560 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 565-566 / 1525-1526 772.54375 802.54375 General Use 567-568 / 1527-1528 772.5625 802.55625 General Use 569-570 / 1529-1530 772.56875 802.56875 General Use 571-572 / 1531-1532 772.59375 802.59375 General Use 573-574 / 1533-1536 772.60625 802.60625 General Use 577-578 / 1537-1538	772.41875	802.41875	General Use	547-548 / 1507-1508
772.45625 802.45625 General Use 553-554 / 1513-1514 772.46875 802.46875 General Use 555-556 / 1515-1516 772.48125 802.48125 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 559-560 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 565-566 / 1525-1526 772.54375 802.54375 General Use 567-568 / 1527-1528 772.55625 802.55625 General Use 569-570 / 1529-1530 772.56875 802.56875 General Use 571-572 / 1531-1532 772.59375 802.59375 General Use 573-574 / 1533-1536 772.60625 802.60625 General Use 577-578 / 1537-1538	772.43125	802.43125	General Use	549-550 / 1509-1510
772.46875 802.46875 General Use 555-556 / 1515-1516 772.48125 802.48125 General Use 557-558 / 1517-1518 772.49375 802.49375 General Use 559-560 / 1519-1520 772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 565-566 / 1525-1526 772.54375 802.54375 General Use 567-568 / 1527-1528 772.55625 802.55625 General Use 569-570 / 1529-1530 772.56875 802.56875 General Use 571-572 / 1531-1532 772.59375 802.59375 General Use 575-576 / 1535-1536 772.60625 802.60625 General Use 577-578 / 1537-1538	772.44375	802.44375	General Use	551-552 / 1511-1512
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772.50625 802.50625 General Use 561-562 / 1521-1522 772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 565-566 / 1525-1526 772.54375 802.54375 General Use 567-568 / 1527-1528 772.55625 802.55625 General Use 569-570 / 1529-1530 772.56875 802.56875 General Use 571-572 / 1531-1532 772.58125 802.58125 General Use 573-574 / 1533-1534 772.59375 802.59375 General Use 575-576 / 1535-1536 772.60625 802.60625 General Use 577-578 / 1537-1538	772.48125	802.48125	General Use	557-558 / 1517-1518
772.51875 802.51875 General Use 563-564 / 1523-1524 772.53125 802.53125 General Use 565-566 / 1525-1526 772.54375 802.54375 General Use 567-568 / 1527-1528 772.55625 802.55625 General Use 569-570 / 1529-1530 772.56875 802.56875 General Use 571-572 / 1531-1532 772.58125 802.58125 General Use 573-574 / 1533-1534 772.59375 802.59375 General Use 575-576 / 1535-1536 772.60625 802.60625 General Use 577-578 / 1537-1538	772.49375	802.49375	General Use	559-560 / 1519-1520
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772.60625 802.60625 General Use 577-578 / 1537-1538	772.58125	802.58125	General Use	573-574 / 1533-1534
	772.59375	802.59375	General Use	575-576 / 1535-1536
772.61875 802.61875 General Use 579-580 / 1539-1540	772.60625	802.60625	General Use	577-578 / 1537-1538
	772.61875	802.61875	General Use	579-580 / 1539-1540

772.63125 802.63125 General Use 581-582 / 1541-1542 772.64375 802.64375 General Use 583-584 / 1543-1544 772.65625 802.65625 General Use 585-586 / 1545-1546 772.66875 802.66875 General Use 587-588 / 1547-1548 772.68125 802.68125 General Use 589-590 / 1549-1550 772.69375 802.69375 General Use 591-592 / 1551-1552 772.70625 802.70625 General Use 593-594 / 1553-1554 772.71875 802.71875 General Use 595-596 / 1555-1556 772.73125 802.73125 General Use 597-598 / 1557-1558 772.74375 802.74375 General Use 599-600 / 1559-1560 772.75625 802.76875 General Use 603-604 / 1563-1564 772.78125 802.78125 General Use 605-606 / 1565-1566 772.79375 802.80625 General Use 607-608 / 1567-1568 772.81875 802.80625 General Use 611-612 / 1571-1572 772.83125 802.83125 General Use				
772.65625 802.65625 General Use 585-586 / 1545-1546 772.66875 802.66875 General Use 587-588 / 1547-1548 772.68125 802.68125 General Use 589-590 / 1549-1550 772.69375 802.69375 General Use 591-592 / 1551-1552 772.70625 802.70625 General Use 593-594 / 1553-1554 772.71875 802.71875 General Use 595-596 / 1555-1556 772.73125 802.73125 General Use 597-598 / 1557-1558 772.74375 802.74375 General Use 599-600 / 1559-1560 772.75625 802.75625 General Use 601-602 / 1561-1562 772.76875 802.76875 General Use 603-604 / 1563-1564 772.79375 802.78125 General Use 605-606 / 1565-1566 772.79375 802.79375 General Use 607-608 / 1567-1568 772.81875 802.80625 General Use 611-612 / 1571-1572 772.83125 802.83125 General Use 613-614 / 1573-1576 772.84375 802.84375 General Use	772.63125	802.63125	General Use	581-582 / 1541-1542
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772.71875 802.71875 General Use 595-596 / 1555-1556 772.73125 802.73125 General Use 597-598 / 1557-1558 772.74375 802.74375 General Use 599-600 / 1559-1560 772.75625 802.75625 General Use 601-602 / 1561-1562 772.76875 802.76875 General Use 603-604 / 1563-1564 772.78125 802.78125 General Use 605-606 / 1565-1566 772.79375 802.79375 General Use 607-608 / 1567-1568 772.80625 802.80625 General Use 609-610 / 1569-1570 772.81875 802.81875 General Use 611-612 / 1571-1572 772.83125 802.83125 General Use 613-614 / 1573-1574 772.84375 802.84375 General Use 615-616 / 1575-1576 772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.89375 802.89375 General Use 623-624 / 1583-1584	772.69375	802.69375	General Use	591-592 / 1551-1552
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772.74375 802.74375 General Use 599-600 / 1559-1560 772.75625 802.75625 General Use 601-602 / 1561-1562 772.76875 802.76875 General Use 603-604 / 1563-1564 772.78125 802.78125 General Use 605-606 / 1565-1566 772.79375 802.79375 General Use 607-608 / 1567-1568 772.80625 802.80625 General Use 609-610 / 1569-1570 772.81875 802.81875 General Use 611-612 / 1571-1572 772.83125 802.83125 General Use 613-614 / 1573-1574 772.84375 802.84375 General Use 615-616 / 1575-1576 772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.71875	802.71875	General Use	595-596 / 1555-1556
772.75625 802.75625 General Use 601-602 / 1561-1562 772.76875 802.76875 General Use 603-604 / 1563-1564 772.78125 802.78125 General Use 605-606 / 1565-1566 772.79375 802.79375 General Use 607-608 / 1567-1568 772.80625 802.80625 General Use 609-610 / 1569-1570 772.81875 802.81875 General Use 611-612 / 1571-1572 772.83125 802.83125 General Use 613-614 / 1573-1574 772.84375 802.84375 General Use 615-616 / 1575-1576 772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.73125	802.73125	General Use	597-598 / 1557-1558
772.76875 802.76875 General Use 603-604 / 1563-1564 772.78125 802.78125 General Use 605-606 / 1565-1566 772.79375 802.79375 General Use 607-608 / 1567-1568 772.80625 802.80625 General Use 609-610 / 1569-1570 772.81875 802.81875 General Use 611-612 / 1571-1572 772.83125 802.83125 General Use 613-614 / 1573-1574 772.84375 802.84375 General Use 615-616 / 1575-1576 772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.74375	802.74375	General Use	599-600 / 1559-1560
772.78125 802.78125 General Use 605-606 / 1565-1566 772.79375 802.79375 General Use 607-608 / 1567-1568 772.80625 802.80625 General Use 609-610 / 1569-1570 772.81875 802.81875 General Use 611-612 / 1571-1572 772.83125 802.83125 General Use 613-614 / 1573-1574 772.84375 802.84375 General Use 615-616 / 1575-1576 772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.75625	802.75625	General Use	601-602 / 1561-1562
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772.80625 802.80625 General Use 609-610 / 1569-1570 772.81875 802.81875 General Use 611-612 / 1571-1572 772.83125 802.83125 General Use 613-614 / 1573-1574 772.84375 802.84375 General Use 615-616 / 1575-1576 772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.78125	802.78125	General Use	605-606 / 1565-1566
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772.83125 802.83125 General Use 613-614 / 1573-1574 772.84375 802.84375 General Use 615-616 / 1575-1576 772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.80625	802.80625	General Use	609-610 / 1569-1570
772.84375 802.84375 General Use 615-616 / 1575-1576 772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.81875	802.81875	General Use	611-612 / 1571-1572
772.85625 802.85625 General Use 617-618 / 1577-1578 772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.83125	802.83125	General Use	613-614 / 1573-1574
772.86875 802.86875 General Use 619-620 / 1579-1580 772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.84375	802.84375	General Use	615-616 / 1575-1576
772.88125 802.88125 General Use 621-622 / 1581-1582 772.89375 802.89375 General Use 623-624 / 1583-1584	772.85625	802.85625	General Use	617-618 / 1577-1578
772.89375 802.89375 General Use 623-624 / 1583-1584	772.86875	802.86875	General Use	619-620 / 1579-1580
	772.88125	802.88125	General Use	621-622 / 1581-1582
772.90625 802.90625 General Use 625-626 / 1585-1586	772.89375	802.89375	General Use	623-624 / 1583-1584
	772.90625	802.90625	General Use	625-626 / 1585-1586

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772.91875	802.91875	General Use	627-628 / 1587-1588
772.93125	802.93125	General Use	629-630 / 1589-1590
772.94375	802.94375	General Use	631-632 / 1591-1592
772.95625	802.95625	General Use	633-634 / 1593-1594
772.96875	802.96875	General Use	635-636 / 1595-1596
772.98125	802.98125	General Use	637-638 / 1597-1598
772.99375	802.99375	General Use	639-640 / 1599-1600
773.00625	803.00625	Interoperability 7MED86	641-642 / 1601-1602
773.01875	803.01875	Reserve	643-644 / 1603-1604
773.03125	803.03125	State License	645-646 / 1605-1606
773.04375	803.04375	State License	647-648 / 1607-1608
773.05625	803.05625	State License	649-650 / 1609-1610
773.06875	803.06875	State License	651-652 / 1611-1612
773.08125	803.08125	State License	653-654 / 1613-1614
773.09375	803.09375	State License	655-656 / 1615-1616
773.10625	803.10625	Interoperability 7TAC71	657-658 / 1617-1618
773.11875	803.11875	Secondary Trunking	659-660 / 1619-1620
773.13125	803.13125	General Use	661-662 / 1621-1622
773.14375	803.14375	General Use	663-664 / 1623-1624
773.15625	803.15625	General Use	665-666 / 1625-1626
773.16875	803.16875	General Use	667-668 / 1627-1628
773.18125	803.18125	General Use	669-670 / 1629-1630
773.19375	803.19375	General Use	671-672 / 1631-1632

773.20625	803.20625	General Use	673-674 / 1633-1634
773.21875	803.21875	General Use	675-676 / 1635-1636
773.23125	803.23125	General Use	677-678 / 1637-1638
773.24375	803.24375	General Use	679-680 / 1639-1640
773.25625	803.25625	Interoperability 7CAL70	681-682 / 1641-1642
773.26875	803.26875	Reserve	683-684 / 1643-1644
773.28125	803.28125	State License	685-686 / 1645-1646
773.29375	803.29375	State License	687-688 / 1647-1648
773.30625	803.30625	State License	689-690 / 1649-1650
773.31875	803.31875	State License	691-692 / 1651-1652
773.33125	803.33125	State License	693-694 / 1653-1654
773.34375	803.34375	State License	695-696 / 1655-1656
773.35625	803.35625	Interoperability 7MED87	697-698 / 1657-1658
773.36875	803.36875	Reserve	699-700 / 1659-1660
773.38125	803.38125	General Use	701-702 / 1661-1662
773.39375	803.39375	General Use	703-704 / 1663-1664
773.40625	803.40625	General Use	705-706 / 1665-1666
773.41875	803.41875	General Use	707-708 / 1667-1668
773.43125	803.43125	General Use	709-710 / 1669-1670
773.44375	803.44375	General Use	711-712 / 1671-1672
773.45625	803.45625	General Use	713-714 / 1673-1674
773.46875	803.46875	General Use	715-716 / 1675-1676
773.48125	803.48125	General Use	717-718 / 1677-1678
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773.49375 803.49375 General Use 719-720 / 1679-1 773.50625 803.50625 Interoperability 7FIRE83 721-722 / 1681-1 773.51875 803.51875 Reserve 723-724 / 1683-1 773.53125 803.53125 State License 725-726 / 1685-1 773.54375 803.54375 State License 727-728 / 1687-1	682 684 686 688
773.50625 803.50625 7FIRE83 721-722 / 1681-1 773.51875 803.51875 Reserve 723-724 / 1683-1 773.53125 803.53125 State License 725-726 / 1685-1	684 686 688
773.53125 803.53125 State License 725-726 / 1685-1	686 688
	688
773 54375 803 54375 State License 727-728 / 1687-1	
773.5 1373 003.5 1373 State Electrice 727 7207 1007 1	590
773.55625 803.55625 State License 729-730 / 1689-1	570
773.56875 803.56875 State License 731-732 / 1691-1	692
773.58125 803.58125 State License 733-734 / 1693-1	694
773.59375 803.59375 State License 735-736 / 1695-1	696
773.60625 803.60625 Interoperability 77AC72 737-738 / 1697-1	698
773.61875 803.61875 Secondary Trunking 739-740 / 1699-1	700
773.63125 803.63125 General Use 741-742 / 1701-1	702
773.64375 803.64375 General Use 743-744 / 1703-1	704
773.65625 803.65625 General Use 745-746 / 1705-1	706
773.66875 803.66875 General Use 747-748 / 1707-1	708
773.68125 803.68125 General Use 749-750 / 1709-1	710
773.69375 803.69375 General Use 751-752 / 1711-1	712
773.70625 803.70625 General Use 753-754 / 1713-1	714
773.71875 803.71875 General Use 755-756 / 1715-1	716
773.73125 803.73125 General Use 757-758 / 1717-1	718
773.74375 803.74375 General Use 759-760 / 1719-1	720
773.75625 803.75625 Interoperability 7TAC75 761-762 / 1721-1	722
773.76875 803.76875 Reserve 763-764 / 1723-1	724

773.78125	13 78125		
	33.70123	State License	765-766 / 1725-1726
773.79375 80	03.79375	State License	767-768 / 1727-1728
773.80625	03.80625	State License	769-770 / 1729-1730
773.81875	03.81875	State License	771-772 / 1731-1732
773.83125 80	03.83125	State License	773-774 / 1733-1734
773.84375 80	03.84375	State License	775-776 / 1735-1736
773.85625 80	03.85625	Interoperability 7FIRE84	777-778 / 1737-1738
773.86875	03.86875	Reserve	779-780 / 1739-1740
773.88125	03.88125	General Use	781-782 / 1741-1742
773.89375 80	03.89375	General Use	783-784 / 1743-1744
773.90625	03.90625	General Use	785-786 / 1745-1746
773.91875 80	03.91875	General Use	787-788 / 1747-1748
773.93125 80	03.93125	General Use	789-790 / 1749-1750
773.94375 80	03.94375	General Use	791-792 / 1751-1752
773.95625 80	03.95625	General Use	793-794 / 1753-1754
773.96875	03.96875	General Use	795-796 / 1755-1756
773.98125 80	03.98125	General Use	797-798 / 1757-1758
773.99375 80	03.99375	General Use	799-800 / 1759-1760
774.00625 80	04.00625	Interoperability 7LAW81	801-802 / 1761-1762
774.01875 80	04.01875	Reserve	803-804 / 1763-1764
774.03125 80	04.03125	State License	805-806 / 1765-1766
774.04375 80	04.04375	State License	807-808 / 1767-1768
774.05625 80	04.05625	State License	809-810 / 1769-1770

774.06875	804.06875	State License	811-812 / 1771-1772
774.08125	804.08125	State License	813-814 / 1773-1774
774.09375	804.09375	State License	815-816 / 1775-1776
774.10625	804.10625	Interoperability 7TAC73	817-818 / 1777-1778
774.11875	804.11875	Secondary Trunking	819-820 / 1779-1780
774.13125	804.13125	General Use	821-822 / 1781-1782
774.14375	804.14375	General Use	823-824 / 1783-1784
774.15625	804.15625	General Use	825-826 / 1785-1786
774.16875	804.16875	General Use	827-828 / 1787-1788
774.18125	804.18125	General Use	829-830 / 1789-1790
774.19375	804.19375	General Use	831-832 / 1791-1792
774.20625	804.20625	General Use	833-834 / 1793-1794
774.21875	804.21875	General Use	835-836 / 1795-1796
774.23125	804.23125	General Use	837-838 / 1797-1798
774.24375		General Use	839-840 / 1799-1800
774.25625	804.25625	Interoperability 7TAC76	841-842 / 1801-1802
774.26875	804.26875	Reserve	843-844 / 1803-1804
774.28125	804.28125	State License	845-846 / 1805-1806
774.29375	804.29375	State License	847-848 / 1807-1808
774.30625	804.30625	State License	849-850 / 1809-1810
774.31875	804.31875	State License	851-852 / 1811-1812
774.33125	804.33125	State License	853-854 / 1813-1814
774.34375	804.34375	State License	855-856 / 1815-1816

774.35625 804.35625 Interoperability 7LAW82 857-858 / 1817-1818 774.36875 804.36875 Reserve 859-860 / 1819-1820 774.38125 804.36875 Reserve 861-862 / 1821-1822 774.39375 804.39375 General Use 863-864 / 1823-1824 774.40625 804.40625 General Use 865-866 / 1825-1826 774.41875 804.41875 General Use 867-868 / 1827-1828 774.43125 804.43125 General Use 869-870 / 1829-1830 774.44375 804.43125 General Use 871-872 / 1831-1832 774.45625 804.45625 General Use 873-874 / 1833-1834 774.46875 804.46875 General Use 875-876 / 1835-1836 774.49375 804.49375 General Use 877-878 / 1837-1838 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.53125 State License 885-886 / 1845-1846 774.54375 804.53125 State License 887-888 / 1847-1848 774.56875 804.56875 Sta				1
774.38125 804.38125 General Use 861-862 / 1821-1822 774.39375 804.39375 General Use 863-864 / 1823-1824 774.40625 804.40625 General Use 865-866 / 1825-1826 774.41875 804.41875 General Use 867-868 / 1827-1828 774.43125 804.43125 General Use 869-870 / 1829-1830 774.44375 804.4375 General Use 871-872 / 1831-1832 774.45625 804.45625 General Use 873-874 / 1833-1834 774.46875 804.45625 General Use 877-878 / 1837-1838 774.49375 804.49375 General Use 877-878 / 1837-1838 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 887-888 / 1847-1848 774.56875 804.56875 State License 898-890 / 1849-1850 774.56875 804.56875 State License 893-894 / 1853-1854 774.59375 804.59375 State Lice	774.35625	804.35625		857-858 / 1817-1818
774.39375 804.39375 General Use 863-864 / 1823-1824 774.40625 804.40625 General Use 865-866 / 1825-1826 774.41875 804.41875 General Use 867-868 / 1827-1828 774.43125 804.43125 General Use 869-870 / 1829-1830 774.44375 804.44375 General Use 871-872 / 1831-1832 774.45625 804.45625 General Use 873-874 / 1833-1834 774.46875 804.46875 General Use 875-876 / 1835-1836 774.49375 804.49375 General Use 877-878 / 1837-1838 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 887-888 / 1847-1848 774.56875 804.56875 State License 891-892 / 1851-1852 774.59375 804.59375 State License 893-894 / 1853-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 <	774.36875	804.36875	Reserve	859-860 / 1819-1820
774.40625 804.40625 General Use 865-866 / 1825-1826 774.41875 804.41875 General Use 867-868 / 1827-1828 774.43125 804.43125 General Use 869-870 / 1829-1830 774.44375 804.44375 General Use 871-872 / 1831-1832 774.45625 804.45625 General Use 873-874 / 1833-1834 774.46875 804.46875 General Use 875-876 / 1835-1836 774.49375 804.48125 General Use 877-878 / 1837-1838 774.49375 804.49375 General Use 879-880 / 1839-1840 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.54375 804.53125 State License 887-888 / 1847-1848 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interop	774.38125	804.38125	General Use	861-862 / 1821-1822
774.41875 804.41875 General Use 867-868 / 1827-1828 774.43125 804.43125 General Use 869-870 / 1829-1830 774.44375 804.44375 General Use 871-872 / 1831-1832 774.45625 804.45625 General Use 873-874 / 1833-1834 774.46875 804.46875 General Use 875-876 / 1835-1836 774.48125 804.48125 General Use 877-878 / 1837-1838 774.49375 804.49375 General Use 879-880 / 1839-1840 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 885-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Inter	774.39375	804.39375	General Use	863-864 / 1823-1824
774.43125 804.43125 General Use 869-870 / 1829-1830 774.44375 804.44375 General Use 871-872 / 1831-1832 774.45625 804.45625 General Use 873-874 / 1833-1834 774.46875 804.46875 General Use 875-876 / 1835-1836 774.49375 804.48125 General Use 877-878 / 1837-1838 774.49375 804.49375 General Use 879-880 / 1839-1840 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 887-888 / 1847-1848 774.54375 804.54375 State License 889-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.40625	804.40625	General Use	865-866 / 1825-1826
774.44375 804.44375 General Use 871-872 / 1831-1832 774.45625 804.45625 General Use 873-874 / 1833-1834 774.46875 804.46875 General Use 875-876 / 1835-1836 774.48125 804.48125 General Use 877-878 / 1837-1838 774.49375 804.49375 General Use 879-880 / 1839-1840 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 887-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.56875 804.56875 State License 891-890 / 1849-1850 774.58125 804.58125 State License 891-892 / 1851-1852 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.41875	804.41875	General Use	867-868 / 1827-1828
774.45625 804.45625 General Use 873-874 / 1833-1834 774.46875 804.46875 General Use 875-876 / 1835-1836 774.48125 804.48125 General Use 877-878 / 1837-1838 774.49375 804.49375 General Use 879-880 / 1839-1840 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 885-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.56875 804.56875 State License 891-892 / 1851-1850 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.43125	804.43125	General Use	869-870 / 1829-1830
774.46875 804.46875 General Use 875-876 / 1835-1836 774.48125 804.48125 General Use 877-878 / 1837-1838 774.49375 804.49375 General Use 879-880 / 1839-1840 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 885-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.55625 804.55625 State License 899-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.59375 804.59375 State License 893-894 / 1853-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.44375	804.44375	General Use	871-872 / 1831-1832
774.48125 804.48125 General Use 877-878 / 1837-1838 774.49375 804.49375 General Use 879-880 / 1839-1840 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 885-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.55625 804.55625 State License 889-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.45625	804.45625	General Use	873-874 / 1833-1834
774.49375 804.49375 General Use 879-880 / 1839-1840 774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 885-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.55625 804.55625 State License 889-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.46875	804.46875	General Use	875-876 / 1835-1836
774.50625 804.50625 Interoperability 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 885-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.55625 804.55625 State License 889-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.48125	804.48125	General Use	877-878 / 1837-1838
774.50625 804.50625 7MOB79 881-882 / 1841-1842 774.51875 804.51875 Reserve 883-884 / 1843-1844 774.53125 804.53125 State License 885-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.55625 804.55625 State License 889-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.49375	804.49375	General Use	879-880 / 1839-1840
774.53125 804.53125 State License 885-886 / 1845-1846 774.54375 804.54375 State License 887-888 / 1847-1848 774.55625 804.55625 State License 889-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.50625	804.50625	•	881-882 / 1841-1842
774.54375 804.54375 State License 887-888 / 1847-1848 774.55625 804.55625 State License 889-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.51875	804.51875	Reserve	883-884 / 1843-1844
774.55625 804.55625 State License 889-890 / 1849-1850 774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.53125	804.53125	State License	885-886 / 1845-1846
774.56875 804.56875 State License 891-892 / 1851-1852 774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.54375	804.54375	State License	887-888 / 1847-1848
774.58125 804.58125 State License 893-894 / 1853-1854 774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.55625	804.55625	State License	889-890 / 1849-1850
774.59375 804.59375 State License 895-896 / 1855-1856 774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.56875	804.56875	State License	891-892 / 1851-1852
774.60625 804.60625 Interoperability 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.58125	804.58125	State License	893-894 / 1853-1854
774.60625 804.60625 7TAC74 897-898 / 1857-1858 774.61875 804.61875 Secondary Trunking 899-900 / 1859-1860	774.59375	804.59375	State License	895-896 / 1855-1856
	774.60625	804.60625	•	897-898 / 1857-1858
774.63125 804.63125 General Use 901-902 / 1861-1862	774.61875	804.61875	Secondary Trunking	899-900 / 1859-1860
<u> </u>	774.63125	804.63125	General Use	901-902 / 1861-1862

774.64375	804.64375	General Use	903-904 / 1863-1864
774.65625	804.65625	General Use	905-906 / 1865-1866
774.66875	804.66875	General Use	907-908 / 1867-1868
774.68125	804.68125	General Use	909-910 / 1869-1870
774.69375	804.69375	General Use	911-912 / 1871-1872
774.70625	804.70625	General Use	913-914 / 1873-1874
774.71875	804.71875	General Use	915-916 / 1875-1876
774.73125	804.73125	General Use	917-918 / 1877-1878
774.74375	804.74375	General Use	919-920 / 1879-1880
774.75625	804.75625	Interoperability 7DATA89	921-922 / 1881-1882
774.76875	804.76875	Reserve	923-924 / 1883-1884
774.78125	804.78125	State License	925-926 / 1885-1886
774.79375	804.79375	State License	927-928 / 1887-1888
774.80625	804.80625	State License	929-930 / 1889-1890
774.81875	804.81875	State License	931-932 / 1891-1892
774.83125	804.83125	State License	933-934 / 1893-1894
774.84375	804.84375	State License	935-936 / 1895-1896
774.85625	804.85625	Interoperability 7GTAC77	937-938 / 1897-1898
774.86875	804.86875	Reserve	939-940 / 1899-1900
774.88125	804.88125	General Use	941-942 / 1901-1902
774.89375	804.89375	General Use	943-944 / 1903-1904
774.90625	804.90625	General Use	945-946 / 1905-1906
774.91875	804.91875	General Use	947-948 / 1907-1908

Part 2, Appendix A - 12.5KHz Channel Assignments

774.93125	804.93125	Low Power (Regional)	949-950 / 1909-1910
774.94375	804.94375	Low Power (Regional)	951-952 / 1911-1912
774.95625	804.95625	Low Power (Regional)	953-954 / 1913-1914
774.96875	804.96875	Low Power (Regional)	955-956 / 1915-1916
774.98125	804.98125	Low Power (Regional)	957-958 / 1917-1918
774.99375	804.99375	Low Power (Nationwide	959-960 / 1919-1920

700 MHz Broadband Public Safety Band Plan

Upper 700 MHz band public safety LTE broadband networks.

Base Frequency	Mobile Frequency	Description
758 - 763 MHz	788 - 793 MHz	D Block (FirstNet nationwide LTE network)
763 - 768 MHz	793 - 798 MHz	Broadband Public Safety (FirstNet & state/regional LTE networks)
768 - 769 MHz	798 - 799 MHz	Guard Band (FirstNet nationwide LTE network)

Related Links

700 MHz Band Plan

FCC 700 MHz Public Safety Spectrum

47CFR90.531 Public Safety 700 MHz Band Plan

Table of 700MHz Interoperability Channels

(SUBSCRIB	CHANNEL	BASE,MOBILE, OR	ELIQIDILITY (EDIMADY)	Ordering	COMMON	LIMITATIONS
		FIXED (REPEATER	ELIGIBILITY / PRIMARY USE	Original NCC Name	NAME	(47 CFR Part 90)
RECEIVE	TRANSMIT	OR CONTROL)	0 MHz Public Safety Band (12.5 kHz Ch			energy and an energy and a second
CHANNEL	799.14375	Mobile-Fixed	General Public Safety Service	7TAC58	7TAC51	
769.14375	SIMPLEX	Base-Fixed-Mobile	(secondary trunked)	717,000	7TAC51D	90.531(a)(1)(iii)
700 0 1077	799.24375	Mobile-Fixed		7CAL59	7CALL50	00 524(-)(4)(ii)
769.24375	SIMPLEX	Base-Fixed-Mobile	Calling Channel		7CALL50D	90.531(a)(1)(ii)
769.39375	799.39375	Mobile-Fixed	EMS	7MED60	7MED65	
769.39373	SIMPLEX	Base-Fixed-Mobile	LIVIS		7MED65D	
769.49375	799,49375	Mobile-Fixed	EMS	7EMS61	7MED66	
	SIMPLEX	Base-Fixed-Mobile			7MED66D	
769.64375	799.64375	Mobile-Fixed	General Public Safety Service	7TAC62	7TAC52	90.531(a)(1)(iii)
	SIMPLEX 799.74375	Base-Fixed-Mobile Mobile-Fixed	(secondary trunked)	7TAC63	7TAC52D 7TAC55	
769.74375	SIMPLEX	Base-Fixed-Mobile	General Public Safety Service	/ IAC63	7TAC55D	
	799.89375	Mobile-Fixed		7FIR64	7FIRE63	
769.89375	SIMPLEX	Base-Fixed-Mobile	Fire	711110-7	7FIRE63D	
700 00275	799.99375	Mobile-Fixed	Fire	7FIR65	7FIRE64	
769.99375	SIMPLEX	Base-Fixed-Mobile	rire		7FIRE64D	
770.14375	800.14375	Mobile-Fixed	General Public Safety Service	7TAC66	7TAC53	90.531(a)(1)(iii)
770.14373	SIMPLEX	Base-Fixed-Mobile	(secondary trunked)		7TAC53D	30.331(a)(1)(iii)
770.24375	800.24375	Mobile-Fixed	General Public Safety Service	7TAC67	7TAC56	
	SIMPLEX	Base-Fixed-Mobile		71 414/00	7TAC56D	
770.39375	800.39375	Mobile-Fixed	Law Enforcement	7LAW68	7LAW61	
	SIMPLEX	Base-Fixed-Mobile Mobile-Fixed		71 010/00	7LAW61D	
770.49375	800.49375 SIMPLEX	Base-Fixed-Mobile	Law Enforcement	7LAW69	7LAW62 7LAW62D	
	800.64375	Mobile-Fixed	General Public Safety Service	7TAC70	7TAC54	
770.64375	SIMPLEX	Base-Fixed-Mobile	(secondary trunked)	TIACIO	7TAC54D	90.531(a)(1)(iii)
770 74075	800.74375	Mobile-Fixed		7DAT71	7DATA69	00.5044.)(1)(2)
770.74375	SIMPLEX	Base-Fixed-Mobile	Mobile Data		7DATA69D	90.531(a)(1)(i)
770.89375	800.89375	Mobile-Fixed	Mobile Repeater (M03 Use Primary)	7MOB72	7MOB59	
770.09375	SIMPLEX	Base-Fixed-Mobile	Mobile Repeater (MO3 Ose Primary)		7MOB59D	
770.99375	800.99375	Mobile-Fixed	Other Public Service	7TAC73	7GTAC57	
	SIMPLEX	Base-Fixed-Mobile	0.000 0.000		7GTAC57D	
773.00625	803.00625	Mobile-Fixed	EMS	7EMS76	7MED86	
	SIMPLEX	Base-Fixed-Mobile	One of Buttle Coff to Coming	774074	7MED86D	
773.10625	803.10625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile	General Public Safety Service	7TAC74	7TAC71 7TAC71D	90.531(a)(1)(iii)
	803.25625	Mobile-Fixed	(secondary trunked)	7CAL75	7CALL70	
773.25625	SIMPLEX	Base-Fixed-Mobile	Calling Channel	TOALTS	7CALL70D	90.531(a)(1)(ii)
	803.35625	Mobile-Fixed		7EMS77	7MED87	
773.35625	SIMPLEX	Base-Fixed-Mobile	EMS		7MED87D	
773.50625	803.50625	Mobile-Fixed	Fire	7FIR80	7FIRE83	
//3,50025 F	SIMPLEX	Dana Circad Mahila	rire			
	SIMPLEX	Base-Fixed-Mobile			7FIRE83D	
	803.60625	Mobile-Fixed	General Public Safety Service	7TAC78	7TAC72	90 531(a\/1\/iii\
773.60625	803.60625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile	General Public Safety Service (secondary trunked)		7TAC72 7TAC72D	90.531(a)(1)(iii)
	803.60625 SIMPLEX 803.75625	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed	(secondary trunked)	7TAC78 7TAC79	7TAC72 7TAC72D 7TAC75	90.531(a)(1)(iii)
773.60625	803.60625 SIMPLEX 803.75625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile		7TAC79	7TAC72 7TAC72D 7TAC75 7TAC75D	90.531(a)(1)(iii)
773.60625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed	(secondary trunked)		7TAC72 7TAC72D 7TAC75 7TAC75D 7FIRE84	90.531(a)(1)(iii)
773.60625 773.75625 773.85625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service	7TAC79 7FIR81	7TAC72 7TAC72D 7TAC75 7TAC75D 7FIRE84 7FIRE84D	90.531(a)(1)(iii)
773.60625 773.75625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed	(secondary trunked) General Public Safety Service	7TAC79	7TAC72 7TAC72D 7TAC75 7TAC75D 7FIRE84 7FIRE84D 7LAW81	90.531(a)(1)(iii)
773.60625 773.75625 773.85625 774.00625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement	7TAC79 7FIR81 7LAW84	7TAC72 7TAC72D 7TAC75 7TAC75D 7FIRE84 7FIRE84D 7LAW81 7LAW81D	
773.60625 773.75625 773.85625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Mobile-Fixed	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service	7TAC79 7FIR81	7TAC72 7TAC72D 7TAC75 7TAC75D 7FIRE84 7FIRE84D 7LAW81 7LAW81D 7TAC73	90.531(a)(1)(iii) 90.531(a)(1)(iii)
773.60625 773.75625 773.85625 774.00625 774.10625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked)	7TAC79 7FIR81 7LAW84 7TAC82	7TAC72 7TAC72D 7TAC75 7TAC75D 7FIRE84 7FIRE84D 7LAW81 7LAW81D 7TAC73 7TAC73D	
773.60625 773.75625 773.85625 774.00625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Mobile-Fixed	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service	7TAC79 7FIR81 7LAW84	7TAC72 7TAC72D 7TAC75D 7TAC75D 7FIRE84 7FIRE84D 7LAW81D 7LAW81D 7TAC73 7TAC73D 7TAC76	
773.60625 773.75625 773.85625 774.00625 774.10625 774.25625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX 804.25625	Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked) General Public Safety Service	7TAC79 7FIR81 7LAW84 7TAC82	7TAC72 7TAC72D 7TAC75 7TAC75D 7FIRE84 7FIRE84D 7LAW81 7LAW81D 7TAC73 7TAC73D	
773.60625 773.75625 773.85625 774.00625 774.10625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX 804.25625 SIMPLEX 804.35625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked)	7TAC79 7FIR81 7LAW84 7TAC82 7TAC83	7TAC72 7TAC72D 7TAC75D 7TAC75D 7FIRE84 7FIRE84D 7LAW81D 7TAC73 7TAC73D 7TAC76D	
773.60625 773.75625 773.85625 774.00625 774.10625 774.25625 774.35625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX 804.25625 SIMPLEX 804.35625 SIMPLEX 804.50625	Mobile-Fixed Base-Fixed-Mobile Mobile-Fixed Mobile-Fixed Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked) General Public Safety Service Law Enforcement	7TAC79 7FIR81 7LAW84 7TAC82 7TAC83	7TAC72 7TAC72D 7TAC75D 7TAC75D 7FIRE84 7FIRE84D 7LAW81D 7TAC73 7TAC73D 7TAC76D 7LAW82	
773.60625 773.75625 773.85625 774.00625 774.10625 774.25625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX 804.25625 SIMPLEX 804.35625 SIMPLEX 804.35625 SIMPLEX 804.50625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked) General Public Safety Service Law Enforcement Mobile Repeater (M03 Use Primary)	7TAC79 7FIR81 7LAW84 7TAC82 7TAC83 7LAW85 7MOB88	7TAC72 7TAC72D 7TAC75D 7TAC75D 7FIRE84 7FIRE84D 7LAW81D 7TAC73 7TAC73D 7TAC76D 7TAC76D 7LAW82 7LAW82D 7MOB79 7MOB79D	
773.60625 773.75625 773.85625 774.00625 774.10625 774.25625 774.35625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX 804.25625 SIMPLEX 804.35625 SIMPLEX 804.50625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked) General Public Safety Service Law Enforcement Mobile Repeater (M03 Use Primary) General Public Safety Service	7TAC79 7FIR81 7LAW84 7TAC82 7TAC83 7LAW85	7TAC72 7TAC72D 7TAC75D 7TAC75D 7FIRE84 7FIRE84D 7LAW81D 7TAC73D 7TAC73D 7TAC76D 7LAW82 7LAW82D 7MOB79D 7TAC74	90.531(a)(1)(iii)
773.60625 773.75625 773.85625 774.00625 774.10625 774.25625 774.35625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX 804.35625 SIMPLEX 804.35625 SIMPLEX 804.50625 SIMPLEX 804.50625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked) General Public Safety Service Law Enforcement Mobile Repeater (M03 Use Primary)	7TAC79 7FIR81 7LAW84 7TAC82 7TAC83 7LAW85 7MOB88 7TAC86	7TAC72 7TAC72D 7TAC75D 7TAC75D 7FIRE84 7FIRE84D 7LAW81D 7TAC73 7TAC73D 7TAC76D 7TAC76D 7LAW82D 7LAW82D 7MOB79D 7TAC74 7TAC74D	
773.60625 773.75625 773.85625 774.00625 774.10625 774.25625 774.35625 774.50625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX 804.25625 SIMPLEX 804.35625 SIMPLEX 804.50625 SIMPLEX 804.50625 SIMPLEX 804.75625	Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked) General Public Safety Service Law Enforcement Mobile Repeater (M03 Use Primary) General Public Safety Service	7TAC79 7FIR81 7LAW84 7TAC82 7TAC83 7LAW85 7MOB88	7TAC72 7TAC72D 7TAC75D 7TAC75D 7FIRE84 7FIRE84D 7LAW81D 7TAC73 7TAC73D 7TAC76D 7TAC76D 7LAW82D 7LAW82D 7MOB79 7MOB79D 7TAC74 7TAC74D	90.531(a)(1)(iii) 90.531(a)(1)(iii)
773.60625 773.75625 773.85625 774.00625 774.10625 774.25625 774.35625 774.50625 774.60625	803.60625 SIMPLEX 803.75625 SIMPLEX 803.85625 SIMPLEX 804.00625 SIMPLEX 804.10625 SIMPLEX 804.35625 SIMPLEX 804.35625 SIMPLEX 804.50625 SIMPLEX 804.50625 SIMPLEX	Mobile-Fixed Base-Fixed-Mobile	(secondary trunked) General Public Safety Service Fire Law Enforcement General Public Safety Service (secondary trunked) General Public Safety Service Law Enforcement Mobile Repeater (M03 Use Primary) General Public Safety Service (secondary trunked)	7TAC79 7FIR81 7LAW84 7TAC82 7TAC83 7LAW85 7MOB88 7TAC86	7TAC72 7TAC72D 7TAC75D 7TAC75D 7FIRE84 7FIRE84D 7LAW81D 7TAC73 7TAC73D 7TAC76D 7TAC76D 7LAW82D 7LAW82D 7MOB79D 7TAC74 7TAC74D	90.531(a)(1)(iii)

700 MHz - National Interoperability Public Safety Channels

(Sorted by Frequency)

All radios should transmit and receive NAC \$293. Analog operation is not permitted.

Frequency	Input	Type	Tone	Alpha Tag	Description	Mode	Tag
769.14375	799.14375	RM	293 NAC	7TAC51/51D	General Public Safety	P25	Interop
769.24375	799.24375	RM	293 NAC	7CALL50/50D	Calling Channel 50	P25	Interop
769.39375	799.39375	RM	293 NAC	7MED65/65D	EMS 65	P25	Interop
769.49375	799.49375	RM	293 NAC	7MED66/66D	EMS 66	P25	Interop
769.64375	799.64375	RM	293 NAC	7TAC52/52D	General Public Safety	P25	Interop
769.74375	799.74375	RM	293 NAC	7TAC55/55D	General Public Safety	P25	Interop
769.89375	799.89375	RM	293 NAC	7FIRE63/63D	Fire 63	P25	Interop
769.99375	799.99375	RM	293 NAC	7FIRE64/64D	Fire 64	P25	Interop
770.14375	800.14375	RM	293 NAC	7TAC53/53D	General Public Safety	P25	Interop
770.24375	800.24375	RM	293 NAC	7TAC56/56D	General Public Safety	P25	Interop
770.39375	800.39375	RM	293 NAC	7LAW61/61D	Law Enforcement 61	P25	Interop
770.49375	800.49375	RM	293 NAC	7LAW62/62D	Law Enforcement 62	P25	Interop
770.64375	800.64375	RM	293 NAC	7TAC54/54D	General Public Safety	P25	Interop
770.74375	800.74375	RM	293 NAC	7DATA69/69D	Mobile Data 69	P25	Interop
770.89375	800.89375	RM	293 NAC	7MOB59/59D	Mobile Repeater 59	P25	Interop
770.99375	800.99375	RM	293 NAC	7GTAC57/57D	Other Public Service 57	P25	Interop
773.00625	803.00625	RM	293 NAC	7MED86/86D	EMS 86	P25	Interop
773.10625	803.10625	RM	293 NAC	7TAC71/71D	General Public Safety	P25	Interop
773.25625	803.25625	RM	293 NAC	7CALL70/70D	Calling Channel 70	P25	Interop
773.35625	803.35625	RM	293 NAC	7MED87/87D	EMS 87	P25	Interop
773.50625	803.50625	RM	293 NAC	7FIRE83/83D	Fire 83	P25	Interop
773.60625	803.60625	RM	293 NAC	7TAC72/72D	General Public Safety	P25	Interop
773.75625	803.75625	RM	293 NAC	7TAC75/75D	General Public Safety	P25	Interop
773.85625	803.85625	RM	293 NAC	7FIRE84/84D	Fire 84	P25	Interop
774.00625	804.00625	RM	293 NAC	7LAW81/81D	Law Enforcement 81	P25	Interop
774.10625	804.10625	RM	293 NAC	7TAC73/73D	General Public Safety	P25	Interop
774.25625	804.25625	RM	293 NAC	7TAC76/76D	General Public Safety	P25	Interop
774.35625	804.35625	RM	293 NAC	7LAW82/82D	Law Enforcement 82	P25	Interop
774.50625	804.50625	RM	293 NAC	7MOB79/79D	Mobile Repeater 79	P25	Interop
774.60625	804.60625	RM	293 NAC	7TAC74/74D	General Public Safety	P25	Interop
774.75625	804.75625	RM	293 NAC	7DATA89/89D	Mobile Data 89	P25	Interop
774.85625	804.85625	RM	293 NAC	7GTAC77/77D	Other Public Service 77	P25	Interop

700 MHz - National Interoperability Public Safety Channels

All radios should transmit and receive NAC \$293. Analog operation is not permitted.

Frequency	Input	Туре	Tone	Alpha Tag	Description	Mode	Tag
769.24375	799.24375	RM	293 NAC	7CALL50/50D	Calling Channel 50	P25	Interop
769.14375	799.14375	RM	293 NAC	7TAC51/51D	General Public Safety	P25	Interop
769.64375	799.64375	RM	293 NAC	7TAC52/52D	General Public Safety	P25	Interop
770.14375	800.14375	RM	293 NAC	7TAC53/53D	General Public Safety	P25	Interop
770.64375	800.64375	RM	293 NAC	7TAC54/54D	General Public Safety	P25	Interop
769.74375	799.74375	RM	293 NAC	7TAC55/55D	General Public Safety	P25	Interop
770.24375	800.24375	RM	293 NAC	7TAC56/56D	General Public Safety	P25	Interop
770.99375	800.99375	RM	293 NAC	7GTAC57/57D	Other Public Service 57	P25	Interop
770.89375	800.89375	RM	293 NAC	7MOB59/59D	Mobile Repeater 59	P25	Interop
770.39375	800.39375	RM	293 NAC	7LAW61/61D	Law Enforcement 61	P25	Interop
770.49375	800.49375	RM	293 NAC	7LAW62/62D	Law Enforcement 62	P25	Interop
769.89375	799.89375	RM	293 NAC	7FIRE63/63D	Fire 63	P25	Interop
769.99375	799.99375	RM	293 NAC	7FIRE64/64D	Fire 64	P25	Interop
769.39375	799.39375	RM	293 NAC	7MED65/65D	EMS 65	P25	Interop
769.49375	799.49375	RM	293 NAC	7MED66/66D	EMS 66	P25	Interop
770.74375	800.74375	RM	293 NAC	7DATA69/69D	Mobile Data 69	P25	Interop
773.25625	803.25625	RM	293 NAC	7CALL70/70D	Calling Channel 70	P25	Interop
773.10625	803.10625	RM	293 NAC	7TAC71/71D	General Public Safety	P25	Interop
773.60625	803.60625	RM	293 NAC	7TAC72/72D	General Public Safety	P25	Interop
774.10625	804.10625	RM	293 NAC	7TAC73/73D	General Public Safety	P25	Interop
774.60625	804.60625	RM	293 NAC	7TAC74/74D	General Public Safety	P25	Interop
773.75625	803.75625	RM	293 NAC	7TAC75/75D	General Public Safety	P25	Interop
774.25625	804.25625	RM	293 NAC	7TAC76/76D	General Public Safety	P25	Interop
774.85625	804.85625	RM	293 NAC	7GTAC77/77D	Other Public Service 77	P25	Interop
774.50625	804.50625	RM	293 NAC	7MOB79/79D	Mobile Repeater 79	P25	Interop
774.00625	804.00625	RM	293 NAC	7LAW81/81D	Law Enforcement 81	P25	Interop
774.35625	804.35625	RM	293 NAC	7LAW82/82D	Law Enforcement 82	P25	Interop
773.50625	803.50625	RM	293 NAC	7FIRE83/83D	Fire 83	P25	Interop
773.85625	803.85625	RM	293 NAC	7FIRE84/84D	Fire 84	P25	Interop
773.00625	803.00625	RM	293 NAC	7MED86/86D	EMS 86	P25	Interop
773.35625	803.35625	RM	293 NAC	7MED87/87D	EMS 87	P25	Interop
774.75625	804.75625	RM	293 NAC	7DATA89/89D	Mobile Data 89	P25	Interop

700 MHz Low Power/Itinerant

The following narrowband channels are designated for low power use for on-scene incident response purposes using mobiles and portables.

Transmitter power must not exceed 2 watts (ERP).

Bandwidth is 12.5 kHz.

Three of the pairs can be licensed for nationwide itinerant use, the rest are subject to regional There are no nationwide standard names or designators for these channels.

FCC Channel No.	Frequency	Input	Туре	Description	Tag
1-2 / 961-962	769.00625	799.00625	RM	700 MHz Regional	Multi-Tac
3-4 / 963-964	769.01875	799.01875	RM	700 MHz Regional	Multi-Tac
5-6 / 965-966	769.03125	799.03125	RM	700 MHz Regional	Multi-Tac
7-8 / 967-968	769.04375	799.04375	RM	700 MHz Regional	Multi-Tac
9-10 /969-970	769.05625	799.05625	RM	700 MHz Nationwide Itinerant	Multi-Tac
11-12 /971-972	769.06875	799.06875	RM	700 MHz Nationwide Itinerant	Multi-Tac
949-950 / 1909-1910	774.93125	804.93125	RM	700 MHz Regional	Multi-Tac
951-952 / 1911-1912	774.94375	804.94375	RM	700 MHz Regional	Multi-Tac
953 954 / 1913-1914	774.95625	804.95625	RM	700 MHz Regional	Multi-Tac
955-956 / 1915-1916	774.96875	804.96875	RM	700 MHz Regional	Multi-Tac
957-958 / 1917-1918	774.98125	804.98125	RM	700 MHz Regional	Multi-Tac
959-960 / 1919-1920	774.99375	804.99375	RM	700 MHz Nationwide Itinerant	Multi-Tac

General Use (Former Reserve Channels)

FCC	Base	Mobile	
Channel	Frequency	Frequency	Status
37-38	769.231250	799.231250	Available
61-62	769.381250	799.381250	Available
77-78	769.481250	799.481250	Available
117-118	769.731250	799.731250	Available
141-142	769.881250	799.881250	Available
157-158	769.981250	799.981250	Available
197-198	770.231250	800.231250	Available
221-222	770.381250	800.381250	Available
237-238	770.481250	800.481250	Available
277-278	770.731250	800.731250	Available
301-302	770.881250	800.881250	Available
317-318	770.981250	800.981250	Available
643-644	773.018750	803.018750	Available
683-684	773.268750	803.268750	Available
699-700	773.368750	803.368750	Available
723-724	773.518750	803.518750	Available
763-764	773.768750	803.768750	Available
779-780	773.868750	803.868750	Available
803-804	774.018750	804.018750	Available
843-844	774.268750	804.268750	Available
859-860	774.368750	804.368750	Available
883-884	774.518750	804.518750	Available
923-924	774.768750	804.768750	Available
939-940	774.868750	804.868750	Available

Public safety incumbents relocating from the 470-512 MHz band (T-Band) in the urban areas specified in Sections 90.303 and 90.305 of the Commission's rules have priority access to these channels. Outside the urban areas specified in Sections 90.303 and 90.305 of the Commission's rules, no more than eight 12.5 kHz-wide channel pairs may be designated for temporary deployable mobile trunked infrastructure (FB2T) that could be transported into an incident area to assist with emergency response and recovery. See

Table of Deployable Trunked Channels

NPSTC and NRPC Recommended Channels for Deployable Trunked Systems

On February 13, 2015, NPSTC and the NRPC recommended a set of six former reserve channels (12.5 kHz bandwidth) to be allocated nationwide for 700 MHz deployable systems. The NPSTC/NRPC recommended channels are listed below:

Deployable Trunked Channel	Channel Number	12.5 kHz Center Frequency	Separation from Lower- Adjacent Deployable Trunked Channel (kHz)
A	37-38	769.23125	N/A
В	61-62	769.38125	150
С	117-118	769.73125	350
D	141-142	769.88125	150
Е	883-884	774.51875 ¹	4500
F	939-940	774.86875 ²	350

On March 3, the Public Safety and Homeland Security Bureau issued a *Public Notice* seeking comment on the recommended channels.³ On April 2, 2015, the Association of Public-Safety Communications Officials-International, Inc. filed comments urging approval of the NPSTC/NRPC recommended channels.⁴

Accordingly, we hereby approve the recommended channels as set forth above. RPCs may now incorporate these channels into their plans for deployable trunked systems provided any region with a T-Band market must give priority to these channels, in that market, to any public safety T-band incumbent seeking to relocate from the T-band.⁵

¹ NPSTC and NRPC recommend this channel as the primary control channel (CC-P).

² NPSTC and NRPC recommend this channel as the alternate control channel (CC-A).

³ See Public Safety and Homeland Security Bureau Seeks Comment on Recommended Nationwide Channels for Deployable Trunked Systems in the 700 MHz Narrowband Public Safety Band, *Public Notice*, PS Docket No. 13-87 and WT Docket 02-378, DA 15-278 (PSHSB rel. Mar. 3, 2015).

⁴ See Comments of Association of Public-Safety Communications Officials-International, Inc. (Apr. 2, 2015).

⁵ Regional Planning Committees must file plan amendments to reflect the revised 700 MHz narrowband segment no later than October 30, 2015. *See* Proposed Amendments to the Service Rules Governing Public Safety Narrowband Operations in the 769-775/799-805 MHz Bands, *et al*, PS Docket 13-87, PS Docket 06-229, WT Docket 96-86, RM 11433 and RM 11577, *Order*, DA 15-476 (PSHSB rel. Apr. 20, 2015).

700MHz Secondary Trunking

FCC	Base	Mobile	Status
Channel	Frequency	Frequency	Status
21-22	769.131250	799.131250	Available
101-102	769.631250	799.631250	Available
181-182	770.131250	800.131250	Available
261-262	770.631250	800.631250	Available
659-660	773.118750	803.118750	Available
739-740	773.618750	803.618750	Available
819-820	774.118750	804.118750	Available
899-900	774.618750	804.618750	Available

Use aboard aircraft is allowed to support Air-Ground communications by the FCC's 700MHz Narrowbanding Report & Order (14-172) for public safety aircraft voice operations at a height not to exceed 1500ft (457m) and power not to exceed 2W (ERP). Each applicant for Air-Ground spectrum shall notify the relevant State prior to filing a license application with the FCC and allow the State the opportunity to review the application and prepare a statement of concurrence.

700MHz Secondary Trunking Recommended Air-Ground Naming

FCC	Base	Mobile	Common Name
Channel	Frequency	Frequency	
21-22	769.131250	799.131250	7AIR58
		Simplex	7AIR58D
101-102	769.631250	799.631250	7AIR60
		Simplex	7AIR60D
181-182	770.131250	800.131250	7AIR67
		Simplex	7AIR67D
261-262	770.631250	800.631250	7AIR68
		Simplex	7AIR68D
659-660	773.118750	803.118750	7AIR78
		Simplex	7AIR78D
739-740	773.618750	803.618750	7AIR80
		Simplex	7AIR80D
819-820	774.118750	804.118750	7AIR85
		Simplex	7AIR85D
899-900	774.618750	804.618750	7GRND8
		Simplex	7GRND8D

Use aboard aircraft is allowed to support Air-Ground communications by the FCC's 700MHz Narrowbanding Report & Order (14-172) for public safety aircraft voice operations at a height not to exceed 1500ft (457m) and power not to exceed 2W (ERP). Each applicant for Air-Ground spectrum shall notify the relevant State prior to filing a license application with the FCC and allow the State the opportunity to review the application and prepare a statement of concurrence.

APPENDIX B

MEMORANDUM OF UNDERSTANDING BY AND BETWEEN NEW ENGLAND REGION 19 700 MHz PLANNING COMMITTEE AND

ТО:	(Signer of application and title)	
	(Agency name)	
FROM:	, Chairman	
DATE:	(mm/dd/yy)	
SUBJECT:	Memorandum of Understanding for Operating the 700 MHz Interoperabili Channels for Region 19	.ty

This Memorandum of Understanding (hereafter referred to as MOU) shall be attached to the application when submitting it. By virtue of signing and submitting the application and this MOU, (agency name), (hereafter referred to as APPLICANT) affirms its willingness to comply with the proper operation of the Interoperability (interoperability) channels as dictated by the New England Region 19 700 MHz Regional Planning Committee (hereafter referred to as RPC) as approved by the Federal Communications Commission (hereafter referred to as FCC) and by the conditions of this MOU.

The APPLICANT shall abide by the conditions of this MOU which are as follows:

- To operate by all applicable State, County, and City laws and ordinances.
- To utilize "plain language" for all transmissions.
- To monitor the Calling Channel(s) and coordinate the use of the Tactical Channels.
- To identify inappropriate use and mitigate the same from occurring in the future.
- To limit secondary Trunked operation to the interoperability channels specifically approved on the application and limited to channels listed below.
- To relinquish secondary Trunked operation of approved interoperability channels to requests for primary conventional access with same or higher priority.
- To mitigate contention for channels by exercising the Priority Levels identified in this MOU.
- The applicant agency will use these interoperability channels with (<u>number of mobile/portable units</u>) and will notify the New England Region 19 700 MHz Regional Planning Committee (RPC) if the number of radios programmed increases by more than 10% of the number of units listed above.

The preceding conditions are the primary, though not complete, requirements for operating in the interoperability channels. (Refer to the New England Region 19 Plan for the complete requirements list.)

Priority Levels:

- 1. Disaster or extreme emergency operation for mutual aid and interagency communications;
- 2. Emergency or urgent operation involving imminent danger to life or property;
- 3. Special event control, generally of a preplanned nature (including Task Force operations);
- 4. Single agency secondary communications.

To resolve contention within the same priority, the channel should go to the organization with the wider span of control and/or authority. This shall be determined by the State Interoperability Executive Committee or RPC for the operation or by the levels of authority/government identified in the contention.

For clarification purposes and an aid to operate as authorized, any fixed or mobile relay stations identified on the license for temporary locations (FCC station class FBT or FB2T, respectively) shall remain within the licensed area of operation. Similarly, vehicular/mobile repeater stations (FCC station class MO3) shall remain within the licensed area of operation. Federal agencies are permitted access to interoperability channels only as authorized by 47 CFR 2.102 & 2.103 and Part 7.12 of the National Telecommunications Information Administration (NTIA) Manual.

Any violation of this MOU, the New England Region 19 Plan, or FCC Rule shall be addressed immediately. The first level of resolution shall be between the parties involved, next the State Interoperability Executive Committee or RPC, and finally the FCC.

all covenants of the Agreement.

(Printed name of Region 19 Representative and title)
(Printed name of Region 19 Representative and title)
(Signature of Region 19 Representative)
(Signature of Region 19 Representative)
(Date)
New England Region 19 700 MHz Committee
(Printed name of authorized signer and title)
(Finited name of authorized signer and title)
(Authorized signer identified above and consistent with application)
(Authorized signer identified above and consistent with application)
(Date)
(Date)
(Agency name)
(Agency name)
(Agency address)
(Agency audiess)
(Agency address)
(Agency audiess)
(Agency address)
(Agency address)
(Signar's telephone)
(Signer's telephone)
(Cinna's and Library)
(Signer's email address)

These parties each bind themselves, successors, assigns and legal representatives with respect to

(Agency letterhead of Licensee)

APPENDIX C

MEMORANDUM OF AGREEMENT BY AND BETWEEN NEW ENGLAND REGION 19 700 MHz PLANNING COMMITTEE AND

ГО:			
10.	(Recipient person and title	2)	
	(Recipient agency)		
FROM:	(Authorizing person and ti	itle)	
	(Authorizing agency)		
DATE:	(mm/dd/yy)		
SUBJECT:	Memorandum of	Agreement Rega	arding Mobile Radio Parameters
grantee)	operation shall be p		mobile (vehicular or hand-held) parameters:
Call Sign	Frequency(ies)	Max. Power	Channel Description
Use addition	nal attachments as n	ecessary for mor	re frequencies/channels)

This written agreement applies to operations in cooperation and coordination with activities of the licensee per New England Region 19 Plan, FCC Rules 47 CFR Parts 2.102(c), 2.103 and 90.421 and Part 7.12 of the National Telecommunications Information Administration Manual. Furthermore, the grantor reserves the right to effectively eliminate the possibility of unauthorized operation, which ultimately could result in terminating this written agreement.

all covenants of the Agreement.	
(Printed name of Region 19 representative and title)	
(Signature of Region 19 representative)	
(Date)	
New England Region 19 700 MHz Comm	ittee
and	
and	
	<u></u>
(Printed name of authorized signer and title)	
(Authorized signer identified above)	
(Date)	
(Agency name)	<u> </u>
(Agency address)	
(Agency address)	
(Agency address)	<u> </u>
(Signer's phone)	<u>—</u>
(Signer's email address, if available)	

These parties each bind themselves, successors, assigns and legal representatives with respect to

APPENDIX D

NEW ENGLAND REGION 19 700 MHZ COMMITTEE DISPUTE RESOLUTION PROCESS

INTRODUCTION

The New England Region 19 700 MHz Committee is established under section 90.527 of the Federal Communications Commission's (FCC) rules and regulations. It is an independent Committee apart from the Federal Communications Commission with authority to evaluate applications for public safety uses of the spectrum allocated under FCC Docket 96-86. In addition, the Committee hears appeals of the decisions and allocations which it has made. The formal requirements of the appeal process are set out below.

In order to ensure that the appeal process is open and understandable to the public, the New England Region 19 700 MHz Committee has developed this procedure. The Committee and its members will follow this procedure (as may be amended). Any changes made to this process will require a modification to the Regional Plan and will be made available to the public.

The New England Region 19 700 MHz Committee will make every effort to process appeals in a timely fashion and issue decisions expeditiously.

APPEALS COMMITTEE

Members

The Regional Chair may organize the Committee into Sub-Committees, each comprised of one or more members. The Appeals Sub-Committee is one of those Sub-Committees. Where an appeal is scheduled to be heard by this Sub-Committee, the chair is determined as follows:

- (a) if the chair of the Committee is on the Sub-Committee, he/she will be the chair;
- (b) if the chair of the Committee is not on the Sub-Committee but the vice-chair is, the vice-chair will be the chair; and
- (c) if neither the chair nor the vice-chair is on the Sub-Committee, the New England Region 19 700 MHz Committee will designate one of the members to be the chair.

Withdrawal or Disqualification of a Committee Member on the Grounds of Bias

Where the chair or a Committee member becomes aware of any facts that would lead an informed person, viewing the matter reasonably and practically, to conclude that a member, whether consciously or unconsciously, would not decide a matter fairly, the member will be prohibited from conducting the appeal unless consent is obtained from all parties to continue. In addition, any party to an appeal may challenge a member on the basis of real or a reasonable appearance of bias.

Correspondence (Communicating) with the Committee

To ensure the appeal process is kept open and fair to the participants, all correspondence to the New England Region 19 700 MHz Committee must be sent to the chair, vice-chair and secretary and other parties to the appeal.

Committee members will not contact a party on any matter relevant to the merits of the appeal, unless that member puts all other parties on notice and gives them an opportunity to participate. The appeal process is public in nature and all meetings regarding the appeal will be open to the public.

THE APPEAL PROCESS

Filing an Appeal

What can be appealed

The Committee hears appeals of decisions or allocations.

Who can appeal

An official of the entity who filed the original application to the New England Region 19 700 MHz Committee must be the person who files the appeal on behalf of the entity.

How to appeal

A notice of appeal must be served upon the New England Region 19 700 MHz Committee. The notice of appeal may be "delivered" by mail, courier, or hand delivered to the office of the chair, vice-chair and secretary as listed in the Official Membership List. The Committee will also accept a notice of appeal by facsimile to the chair, vice-chair and secretary with the original copy of the notice of appeal served as indicated above.

Certain things must be included in a notice of appeal for it to be accepted. The notice of appeal **must** include:

- 1. name and address of the appellant;
- 2. name of the person, if any, making the request for an appeal on behalf of the appellant;
- 3. address for service of the appellant;
- 4. grounds for appeal (a detailed explanation of the appellant's objections to the determination describe errors in the decision);
- 5. description of the relief requested; and
- 6. signature of the appellant or the appellant's representative.

Time limit for filing the appeal

To appeal a decision or allocation, the entity who is subject to the decision must deliver a notice of appeal within thirty calendar days after receiving the decision.

Extension of time to appeal

The Committee is allowed to extend the deadline, either before or after its expiration based upon a majority plus one vote of the Committee.

A request for an extension should be made to the chair, vice-chair and secretary in writing, and include the reasons for the delay in filing the notice of appeal and any other reasons which the requester believes support the granting of an extension of time to file the appeal.

Rejection of a notice of appeal

The Committee may reject a notice of appeal if:

- (a) it is determined that the appellant does not have standing to appeal; or
- (b) the Committee does not have jurisdiction over the subject matter or the remedy sought.

Before a notice of appeal is rejected, the Committee will inform the appellant of this in writing, with reasons, and give the appellant a thirty calendar day opportunity to make submissions and any potential parties with an opportunity to respond.

Adding parties to the appeal

In addition to the parties mentioned above, the Committee has the discretion to add any other person who may be "affected" by the appeal as a party to the appeal.

Anyone wanting to obtain party status should make a written request to the chair, vice-chair and secretary no less than thirty calendar days prior to the hearing date. The written request should contain the following information:

- (a) name, address, telephone, fax number and email of the person submitting the request,
- (b) detailed description of how the person is "affected" by the notice of appeal,
- (c) reasons why the person should be included in the appeal,
- (d) signature of the person submitting the request.

Intervener status

The Committee may also invite or permit an individual or organization to participate in a hearing as an intervener. Interveners are generally individuals or organizations that do not meet the criteria to become a party (i.e. "may be affected by the appeal") but have sufficient interest in, or relevant expertise or view in relation to the subject matter of the appeal.

An individual or organization wanting to take part in an appeal as an intervener should send a written request to the chair, vice-chair and secretary. The written request should contain the following information:

- (a) name, address, telephone, fax number and email of the person or organization submitting the request,
- (b) detailed description of the interest or relevant expertise of the person or organization in relation to the subject matter of the appeal,
- (c) reason why the person or organization should be allowed to participate as an intervener in the appeal,
- (d) signature of the person submitting the request.

Prior to inviting or permitting an individual or organization to participate in a proceeding as an intervener, or deciding on the extent of that participation, the Committee will provide all parties with an opportunity to make representations if they wish to do so.

Type of appeal hearing (written or oral)

An appeal may be conducted by way of written submissions, oral hearing or a combination of both. The Committee will determine the appropriate type of appeal after a complete notice of appeal has been received. The Committee will normally conduct an oral hearing although it may order that a hearing proceed by way of written submissions in certain cases. Where a hearing by written submissions is being considered by the Committee, the Committee may request input from the parties.

Burden of proof

The burden or responsibility for proving a fact is on the person who asserts it.

Notification of expert evidence

The Committee requires any party that intends to present expert evidence at a hearing to provide the chair, vice-chair and secretary, and all other parties to the appeal, with advance notice that an expert will be called to give an opinion. Advance notice shall be no less than thirty calendar days. The notice should include a brief statement of the expert's qualifications and areas of expertise.

If a party intends to produce, at a hearing, a written statement or report prepared by an expert, a copy of the statement or report should be provided to the chair, vice-chair and secretary, and all parties to the appeal before the statement or report is given in evidence. Expert statements or reports are to be distributed no less than thirty calendar days prior to the hearing date.

Documents

If a party will be referring to a document, that document must be provided to the chair, vice-chair and secretary and all parties no less than thirty calendar days prior to the hearing.

APPEALING THE APPEALS DECISION

If a party is not satisfied with the decision of the Region, he or she can appeal that decision to the Federal Communications Commission.

Part 2 Appendix E - Region 19 County and State Data

Charles Can Charles		% O	odnare	Persons /
county and state	Population	Population	Miles	Square Mile
Connecticut	3,574,097	100%	4,845	738
Fairfield	916,829	25.7%	626	1,465
Hartford	894,029	25.0%	735	1,216
Litchfield	189,927	2.3%	920	206
Middlesex	165,676	4.6%	369	449
New Haven	862,477	24.1%	909	1,423
New London	274,055	7.7%	999	411
Tolland	152,691	4.3%	410	372
Windham	118,428	3.3%	513	231

Maino	1 328 361	1000%	C98 UE	13
manie	1,05,030,1	0/00/	30,00	1
Androscoggin	107,702	8.1%	470	229
Aroostook	71,870	5.4%	6,672	11
Cumberland	281,674	21.2%	836	337
Franklin	30,768	2.3%	1,698	18
Hancock	54,418	4.1%	1,588	34
Kennebec	122,151	9.5%	898	141
Knox	39,736	3.0%	366	109
Lincoln	34,457	2.6%	456	92
Oxford	57,833	4.4%	2,078	28
Penobscot	153,923	11.6%	3,396	45
Piscataquis	17,535	1.3%	3,966	4
Sagadahoc	35,293	2.7%	254	139
Somerset	52,228	3.9%	3,926	13
Waldo	38,786	2.9%	730	23
Washington	32,856	2.5%	2,568	13
York	197,131	14.8%	991	199

Massachusetts	6,547,629	100%	7,840	835
Barnstable	215,888	3.3%	396	545
Berkshire	131,219	2.0%	931	141
Bristol	548,285	8.4%	929	986
Dukes	16,535	0.3%	104	159
Essex	743,159	11.4%	501	1,483
Franklin	71,372	1.1%	702	102
Hampden	463,490	7.1%	618	220
Hampshire	158,080	2.4%	529	299
Middlesex	1,503,085	23.0%	823	1,826
Nantucket	10,172	0.2%	48	212
	ı			

Source: US Census Bureau , Census 2010 files: Census 2010 Summary File 1, Matrices PCT-12 and P13. QuickFacts for Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

County and State	Donilation	% of	Square	Persons /
county and state	ropulation	Population	Miles	Square Mile
Massachusetts	6,547,629	100%	7,840	988
Norfolk	670,850	10.2%	400	1,677
Plymouth	494,915	%9'.2	199	749
Suffolk	722,023	11.0%	29	12,238
Worcester	798,552	12.2%	1,513	278

New Hampshire	1,316,470	100%	8,968	147
Belknap	880'09	4.6%	401	150
Carroll	47,818	3.6%	934	51
Cheshire	711,77	%6'9	707	109
Coos	33,055	7:2%	1,800	18
Grafton	89,118	%8'9	1,713	52
Hillsborough	400,721	30.4%	876	457
Merrimack	146,445	11.1%	934	157
Rockingham	295,223	22.4%	969	425
Strafford	123,143	9.4%	369	334
Sullivan	43,742	3.3%	237	81

Rhode Island	1,052,567	100%	1,045	1,007
Bristol	49,875	4.7%	25	1,995
Kent	166,158	15.8%	170	226
Newport	82,888	%6'.2	104	797
Providence	626,667	29.5%	413	1,517
Washington	126,979	12.1%	333	381

Vermont	625,741	100%	9,250	89
Addison	36,821	2.9%	770	48
Bennington	37,125	2.9%	9/9	22
Caledoonia	31,227	2.0%	651	48
Chittenden	156,545	25.0%	539	290
Essex	908'9	1.0%	999	6
Franklin	47,746	%9.7	637	75
Grand Isle	6,970	1.1%	83	84
Lamoille	24,475	3.9%	461	53
Orange	28,936	4.6%	689	42
Orleans	27,231	4.4%	869	39
Rutland	61,642	%6.6	933	99
Washington	59,534	9.5%	689	98
Windham	44,513	7.1%	789	99
Windsor	26,670	9.1%	971	28

62,810	865	14,444,8	Total
1000	L	****	
=	62,81		14,444,865 62,81

APPENDIX F

NEW ENGLAND REGION 19 AGENCIES TO BE CONSIDERED FOR INTEROPERABILITY

The following is a listing of agencies which may need to communicate with each other during an emergency situation:

Federal Agencies

Federal Marshal Border Patrol Coast Guard

Navy/Army/Marines Environmental Protection

Treasury

Indian Tribal Nations
Forest Services
Parks Services

Emergency Management

Transportation

State Agencies

Police

Fire Marshall

Environmental Protection

Transportation Corrections

Hazardous Materials Transit Authority Community Health

Emergency Management

City/Township/Town

Police Parks

Environmental Protection

Fire Schools Public Works Schools

Community Health Animal Control Ambulance services Bridge Authority Metro Parks

County

Sheriff Parks

Environmental Protection

Fire

Road Commission Animal Control Ambulance Services Bridge authority Metro Parks

Emergency Management

Population Centers/ Industry, Business

Factories
Gas Company
Electric Company
Colleges/Schools
Stadium(s)

Convention Center

Public Service

Salvation Army Red Cross Radio Amateurs Ambulance Service Bridge Authority

Hospitals

City County Private

Transportation

Harbor Master Airport Railroad Civil Air Patrol Toll Road Bridge Authority

APPENDIX G

NEW ENGLAND REGION 19 INITIAL PLANNING MEETING, MEETING MINUTES, ATTENDANCE AND NOTIFICATION METHODS

Initial Meeting

On December 7, 2000, the initial Planning Meeting for the New England Region 700 MHz Planning Committee was held at the Daniel Webster College in Nashua, New Hampshire. The meeting was called to order by Mr. George Pohorilak, current chair of the Region 19 800 MHz Committee. The meeting was open to the public.

Copies of the Federal Communications Commission (FCC) Public Notice and the minutes of the initial Planning Meeting are enclosed in this appendix.

December 2000 Minutes

NEW ENGLAND REGION 700MHZ PLANNING MEETING

MINUTES

DECEMBER 7, 2000 DANIEL, WEBSTER COLLEGE Nashua, New Hampshire

9:15 am

Mr. George Pohorilak, current chair of the Region 19 800MHz Committee, called the meeting to order.

He described the mandate that gives him authority to convene this meeting

Pohorilak introduced James Warakois, Boston Police Communications as the Temporary Recording secretary.

Pohorilak introduced, himself the members of the panel, Jerry Zarwanski, DPS-OSET, and Jim Warakois, APCO AFC MA/RI.

Nominations were opened for Chairman.

R. DiBella nominated George Pohorilak; there were multiple seconds.

A second call for nominations was made. No further nominations were received.

The nominations for Chairman were closed. A voice vote was made.

George Pohorilak, Chairman of the New England 700MHZ Planning Committee.

Nominations opened for Vice Chairman.

Jerry Zarwanski was nominated, and seconded for Vice-Chairman.

A second call for nominations was made. No further nominations were received.

The nominations for Vice Chairman were closed. A voice vote was made.

Jerry Zarwanski, Vice Chairman of the New England Region 700MHZ Planning Committee.

Nominations opened for Recording Secretary

Jim Warakois was nominated, and seconded for Recording Secretary.

A second call for nomination was made. No further nominations were received.

The nominations for Recording Secretary were closed. A voice vote was made.

Jim Warakois, Recoding Secretary of the New England Region 19 700MHZ Planning Committee.

R. DiBella moved that the vote for all officers be made unanimous by acclamation. Seconded and affirmed by voice vote.

The Roberts Rules of Order will govern the proceedings of this committee.

Pohorilak introduced David Eierman, Motorola / NCC member.

Mr. Eierman spoke on the current status of the 700 MHZ Transition.

A PowerPoint presentation was used to emphasize major points such as:

Reallocation of TV Channels 60 - 69; Allocations to Public Safety; NCC Current recommendations; National & Regional plans, existing and future; 700 MHz RPC Process; Adjacent Regions; Notifications of adjacent regions; Management of databases; TV Incumbency and timetables for change.

A the conclusion of Mr. Eierman's presentation the panel reconvened for further business.

G. Pohorilak asked those assembled if there was objection to delaying the formation of subcommittees until the next meeting of this committee which will be held in February 2001.

No objection was voiced.

Meeting adjourned at 10:31 am

Respectfully submitted

James A. Warakois, Recording Secretary.

Documents made available prior to meeting:

NCC Implementation Subcommittee Final Draft Guidelines for 764-776/794-806 REGIONAL PLANNING COMMITTEES

New England Region 700MHZ Planning Meeting Agenda

A meeting Registration list was created.

March 2001 Minutes

New England Region 700MHz, Technical Advisory Committee Meeting

Thursday, March 29, 2001

State Police Headquarters, Framingham, Massachusetts

List of Attendees:

George Pohorilak DPS-OSET, State of Connecticut, Chairman

Jerry Zarwanski DPS-OSFT, State of Connecticut, Vice-Chairman

James Warakois Boston, MA, Police Communications, Secretary

Gregory Richardson Boston Fire Dept

James P. Kowalik NH State Police

Michael Doucette NH State Police - Troop F

Ralph R. Thompson

Rick Pollak Motorola

Robert DiBella Town of Glastonbury, CT

Thomas Crony Rhode Island State Police

John Pinkham Mass State Police

John Mosely Mass State Police

Mark Cady Worcester Fire

Richard Hanlon Mass State Police

Gary Gutowski Mass State Police

Phillip Balboni Boston EMS

George Carbonell CT DOT

Michael Stemmler CT State Police

The Chairman called the meeting to order at 9:40 AM.

The Chairman announced the publication of the Fifth Report and Order (FCC WT Docket No.96-86). Of immediate importance is the definition of the geographic regions served by the committees. The Chairman referenced the division of the State of Connecticut into Region 8 and Region 19. State decision to opt out must meet 7/1/01 deadline.

Copies of FCC Public Notice DA 01-58, Public Safety 700 MHz Band General Use Spectrum Deadline for changing Regional Boundaries were distributed. The Chairman requisitioned members of the committee, from the state of Connecticut, take a vote to include the entire state into one Region. He referenced page 1 of attachment B of DA 01-58.

Motion by G. Carbonell that: **THE STATE OF CONNECTICUT UN IT'S ENTIRETY BE MOVED TO REGION 19 FOR THE 700MHz SPECRUM ASSIGNMENTS.** Second by R. DiBella. Comments by the Chairman and & Carbonell about the advantages of the change The Chairman called for a vote by those members from Connecticut. **The Vote was unanimous in the AFFIRMATIVE**. The FCC will be notified by letter of Connecticut's decision to opt out of Region 8 as a result of this vote.

Grant Application

The Chairman next called attention to the document Regional Planning Committee Support Funding Program 2001. He pointed out the need for disbursement and accounting of any funds received from the National Institute of Justice AGILE Program Association of Public Safety Communications Officials, International (APCO), Atlantic Chapter was approached to provide the accounting and disbursement of any funds received under this program.

The treasurer of the APCO, Atlantic Chapter, Jeff Vannais was approached by the Chairman as to the willingness of APCO - Atlantic Chapter to hold money for the committee and disburse funds as authorized by the committee.

R. DiBella suggested that APCO - Atlantic Chapter handling the funds might give the appearance of favoritism. R. Thompson stated that the small sum of money would not be significant and from his view would not evoke feeling of conflict with IMSA or other frequency coordinators. G. Carbonell noted that the handling of the finds by APCO would avoid the accounting difficulties found within state accounting and disbursement systems. He questioned how many other organizations not tied to a state were setup to handle the disbursement of finds. It was noted that there would be no charges for servicing this account.

The chairman stated that the request for accounting support be brought before the APCO - Atlantic Chapter for approval. A Memorandum of Understanding will be generated between the 700Mhz Committee and APCO - Atlantic Chapter. Rules of find disbursement will be identified. J. Kowalik inquired of the committee's intent to support funding for implementation of software training for maintenance of the frequency database. The Chairman suggested that use of the database would likely be by the Frequency Coordinators involved in the frequency assignment process.

Vice Chairman (J. Zarwanski) observed that the frequency database would be maintained by some person from the Committee. Coordination of frequencies could be by any of the Coordinators who currently coordinate Public Safety frequencies.

Motion by R. DiBella that APPLICATION BE MADE FOR A GRANT OF THE MAXIMUM FUNDS AVAILABLE FROM N.P.S.T.C. Seconded by G. Carbonell. Voted in the affirmative by the majority of those present.

Motion by R. DiBella that **APCO**, **ATLANTIC CHAPTER BE USED TO HOLD AND DISBURSE THE GRANT MONEYS RECEIVED.** Seconded by R. Thompson. **Voted in the affirmative by the majority of those present.**

Public Notice (FCC) DAOI-406 Public Safety 700 MHz Band-State License Option to Apply Runs through December 31, 2001 distributed.

The Chairman emphasized the need for each State to take prompt action to file application for the State frequencies even though the final rules have not been issued.

General discussion ensued regarding the designation by the States for State "Band Managers" for 700 MHz. J. Kowalik described the process in New Hampshire. The Chairman described the

process and intentions in Connecticut. J. Zarwanski explained the current procedure for filing for the license, the results that can be expected and the date of deadlines. The discussion by others emphasized the need for all of the Region 19 member states to file timely application for the "State 700MHz Band" even though the states were in preliminary discussions.

Motion by R. Thompson that **The Chairman send a letter to those states not represented at this session (Maine and Vermont) emphasizing the need for them to act on making application for the state allotment of 700 MHz frequencies.** (FCC Public Notice DA 01-406). Seconded by R. DiBella. **A voice vote was unanimous in the affirmative.**

The Chairman opened discussion about the plan development process. He suggested that the elements of the plan should begin by the June meeting.

The subjects of discussion included: Geographic boundaries; 800 MHz process and previous experience with the 821 MHz plan. The Chairman referred to the published NPSTC Plan and recommended it as a guideline for the 700MHz plan. The NPSTC Plan includes: Procedures; Plan Development; Technical Standards; Appeals; Interoperability; Eligibility; Applications; Enforcement; etc.

J. Kowalik suggested dividing plan development into two main areas with associated subcommittees: administrative procedures; and technical issues; and procedures isle noted many of the procedures be modeled after the 800MHz plan that is now in place. However, there are technical standards that will have to wait for FCC guidelines.

The possibility of Internet use by the members was discussed G. Carbonell suggested the creation of an Internet user group for exchange of information.

The Chairman suggested that the plan development process should begin before the next meeting. The following members agreed to begin drafting the following:

Procedures element - J. Kowalski

Eligibility sub committee - J. Zarwanski, G. Pohorilak

Applications process - sub committee, G. Pohorilak

It was suggested that the current Regional 19 plan be obtained for the members G. Carbonell agreed to "scan-in" the current Region S and Region 19 plans into a user group format to be available to the members of this committee via the Internet

The Chairman suggested holding the next meeting of the entire committee in late June. After discussion, Wednesday, June 20, 2001 was chosen as the next meeting date. The location, Vermont. The location address will be sent with Agenda to committee members

A general public notification of the meeting will be made to Public Safety Entities, especially those near the meeting venue

Motion by the Vice-Chairman that The minutes of the previous meeting be accepted as written. Second by G. Carbonell. There was no further discussion. The minutes of the previous meeting were approved by voice vote.

The Chairman called for any further comments or discussion from the floor.

Motion to adjourn voted and carried.

Meeting adjourned at 11:48 AM

Documents distributed to attendees:

- Regional Planning Committee Support Funding Program 2001, NPSTC (National Public Safety Telecommunications Committee
- FCC Public Notice, DA 01-58, Public Safety 700 MHz Band General Use Spectrum Deadline for Changing Regional Boundaries is July 2, 2001
- FCC Public Notice, DA 01-406, Public Safety 700 MHz Band--State *License Option To Apply Runs Through December 31 2001*
- Minutes New England Region 700 MHz Planning Meeting, December 7, 2000, Daniel Webster College, Nashua, New Hampshire.

Respectfully Submitted

James N Warakois, Secretary

June 2001 Minutes

New England Region 700MHz, Technical Advisory Committee Meeting Wednesday, June 20, 2001

List of Attendees:

George Pohorilak DPS-OSET, State of Connecticut, Chairman Jerry Zarwanski DPS-OSET, State of Connecticut, Vice-Chairman James Warakois Boston, MA, Police Communications, Secretary Stephan Brown CT State Aviation and Port George Carbonell CT DOT Stephen Verbil, Verbil Communications, Inc. Robert DiBella Town of Glastonbury, CT Mark Cady Worcester, MA, Fire Terry Lavalley VT State Police Elliot Derdak Boston, MA, EMS Bob Cruikshank Motorola Ralph R. Thomson Worcester, MA Thomas Crotty RI State Police Gary Gutowski MA State Police Mike Stemmler CT State Police Blair Sutherland MA State Police John Pinkham MA State Police

The third quarterly meeting of the New England Region 700MHz Technical Advisory Committee was held on Wednesday, June 20, 2001 at the Vermont State Police Barracks, Chester, VT. The Chairman called the meeting to order at 10:20 AM.

First Order of Business:

Acceptance of the minutes of the previous meeting. **Moved** by G. Carbonell to **ACCEPT the** minutes as written. There was no discussion or changes. The minutes were approved as presented.

Grant Application:

An **application** for a **grant** for operational expenses was submitted in May to the National Law Enforcement and Technology Center. There has been no response.

A **Memorandum of Understanding (MOU)** has been created between this Committee and the Atlantic Chapter of APCO. The funding obtained through the grant will be held and disbursed by the Atlantic Chapter APCO with Committee's approval, **voted** authorization. **700MHz FCC Planning Process**:

The Chairman discussed the historical development of the 800MHz Plan. He emphasized the need to examine the successful and unsuccessful processes used in that plan. The Chairman indicated the need for creativity/improvements for the forthcoming 700MHz plan development and not to necessarily copy the existing 800MHz plan.

The Chairman announced the intent of the Committee meetings to be held at various venues around Region 19 to allow wider attendance

The Chairman discussed the need for creating an **equitable representation from the community of Public Safety users.** The Chairman noted the need to take a proactive approach to gaining membership and interest. By moving the meeting sites among the states of Region 19 it is hoped that all committee members would be able to participate actively in the meetings. There are members of the **NCC** from within the Region who could serve as a link with the Committee for the exchange of ideas.

Mr. Carbonell noted that the Governor of each state has to designate some Public Safety group within the state to administer the "State License", state defined radio channels.

General discussion: The governor of Vermont has appointed the Vermont State Police as administrator within that state. New Hampshire and Maine have designated the State Police to administer. The Massachusetts State Police have filed application with the Governor for designation as administrator. Official designation has not been received. Connecticut has also moved to name an administrator with several possible choices.

Mr. Derdak observed that in all cases the license is always held by the highest political entity, which **is the State.** The department chosen to administer the license serves as "the mailing address." Mr. Crotty confirmed that the Rhode Island State Police would be the administrator in that state. The Chairman noted that the deadline for such appointments is the end of 2001. It seems certain that all administrators within Region 19 will be officially established by then. The Chairman placed some ideas on the **composition of the Committee.** The eligibility for membership could be determined/defined by state and category. The number of members must be decided as well as those who would be "members at-large."

General discussion: The **updated** list of those that are eligible must be confirmed. Public Safety entities such as Fire, Police, EMS, DOT and others must be identified as officially eligible. The Chairman noted that the identified groups must be notified of their eligibility to participate. A list of such groups will be prepared by the Chairman and circulated among the participants for comments.

General discussion: Better effort must be made to notify all with potential interest in the Committee. Meeting notices and committee information must be more widely distributed. Email lists can be also be used for dissemination.

Mr. Carbonell will investigate the development of a list server.

POINT SCORING PROCESS:

The Chairman introduced the subject of scoring the applications for Regional Planning Committee (RPC) approval. He mentioned several of the shortcomings of the present system, the lack of completeness, or misunderstanding of instructions. There is a need for close examination of the process with the intent of streamlining or simplifying it.

There is a current practice in the 800 MHz planning process of returning applications numerous times for data or contacting the applicants for clarification.

OLD BUSINESS:

The Chairman reports that Connecticut has submitted to the FCC an "opt out" of Region 8 statement for the 700MHz planning process. All of Connecticut is now in the New England Regional Planning Process Region 19.

NEW BUSINESS:

The next meeting will be held on **Wednesday, September 26, 2001 at 10:30 AM at a location in Maine.** Mr. Carbonell **moved to adjourn. Carried.** Meeting adjourned 11:20 AM.

Respectfully Submitted

James Warakois, Secretary

Documents distributed to attendees:

- GUIDELINES FOR 764-776/794-806 REGIONAL PLANNING COMMITTEES, NCC Implementation Subcommittee Guidelines, May 10, 2001
- OUTLINE FOR 764-776/794-806 NATIONAL / REGIONAL PLANS, NCC Implementation Subcommittee, May 10, 2001
- Minutes **New England Region 700 MHz Planning Meeting,** Massachusetts State Police Headquarters, Framingham, Massachusetts, Thursday, March 29, 2001

September 2001 Minutes

New England Region 700 MHz, Technical Advisory Committee Meeting September 26, 2001

List of Attendees: see attachment

The fourth quarterly meeting of the New England Region 700MHz Technical Advisory Committee was held on Wednesday September 26, 2001 at 10:30 AM, At the Municipal Police Headquarters, Scarborough, ME, the Chairman, Vice Chairman and Secretary present. Meeting convened at 10:35 AM.

The chairman called for a moment of silence for the Public Safety workers who lost their lives at the World Trade Center catastrophe.

Order of Business as follows:

1. Moved to ACCEPT the June 20, 2001 minutes (Exhibit I) as distributed. There was no request for changes and no discussion followed. The minutes were **APPROVED** as presented.

The Chairman noted that the **FCC** has formally **approved** the change in Region boundaries allowing this committee to encompass the entire political boundaries of the New England States. The entire State of Connecticut is now in this region. The Commission has issued a PUBLIC NOTICE, which was distributed (Exhibit II).

2. Membership / New Committee Members:

Mark Cady, Worcester, MA, Fire Department has submitted written request to be a member of this committee.

The Chairman referred to a draft document originating with NPSTC, titled Bylaws of Region-(Exhibit III) and a second document for reference, page 5 and 6 of a plan noted as "Region 8 Plan" (Exhibit IV). Discussion of Exhibit III and Exhibit IV followed.

ARTICLE I

NAME & PURPOSE

The Chairman proposed a formal name for this committee be "The New England 700 MHz Committee." Mr. DiBella suggested the name be "The New England States 700 MHz Committee." The committee voted and accepted a formal name to be "The New England Region 700MHz Committee".

ARTICLE II

MEMBERS

For purposes of this Article, the term "member," unless otherwise specified, refers to both voting and non-voting members.

VOTING MEMBER

Voting members shall consist of one representative from any single agency engaged in public safety eligible to hold a license under U.S. 47 CFR 90.20, 47 CFR 90.523 or 47 CFR 2.103. NUMBERS, ELECTION and QUALIFICATION

The Chairman referred to Exhibit V, a table illustrating membership eligibility that would provide equal representation. He noted that the Executive Committee would encompass each State. Every type of Public Safety entity, as defined, would be eligible to hold a seat. A total of ten persons from each state would be eligible for membership.

The chairman noted that the call for membership would be disseminated as widely as possible. Meetings held quarterly, moving from state to state.

Referring to Exhibit V, the Service Categories and eligibility would be Police, Fire, EMS, OEM/FEMA, at-large member and Highway as well as representatives from the coordinating bodies APCO, AASHTO, IMSA, FCCA.

The quorum for a meeting would be 9 eligible members present who are representatives from at least three (3) states of the Region.

A single agency shall be allowed no more than one vote for each distinct eligibility category within the agency's organization or political jurisdiction. No state may represent more than fifty percent of the total quorum for action by a vote.

The Regional Committee shall have two classes of members, "voting members" and "non-voting members." New members may be added at annual, special, or regular meetings. Voting members must attend one scheduled regular meeting annually.

3. Discussion of Technical Proposal - by NYS-TEC (New York State Technology Enterprise Corporation), Exhibit VI.

Mr. Zarwanski explained that this proposal suggest the frequency allocation in this scheme would be a pattern of cells established on a nationwide pattern. The Chairman observed that the plan would limit flexibility in the allocation of frequencies at the local level. Others commented that this type of allocation structure does not account for the effects on adjoining states. The predetermination of frequency assignment would deprive certain entities adequate numbers of channels. Mr. Carbonell suggested that members review the exhibit and prepare to comment at the next meeting of the committee.

4. Procedures Committee Mr. Jim Kowalik

Mr. Kowalik noted the difficulty of creating exact procedures due to the current structure of the band with the FCC decision to provide State Licenses and possibly frequency block licenses. Combining channels for wide-band use would affect the distribution of channels. The creation of state band managers would also cause delays in local allocations.

Discussion: Block allocation data is not firmly set although spectrum allocations charts and guidelines give some idea of current thinking. State boarder assignments would be handled by

NPSTC. The Region would be getting guidance from others (NPSTC, FCC, Precoordination Database regarding allocation procedures.

5. State licenses

State license applications are in various states of completion. An issue in several states is obtaining appropriate authorization signatures and identifying the holding authority. Mr. Derdak observed that the License will be issued to the State by name and further administration of the license will be determined within that state.

6. Grant Application

The funding has been received and deposited into the account being administered by APCO, Atlantic Chapter.

Mr. Carbonell provided information on the creation of a web page for the 700MHz group. This media would be used for informational and distribution purposes. Server Central (Web page developer) charge would be \$84 per year for placing the Web page. All control of the Web site would be under the Committee. The name of the Committee website was discussed and accepted as NER700MHZ.org

Moved by Mr. DiBella: To spend less than \$100 annually for a site Committee Web page. **Seconded** and **voted unanimously IN FAVOR.**

7. Committee Meeting Schedule

Moved by Mr. Derdak that meetings of this committee be held on the second Tuesday of the last month of each calendar quarter, which will be March, June, September, and December. The **Annual Meeting** will be held in **SEPTEMBER** and will rotate locations with the normal schedule.

The next meeting will be held on Tuesday, December 11, 2001 at 10:00 am at the Emergency Operations Center, Office of Emergency Management, 645 New London Avenue, Cranston, Rhode Island.

Mr. DiBella moved to adjourn. Carried. Meeting adjourned at 11:55 AM

Respectfully submitted James Warakois, Secretary

Documents distributed to attendees:

- New England Region 700MHz Technical Advisory Committee Meeting Minutes, Wednesday, June 20, 2001 (Exhibit I)
- FCC PUBLIC NOTICE, PUBLIC SAFETY 700 MHz BAND- General Use Channels, APPROVAL OF CHANGES TO REGIONAL PLANNING BOUNDARIES OF CONNECTICUT AND MICHIGAN, September 10, 2001, (Exhibit II)
- **BYLAWS OF REGION--**, a draft, (Exhibit III)
- FCC Region 8 Plan, (Exhibit IV)
- **700 MHz Membership Eligibility** Voting, a spreadsheet. (Exhibit V)

- NYS-TEC, Technical Proposal, 700-MHz National Pre-Allotment, August 7, 2001, Version 5, (Exhibit VI)
- NCC Implementation Subcommittee Appendix E, SAMPLE BYLAWS OF REGION --, May 10, 2001, IM00029-A-20010510 (PO14-A),
- Spectrum, Volume 1, Issue 1, National Public Safety Telecommunications Council

December 2001 Minutes

New England Region 700MHz, Technical Advisory Committee Meeting Fifth Meeting, Wednesday, December 11, 2001

List of Attendees: See attachment

The fifth quarterly meeting of the New England Region 700MHz Technical Advisory Committee was held on Wednesday September 26 at 10:30 AM, at the Emergency Operations Center, Office of Emergency Management, Cranston, RI, the Chairman, Vice Chairman and Secretary present. Meeting Convened at 10:35 AM.

Order of Business:

1. Moved to ACCEPT the September 26, 2001 minutes (Exhibit I) as distributed. There was no request for changes and no discussion followed. The minutes were **APPROVED** as presented.

The Chairman reminded everyone that the committee hosts a website that contains; minutes of all committee meetings, future meeting dates and other related information. The Internet address is www.ner700mhz.org. The webmaster is G. Carbonell.

- 2. State applications for spectrum pool frequencies: The states of Connecticut, Massachusetts, Rhode Island, New Hampshire and Maine reported that they have applied for the licenses. The Chairman asked those present from the New England States if they had also applied for the interoperability frequencies. The response was generally that they had not at this time but would consider filing prior to the deadline date. If a filing (letter) were not completed for interoperability frequencies, the interoperability frequencies would be the domain of the committee.
- 3. **700 MHz FCC Planning Process.** Mr. Bob Schleiman a member of the NCC (National Coordinating Council) gave a presentation that updates the current NCC perspective and anticipated directions. He emphasized current thinking about pool allotments for Public Safety by county area as geographical areas. He discussed the NPSTC database requirements. He explained that the allotments are based on demographics. The responsibility of the regions to develop plans is still paramount. The regions will still have to approve the plans of the adjacent regions.

Mr. Schleiman briefly noted the effects of terrain on propagation. He discussed the general scheme of allotments based on population density schemes. Interoperability Standards are also of prime importance within the development of the 700MHz plans.

4. COMMITTEE REPORTS:

Bylaws committee: G. Pohorilak presented a draft document BY <u>LAWS OF THE NEW ENGLAND 700MHZ COMMITTEE/REGION 19</u> (exhibit II). The group at the suggestion of the Chairman decided that the draft document be studied by the committee members until the next meeting where further discussion and action will be taken.

Procedures Committee: J. Kowalik presented an outline of information and items that must be finalized by FCC decisions. The development of procedures for dealing with applicants for 700 MHz spectrum can proceed. (Exhibit III) In summary, he noted multiple entities in each state will have input into the actual assignment of spectrum and the ultimate frequency distribution responsibility is unclear at this time. His recommendation is to monitor closely the development of technologies and the FCC creation of standards and procedures.

The Chairman suggested, in spite of the haziness of the FCC procedures and specifications the development of a Regional Plan must move forward subject to editing as the FCC adopts specific procedures and technical specifications.

NEW ITEMS FOR DISCUSSION:

A question was raised on the process for new committee membership and the Chairman indicated the question was premature since the bylaws have not yet been finalized and approved.

Moved to adjourn at 11:25 AM. Motion **carried** by voice vote.

The next meeting will be held on March 12, 2002 at the Connecticut DOT, 280 West Street, Rocky Hill, CT at 10:00 a.m.

Respectfully submitted James Warakois, Secretary

Documents distributed to attendees:

- New England Region 700MHz Technical Advisory Committee Meeting Minutes, Tuesday, December 11, 2001. (Exhibit I)
- DRAFT, BYLAWS OF THE NEW ENGLAND 700MHZ COMMMITTEE /
- **REGION 19.** (Exhibit II)
- <u>Procedures Committee Report.</u>, 700 MHz Technical Advisory Committee, New England Region 19, James Kowalik, chairman.

March 2002 Minutes

700 MHZ, TECHNICAL ADVISORY COMMITTEE MEETING Tuesday, March 12, 2002

The sixth quarterly meeting of the New England Region 700MHz Technical Advisory Committee was held on Tuesday March 12, 2002 at 10:30 AM, at the Connecticut Department of Transport, Rocky Hill, CT, the Chairman, Vice Chairman and Secretary being present. Meeting convened at 10:40 AM

Each of the attendees introduced themselves.

Order of Business.

1 APPROVAL of Minutes (Exhibit I)

Those present were advised of one correction to the Website address in the minutes. It was voted to ACCEPT the minutes of the December 11, 2001 meeting as corrected.

2 BYLAWS APPROVAL (Exhibit IIA)

The Chairman presented the Draft of the proposed bylaws. He made one suggested change to allow a mechanism to fill a vacancy in a State's representation on the committee. The change will read as:

F. Each representative state organization will appoint members from their respective states. If a state organization does not appoint a member, to the 700MHz Committee, that state slot may be filled with additional members at large. Individuals, from eligible categories, may apply to the committee for vacant at large positions.

Mr. Gustafson desired clarification of "representative state organization". The chairman defined it as an organization such as APCO, AASHTO, IMSA..., which would send a representative to be a member of the committee. A variant would be members chosen by the respective police, fire, emergency services as statewide representatives.

Moved by Mr. Carbonell and seconded that the Amendment to the proposed Bylaws (Exhibit IIB) be inserted into the Proposed Bylaws Section 2.9, Committee /quorum/voting: VOTED unanimously to approve the amendment as presented.

The Chairman requested approval of the Bylaws as written with the accepted change. There was no further discussion of the Proposed Bylaws.

Moved by G. Carbonell to approve the Bylaws as presented. The motion was seconded. Being no further discussion the chairman called for a vote. VOTED unanimously to ACCEPT THE BYLAWS AS PROPOSED.

The Chairman discussed how those persons qualified and wishing to be officially on the committee would be made known to their affiliate agencies. He stated that he would send a letter requesting confirmation of membership to their affiliate agencies of those people present who are

qualified and wish to serve on the committee. Letters will be sent to other qualified organizations seeking appointment to the committee.

The Chairman moved to item 4 in the agenda. Saving item 3 for discussion later in the session.

4 State License Update

Two documents were distributed to those present. They were the January and February 2002 issues of THE COMMUNICATOR, Motorola news flyer. These contain the results of various States applying for Licenses in the 700MHz Band according to the FCC request. (Exhibits III and IV). Vice Chairman Zarwanski explained that this listing is for the 2.4 MHz segment designated for State use dispersal.

5 NCC Update

A news clipping was distributed (Exhibit V) which outlines current steps in the progress of H.R.3397, The homeland Emergency Response Operations Network (HERO) Act. An act to free 24 MHz of radio spectrum to state and local emergency responders.

6 FCC Update

Mr. Carbonell noted that the ULS system is now using the CORES numbers instead of the tax number identification. A positive result of the FCC's interest in the 700 MHz band is the continued formation of Regional 700 MHz groups.

7 Grant Status

As previously noted this committee has received grant money. Current expenses are for the annual fee for the website. Other uses for grant money will be for: publication of information about the activities of the committee and distributed to government agencies in the region; professional groups and individuals interested this Committee's activities. A request for funding allocation of this publication will be forthcoming.

8 2002 Meeting Schedule

The next three meetings have hosts and locations. Agendas will be provided prior to the meetings.

2002 Meeting Dates and Locations For The New England 700MHz Regional Planning Committee

- June 11, 2002 New Hampshire State Police, Headquarters 1st Floor Conference Room, Manchester, NH
- September 10, 2002 Massachusetts State Police General Headquarters, 470 Worcester Road, Framingham, MA
- December 10, 2002 Springfield State Office Building, Springfield, VT The directions to these locations will be posted on the committee website along with the meeting dates.

3 PLAN DEVELOPMENT

Distributed to those present was the DRAFT Plan for the State Of Missouri (Exhibit VI). The chairman noted that the State of Missouri Draft Plan and the NCC guidelines provide good insight as to the steps necessary in the evolution and organization of a Regional Plan. Sections

of the Missouri draft plan were discussed and comments were addressed. Sections of the Missouri draft plan could be applicable concepts in the New England 700MHz Plan. Mr. Kowalik noted that the subcommittees would serve well to add specific specialized detail to the total plan. The Chairman noted that the experience gained by the 800 MHz Committee can be helpful in streamlining the 700MHz process.

A General Discussion was held.

The concept of "Band Manager" was discussed. This person would interface with the Committee and provide safeguards against mis-allocations of spectrum resources.

Technical requirements have become much more complicated resulting in delays of processing the applicant information. This may require pre-application meetings to define and resolve potential problems. Various scenarios were discussed in an effort to identify potential impediments to the flow of application approval.

A comprehensive review of applications will be necessary with proof of performance by the applicants. A multi-step process will be necessary to proceed in an orderly manner. Mr. Kowalik noted that the guidelines provided in TSB88 must serve as the reference source for the applicant's systems.

Chairman Pohorilak observed that acceptance of applications have been on a window basis. Discussion was held concerning the time-scale of the process.

Msr's Carbonell and Derdak discussed the issue of applicant certification and financial disclosures. Dispute resolution and an appeal process must be created. Various procedures must be explored.

Interoperability channels. The NCC guidelines recommend that the tactical and calling channels be dealt with carefully.

The Chairman emphasized that a draft of the procedures will be placed on the website for study prior to the next meeting.

The chair entertained a motion to continue this discussion at the next meeting. Moved by Mr. Carbonell and seconded that this discussion be continued at the next meeting. Voted unanimously in favor to suspend the discussion until the next meeting.

NEW Business

Gordon Shand questioned whether any of the new applicants would be giving up any of their 800 MHz frequencies when the new 700 MHz channels are available. He then readdressed his question as whether new equipment will be available to cover both frequency bands. He was told the radio vendors will be market driven to make equipment available. He noted that he attends many meetings and finds that there are many viewpoints of what emergency communications is and how it should be applied to their perception of an "emergency." This ranges from complex

high tech systems to the use of PCS devices. He wonders who are the "point persons" in education of the public?

Motion by Chairman to adjourn the meeting. Moved by Carbonell to ADJOURN the meeting. Seconded. The motion was CARRIED.

Adjourned at 1223 PM

Respectfully submitted James Warakois, Secretary.

Documents distributed to attendees:

- New England Region 700 MHz Technical Advisory Committee Meeting Minutes, December 11, 2001 (Exhibit I)
- DRAFT, BY LAWS OF THE NEW ENGLAND 700 MHZ COMMITTEE/ REGION 19, (Exhibit IIA)
- DRAFT, LANGUAGE FOR MEMBERSHIP SECTION OF BY LAWS, (Exhibit IIB)
- The Communicator, a publication of Motorola Inc., February 28, 2002, (Exhibit III)
- The Communicator, a publication of Motorola Inc., January 31, 2002, (Exhibit IV)
- A magazine article, Legislation Introduced to Free Radio Spectrum for First Responders, Source unknown, (Exhibit V)
- DRAFT, REGIONAL PLAN FOR THE STATE OF MISSOURI, Region 24 700 MHz Regional Planning Committee, (Exhibit VI)

June 2002 Minutes

New England Region 700MHz Technical Advisory Committee Meeting Seventh Meeting Tuesday 11 June 2002

The seventh quarterly meeting of the New England Region 700MHz Technical Advisory Committee was held on Tuesday, June 11,2002 at 10:00 AM at the New Hampshire Department of Public Safety, Concord, NH

The meeting was convened at 10: 18 AM.

The Chairman, Vice Chairman and Secretary present as well as 28 others in attendance

Order of Business:

- 1. Moved to ACCEPT the March 12, 2002 minutes as distributed. Seconded and CARRIED by unanimous vote.
- 2. The chairman announced that letters soliciting candidates for membership according to the Bylaws have been sent to all of the eligible categories throughout the New England States. Returns for permanent members returned as of this date include;

<u>State</u>	Affiliation	<u>Name</u>
Connecticut	Office of Emergency Management	Tom Walsh
Massachusetts	Executive Offices of Health and Human Services	Elliot Derdak
Connecticut	Division of State Police	Mike Stemmler
New Hampshire	Division of State Police	Jim Kowalik
Massachusetts	Emergency Management	Tom Muise
New Hampshire	Emergency Medical Services	William Wood
Massachusetts	Highway	Arthur O'Brien
New Hampshire	Emergency Management	Mead Herrick
Rhode Island	FCCA inquiry from Paul Leary	
Connecticut	Department of Health	Gordon Shehan
Connecticut	Fire New Haven CMED	John Gustafson

APCO International -Florida received letters for State appointment for membership which have been forwarded to Mark Poole, Atlantic Chapter President. He will be making a decision for how APCO will appointment an eligible state member. The Chairman proposed the choice of an At Large member. Bill Mansfield, Nashua, NH Police Department has expressed an Interest In becoming a committee member.

MOVED and SECONDED that Bill Mansfield be made the At Large committee member for New Hampshire.

VOTED to AFFIRM Bill Mansfield, Nashua New Hampshire, Police Department is the At Large member from New Hampshire.

3. PLAN DEVELOPMENT:

The Chairman referred to information distributed to the group at the opening.

This will serve to become sections of the plan. Much of this information is from the National Coordination Council (NCC).

First is a table of interoperability channels generated by the NCC. This shows the suggested interoperability channels. (Exhibit I)

Second is a template of a Memorandum of Understanding that affirms the applicant's willingness to comply with proper use of designated Interoperability Channels. (Exhibit 1)

Third is a sharing agreement template (Exhibit III). This document would be used to formally acknowledge the operation of units from other agencies on the frequencies licensed to the Agency holding the FCC operating license.

Fourth is a sample agreement that delineates the method of dispute resolution (Exhibit IV).

Fifth was document showing the population profile of New England and is broken down by further by county population by state. (Exhibit V)

4. PROCEDURES

Jim Kowalik discussed the proposed procedures at length. The topics included the basic direction the formulation of procedures could take based on current information. The NCC guideline is used for guidance but not the only possible reference. Jim has reviewed most of the relevant documents available on the Internet. There appears to be two options: One plan is outlined by the FCC where the authority lies with the Regional Planning Committee (RPC) over general use spectrum. The Interoperability Committee has control over the shared interoperability frequencies. The State Band manager would control the state-licensed spectrum. The Reserve Spectrum would be under the RPC.

Page 6 of this exhibit (Exhibit VI) proposed option 1 is similar to NCC suggestion. First review by committee, then send to coordinators for review and acceptance.

Option 2 proposes the Regional Planning committee first performs evaluations prior to submitting information for frequency selections to the pre-coordination database and the RPC would conduct all of the evaluations of technical parameters.

A discussion evolved for the proper steps and sequence of questions to be addressed by the Committee when processing an application.

Bill Topliff requested consideration of the multiple steps involved in obtaining frequencies for an 800 MHz system. Mr. Zarwanski indicated that, in the case of the Region 19, 800 MHz RPC the data base can be searched and information provided to frequency availability which can be made available to potential applicants. It could be possible to do the same with the 700 MHz applicants.

Mr. Kowalik noted that pre-coordination would be necessary to smooth the development of systems without causing conflict between applicants co-channel and adjacent systems. Geographic licensing would be based on the prioritization of the traditional functions of police, fire, and EMS.

Mr. Warakois noted that another entity might be developed in the form of "homeland security." The chairman noted that the committee is currently bound by the definitions promulgated by the FCC.

Mr. Kowalik noted that the concept of the 700 MHz band seems to be directed toward more wide area systems.

Further discussion was directed toward the history of the 800 MHz evaluations. The result of the current methods was reviewed with regard to the effect of the weighting process on the final decisions.

The summation of the discussion pointed out that the importance of each category is It reflected on the type of incident activity being described.

Frequency give back was discussed. The various scenarios of lapsed, forfeited, and promised giveback were discussed.

Mr. Kowalik noted that his second option had more validity and further thought and discussion would focus on that path.

Mr. Carbonell emphasized that preliminary decision for any frequency allotment should be focused on the service area proposed. This "footprint" would constitute a specific area of coverage in the award of frequencies

Discussion turned to the requirement of applicants to demonstrate :that system signal coverage would not exceed the service area although past practice has been to prove adequate signal within the operating area. This creates a double set of signal boundaries that must be in compliance with the agreement to some specified degree.

Mr. Kowalik noted that the system performance is gauged with respect to the requirements of TSB-88-A and similar accepted documents. In final approval of frequency selection the requirement will be to control extraneous signal and potential interference.

5. STATE LICENSING UPDATE

The chairman noted that all of the Region 19 states have filed for licenses as required in the current scheme development. A State Interoperability Executive Committee has been proposed by the State of New Hampshire. The other states in the region have no formal committees developed.

6. NCC UPDATE

No new information is available for presentation at this time.

7. FCC UPDATE

The Chairman updated the committee with FCC proposed guidelines for TV broadcasters to vacate the 700MHz spectrum.

8. NEW BUSINESS

No new business was presented.

MOVED TO ADJOURN. SECONDED AND CARRIED. The meeting was adjourned at 11:30 AM

Respectfully submitted James Warakois, secretary.

Documents distributed to the attendees

- Exhibit I -Table of Interoperability Channels for Specific Users/Services
- Exhibit II -Memorandum of Understanding Template
- Exhibit III -Sharing Agreement Template
- Exhibit IV- Regional Committee Dispute Resolution Process
- Exhibit V- New England Region Listing by States, Counties and Cities
 - Exhibit VI -FCC Region 19 New England Regional Planning Committee 700 MHZ
 Channel Application Procedure

September 2002 Minutes

New England Region 700MHz, Technical Advisory Committee Meeting Eighth Meeting, Tuesday 10 September 2002

List of Attendees: See attachment

The eighth quarterly meeting of the New England Region 700 MHz Technical Advisory Committee was held on Tuesday, September 10, 2002 at 10:30 AM at the Massachusetts State Police Headquarters, Framingham, MA

The meeting was convened at 10:30 AM.

The Chairman, Vice Chairman and Secretary were present.

Order of Business:

1. Moved to ACCEPT the June 11, 2002 minutes as distributed. Seconded and CARRIED by unanimous vote.

2. MEMBERSHIP

The Chairman noted that the committee is awaiting documents from Rhode Island confirming Tom Crotty's appointment as Rhode Island Police Representative. The committee is awaiting documentation from the President of APCO, Atlantic Chapter naming the APCO Frequency advisors to the Committee. Angela Bean, is the new VT APCO Advisor and will be the Vermont APCO representative. States that have not responded by appointing various committee members will be contacted again.

The Chairman's position as a committee member will be as "member at large" from the State of Connecticut. The Chairman asked if there is any objection to placing member's names and which state they represent on the Committee website. NO OBJECTION voiced from the members present.

A binder containing official documents of the committee was provided to all current members. Updates and additions will be provided, as available.

3. STATE UPDATE

All of the States of Region 19 have chosen to handle their own assignments of the "state" frequency allocations. The Committee will perform the assignment of "interoperability channels" for Vermont, all other states will perform their own. The Region 19 Committee will review all "state" and "interoperability" frequency assignments to prevent conflicts between those various States. The structure of this review/monitoring of the state/interoperability frequency assignments is open at this time.

Mr. Sutherland suggested that the Region 19 committee Chairman visit with each state's licensee holder and present the committees view on respective state/interoperability border assignments. MOVED, by Mr. Carbonell and SECONDED by Mr. Sutherland that: The Chairman of the Region 19 (700 MHz) Committee be directed to visit each of the respective State Interoperability

Committees with the intent of coordination of their efforts regarding avoidance of frequency assignment conflicts.

APPROVED by all (voice vote).

4. PSWN UPDATE

The document from the Public Safety Wireless Network entitled Public Safety Radio Frequency Spectrum Digital Television Transition Status Update, dated, January 2002 was distributed for review and comment.

5. NCC UPDATE

The database of frequencies related to this band plan is created and maintained by the NCC. There is a request on the floor for a person from this planning committee to select and maintain the frequency assignment database. Training will be offered to the selected candidate through Regional Planning Committee funds. Training is offered in October, November, and December. It is the Chairman's feeling that the person chosen should be experienced in frequency coordination. Mr. Carbonell suggested that there be a primary and backup person trained in operation of the database software. Mr. Kowalik offered to be the primary and Mr. Carbonell volunteered to be the backup. There will be further discussion of the roll of Database Manager at later meetings.

6. FCC UPDATE

The Chairman introduced Vincent Kajunski, Chief of the Boston FCC office.

Mr. Kajunski briefly discussed the Commercial and Public Safety aspects of this band allocation. He pointed out issues within the commercial auctions and noted that several interests may be participating. He noted some on the participants on the commercial side were expected and some were totally unexpected. He noted that the Public Safety Regional Committees have been endorsed by the FCC for frequency selections and dispute resolutions.

7. PLAN DEVELOPMENT

Application Procedure

The committee discussed the document distributed to the committee, FCC REGION 19 NEW ENGLAND REGIONAL PLANNING COMMITTEE 700 MHz CHANNEL APPLICATION PROCEDURE

The section "Authority of the Committee" should be entered under Section One of the document. The next paragraph "As of this date..." should be part of Section 4.

Mr. Kowalik explained that "Application Windows", is derived from the 800 MHz plan. The Chairman questioned whether the "window" process would be valid for the 700 MHz process. He observed that other Planning Committees have evolved into a free flowing application system without specific openings as in Region 19, 821MHz practice. Mr. Carbonell noted that windows with date certain allow for more orderly flow of applications.

The current schedule of quarterly Committee meetings would lend itself to a self-enforcing progress toward granting frequency allotments. Subsequent scheduled meetings would serve as deadlines for evaluation and discussion.

The deadlines for applications would be one month before the next committee meeting thus making the action dates more predictable.

The number of copies of the applications would be the burden of the applicant. The quantity was temporarily set at twenty.

"Application Procedures"

Mr. Kowalik discussed the source of authority granted to the Regional Committee for evaluating various States' Plans. During discussion several participants emphasize the oversight function of the RPC. This would be necessary along border areas where the plans of adjacent states would have to be harmonious with respect to interoperability. The interoperability with Federal entities will also have to be considered.

Mr. Kowalik noted that technical parameters are not fixed at this time because FCC requirements have not been delineated.

The Scoring method for applicant qualification was discussed. Various historical debates were reviewed. The rating method using points was generally accepted. The assignment of values and the weight of factors were discussed without a conclusion at this time. Further study of the methods will have to be viewed with objectivity based on previous historical practice with the 800 MHz Plan.

Technical Standards

Mr. Kowalik noted that the EIA/TIA 8.8 technical methods are the general standard. He noted that other technical parameters are being considered for other radio services and these might affect the current standards.

Mr. Zarwanski offered that various models of system efficiency could be chosen as standards for acceptance. Technical parameters will have to be chosen by the committee. These methods will have to be universal to all of the coordinating agencies.

MOVED by Mr. Carbonell to purchase two copies of the TIA/EIA 8.8 for further use by the committee. The expenditure for two copies APPROVED by the general committee.

A primarily TECHNICAL COMMITTEE was formed consisting of J. Kowalik, G. Carbonell, J. Zarwanski, J. Warakois, and others as appointments are made. This sub-committee will review the EIA/TIA 8.8 standard and offer recommendations within the Region 19 application process.

8. NEW BUSINESS

Previous discussion of training for NCC database.

Mr. Carbonell requested annual funding for the website, this is an annual expenditure for website name maintenance. He also explained how anonymity would be preserved within the website using the list-server for committee work.

MOVED TO ADJOURN. SECONDED AND CARRIED.

The meeting was adjourned at 12:13 PM

Respectfully submitted James Warakois, secretary.

December 2002 Minutes

New England Region 700 MHz Technical Advisory Committee Meeting Tenth Meeting Tuesday 10 December 2002

List of Attendees: See attachment

The tenth quarterly meeting of the New England Region 700 MHz Technical Advisory Committee was held on Tuesday December 10, 2002 at the State Office Building in Springfield, Vermont.

The meeting was convened at 10:33 AM

The Chairman, Vice Chairman and Secretary present. Others in attendance introduced themselves.

The Chairman noted the lack of representation from the State of Vermont.

Order of Business:

1. Moved to **ACCEPT** the September 10, 2002 minutes as distributed. Seconded and **CARRIED** by unanimous vote without discussion.

The Chairman noted that additions and changes to the "New England 700 MHz Regional Plan" (now in a green binder) would be made available to committee members by way of the committee website.

MEMBERSHIP a review of the membership list included adding **Mr. Greg Richardson**, **Boston Fire Department.** (**Representing the MA State Fire Marshal**) A question arose as to the Mass. State Police representative. Blair Sutherland is the official representative. John Pinkham, (MA State Police) was present representing Sutherland.

The Chairman distributed a calendar of all meeting dates for the foreseeable future. He noted that the next meeting, March 11, 2003 will be held in **Gray, ME**.

Mr. Carbonell inquired whether e-mail addresses could be posted on the website. He noted that a listing of the committee members would be beneficial in answering questions by license applicants.

State Licensees. There is no new information. Most of the holders are members of this committee.

NCC UPDATE

At this time there is no new information being distributed by the NCC.

FCC UPDATE

The Chairman distributed printed information regarding the progress toward HDTV and other digital modes. Discussion on the possibility of Congress creating a "date certain" for conversion of TV channels to HDTV would remedy the 700 MHz spectrum to be freed for use.

PROPOSED the Committee craft a letter to be sent to appropriate Congressional delegations stating the need for progress on the issue of making the 700 MHz frequencies available to Public Safety users. **MOVED**, the **Chairman is directed** to write such a letter, circulate among the committee members for comment for subsequent delivery to the appropriate Congressional Delegations and Cabinet members. **SECONDED** and **PASSED**. The Chairman is so directed.

PLAN DEVELOPMENT

Changes to the current Regional Plan were distributed.

Discussions of page 8-1 "Regional Interoperability (I/O) Channel Usage" allocations. Several committee members observed that interoperability channels were allocated to specific services rather than for mutual intercommunications. This reverts to the current practice of the services being isolated from each other.

Other existing systems and frequency bands must also be considered in the development of the new plan. Various other State plans were discussed.

Application Procedures (Section 9)

Changes will be incorporated before the next meeting.

Scoring Matrix.

Various forms of the matrix concept have been adopted in different Regions.

There have been several flaws identified in the matrix used by Region 19 as it is now used for the 800 MHz application evaluations. It was intended as the prioritization tool to objectively weigh the merit of the various applicant applications. The intent was to provide a tool to score objectively applications. According to the Chairman no applicant has ever been denied a frequency assignment on the basis of the scoring matrix. The result has been to give the highest score within the window period the first position in the assignment of frequencies.

Some of the categories in the Matrix table have given fractional numbers that have no affect on the scoring process.

The assignment of numeric weights to different services ignores the fact that the nature of the incident tends to dictate which service assumes the predominant roll.

The Chairman noted that a discrepancy in weighting a service is obvious when, for example Fire or Police are rated higher than another service and then in the face of and incident the service provided by the lesser rated service becomes the predominant service for that particular incident.

Mr. Derdak with Mr. Carbonell noted that entities that are purely governmental should be scored higher that those that can also fall in the realm of services which can file under other FCC parts. They also noted that genuine need must be identified in the process and frivolous applications must be filtered.

Mr. Zarwanski observed that the values derived through manipulating population, area serviced, geography etc. has resulted in the fractional results that were insignificant in the total matrix evaluation.

A brief discussion of the inadequate results of "frequency give-back." The Chairman called for careful examination of the NCC criteria and asked for careful consideration and suggestions of needed changes. There will be further discussion at the March meeting.

OLD BUSINESS

CAPRAD Training

Mr. Kowalik and Mr. Carbonell will attend the training in January. The class will be held for three days in Denver, CO. Mr. Kowalik will present an estimate of expenses. Funds will be taken from the Committee Allotment.

Budget Report

The current balance of granted funds is two thousand, one hundred dollars (\$2100.00). Approximately \$2,000.00 will be used for the CAPRAD training Miscellaneous expenses and web site fees will deplete most of the remainder.

Web Site

Mr. Carbonell discussed the security aspects of the web site. He also discussed various schemes that would make the site more useful for Committee work. He requested approval to set up a list server for the Committee. **Granted** by the Committee.

MOVED to adjourn meeting. Unanimous vote to adjourn. 12:16

Respectfully submitted

James Warakois, Secretary.

March 2003 Minutes

New England Region 700 MHz Technical Advisory Committee Meeting Tenth Meeting Tuesday 11 March 2003

List of Attendees: See attachment.

The tenth meeting of the New England Region 700 MHz Technical Advisory Committee was held on Tuesday March 11, 2003 at the Maine State Police -Troop B Barracks in Gray, Maine.

The meeting was convened at 10:00AM

The Chairman and Vice Chairman were present. The Secretary had informed the Chairman in advance of his absence and the Vice Chairman, Jerry Zarwanski took minutes.

The Chairman, George Pohorilak requested everyone present introduce themself.

Order of Business:

1. Minutes

A correction was pointed to the Chairman that the last meeting was the ninth and not the tenth meeting. Jim Kowalik motioned to ACCEPT the December 10, 2002 minutes as distributed with correction to ninth meeting. Seconded by Steve Brown and CARRIED by unanimous vote.

2. Membership

The Chairman indicated that every state except Vermont has membership on this committee. Letters were mailed to Vermont as well as all the other New England States and there has been no official response from VT. The Chairman indicated that , CT State layoffs have affected his ability to visit the "700 MHz State License" holder in the New England States. The layoff of the Chairman's two Connecticut staff members and restrictions in out of State travel has restricted visits and research and distribution of 700MHz correspondence.

3. State Licensees Update.

There is no new information. Most of the holders are members of this committee. In Connecticut the Governor has offered an early retirement incentive. Frank Aiudi from DOIT (CT 700MHz License holder) who has been attending the 700MHz meetings is strongly considering retiring. Chuck Welch from NH OEM indicated Meade Herrick is retiring and he would be the new representative from NH OEM.

4. NCC UPDATE:

At this time there is no new information being distributed by the NCC.

Two members of this committee, Jim Kowalik and George Carbonell flew to Denver, Colorado for CAPRAD (Computer Assisted Precoordination Resource and Database System) Training and

will update the committee further once the agenda item is reached. The Chairman indicated there is approximately \$700 remaining in the budget for 700MHz planning.

5. FCC UPDATE:

The Chairman indicated there was really nothing new to report and eventually he would craft a letter to be sent to appropriate Congressional delegations stating the need for progress on the issue of making the 700 MHz frequencies available to Public Safety users. Bob Cruikshank - Motorola informed the committee he has a list of Congressional delegates that sit on the 700 MHz Committee. He also indicated some action the committee may pursue with the FCC/Congressional delegates to expedite the use of 700MHz frequencies for Public Safety.

The Chairman also indicated that at some future date he may send letters to the Governors of the New England State or meet on the topic of 700MHz. At this time, he cannot even meet with the CT Governor because the Governor has other significant issues such as State budget and Departmental issues.

George Carbonell addressed the 85% penetration rule and some discussion took place but the bottom line is there is no change in the ruling.

6. CAPRAD

Jim Kowalik spoke on the training that took place in Colorado and indicated that the r online system is a tool for sorting and allocating frequencies in 700MHz. The 700MHz frequencies have been pre allotted on a county basis through out the United States. The Development of a State or regional plan would either adopt the pre-allotment, refine it or supercede the allotment. California has adopted a 6.25 distribution and Missouri is adopting a cellular technology distribution approach.

George Carbonell presented a Power Point presentation on CAPRAD which addressed: accessibility and rights into the online system; Technical system features and hardware; Placement of Regional Plans, Applications and Database Information on the online system. George Carbonell also handed out a CD which introduces the CAPRAD system.

The Chairman motioned we adopt the CAPRAD system as part of the Regional Planning process. Seconded by Steve Brown. Carried by unanimous vote.

The Vice Chairman addressed the issue of interference criteria and what has been technically adopted. Mr. Carbonell indicated that a field strength/contour of 50Dbu is considered and any contour cannot exceed a county by five miles. As to Interference criteria, nothing has been adopted. The Vice Chairman asked what would happen if States/Regions adopted different standards and boarder issues arise. Mr. Carbonell indicated there is a need to reach out to the different States/Regions and address these issues.

7. PLAN DEVELOPMENT

Scoring Matrix.

Attached to the Agenda was four available scoring matrix tables for discussion. The first, existing 821MHz scoring matrix, the second, NCC 700MHz adopted scoring matrix as provided

in the green binder (700MHz NER Plan), the third, a newly developed scoring matrix and the fourth, a version of the third with the top category, Service, modified. The Chairman discussed each and the members present questioned the differences in each of the scoring matrix. The deciding factor on which scoring matrix should be chosen is the objectivity of scoring rather than the subjectivity. The Chairman asked for a response from each member in a month as to the best scoring matrix for 700MHZ.

8. New Business/Comments

None

The Chairman indicated the next meeting will be held in Rhode Island on June 10, 2003 at 10:00 AM at a site still to be determined.

The Chairman MOVED to adjourn the meeting. Seconded by Carbonell. Unanimous vote to adjourn. 11:42AM

Respectfully submitted Jerry Zarwanski, Vice Chairman.

June 2003 Minutes

Meeting of the New England Region 700 MHz Technical Advisory Committee Tuesday , June 10,2003

The meeting convened at 10:10 AM

Present were the Chairman, Vice-Chairman, Secretary. Attendees signed attendance roster that was passed around

The Chairman referenced the Agenda and the following items were discussed:

Approval of the minutes of the previous meeting held March 10,2003.

Moved by G. Carbonell, seconded by S. Brown that the Minutes the meeting of March 10 2003 be accepted. Accepted by unanimous voice vote.

Membership Report:

The chairman reviewed the Current membership of the committee and the members present. He noted that participation by Vermont has been minimal. There was no Vermont representation at the recent Vermont meeting. Chairman Pohorilak indicated he would continue to seek Vermont members for the committee.

The chair addressed the need to take initiatives on a state level to begin planning for the use of 700MHz spectrum. He requested that state representatives report on any activities of the Region Nineteen member States in meeting or planning for 700MHz use.

Connecticut: The Chairman addressed Connecticut and indicated the Department of Information & Technology (DOIT) has lost a number of persons due to statewide layoffs. DOIT holds the State License and has not initiated any formal meetings or begun the planning process.

The result of the layoffs has impacted all state agencies including the Department of Public Safety. Losing two employees in the Chairman's office has resulted in less time available to visit and contact other States regarding the survey and planning of Interoperability and State use of 700MHz

In Connecticut an 800MHz Interoperability Committee has been formed and has purchased and distributed 800MHz radios with grant money. These ICAL/IT AC radios will be used in Connecticut under the Region 19 Interoperability Plan and the Connecticut State Police have a network in place to provide Statewide coverage. The State is also applying for additional monies for control stations and radios. The Office of Emergency Management has purchased 20 trailers equipped with interoperability repeaters and a cache of radios. To date approximately 12 trailers have been accepted and distributed statewide.

Rhode Island: No report of activities.

Massachusetts: Mr. Sutherland noted that the Executive Council of Public Safety has formed the State interoperability plan committee progress is being made in identifying key related needs.

New Hampshire: Mr. Kowalik reported that numerous State agencies are being combined to form a multiple disciplined agency to oversee 'Homeland Security'. The exact form of this agency has not been resolved.

Vermont: No report

Maine: No report.

NCC Update.

The chairman reported that the Department of Justice (DOJ) federal budget allocation has changed and monies are not now allocated to specific departments/projects but to the Department. DOJ project funding for CAPRAD might be challenged by reorganization and budget appropriations. He questioned how this would affect the future use of CAPRAD.

FCC Update - No 700MHz issues were raised

The Committee Discussed:

- **-Public Safety system overload** during planned and unplanned events. Public Safety Agencies have complained that their systems become overloaded during any type of event and there is a need for additional spectrum in all bands. Commercial systems experience the same problems during events and the problems multiply once the media arrives. Officer safety is jeopardized once a system experiences overload.
- **-FCC rulings on 4.9 GHz and effect on Public Safety.** The FCC is making 4.9GHz available within the next few weeks once the report and order is published. All public Safety entities are eligible to license all 50MHz of spectrum. The equipment does not exist at this time but the technology is known as "Mesh Network". More information to following in the next meetings

The Chairman noted from the Report and Order -Item 16 of FCC <u>03-99."The 4.9 GHz Band Transferred from Federal Government Use"</u> The 700 MHz RPUC's will have to develop a 4.9 MHz plan in addition to the 700 MHz plan.

- **-The effect of licensed spread spectrum on public safety communications.** Noted that there are very few spread spectrum applications pending since there are limited number of spread spectrum frequencies. Commercial spread spectrum operations interfere daily with Public Safety operations.
- **-CAPRAD training** for additional com it tee members.

APCO is providing CAPRAD training prior to their annual conference in Indianapolis, IN. Any member is welcome to attend a their own expense. Mr. Kowalik indicated that he would attend the class. Mr. Carbonell noted that some sort of coordinating fee could help support the local committee expenses.

Plan Development

The options for a scoring methodology were discussed. The Chairman noted that previously distributed Options A and B had the most responses. The Chairman discussed Option A in length and Mr. Zarwanski pointed out some specifics in Option B.

The details of eligibility were discussed at length. The definition of Categories was discussed at length. E. Derdak noted that entities that are eligible on other services should have a lower scoring/rating. He gave examples of bus companies and utility companies.

A motion was raised to adopt plan A was MOVED by J. Warakois seconded by B. Sutherland. Vote by show of hands to accept this portion of the plan as presented. Plan A of the scoring scheme was ACCEPTED by show of hands (12 in favor, 1 opposed.)

New Business:

Next meeting is scheduled in Connecticut at CT Fire Academy, Windsor Locks, CT, September 9,2003, 10:00a.m.

The December meeting will be held Concord NH, December 9th.

Mr. Kowalik discussed 'Self-promotion" of the RPUC: The website should present our mission statement. Mr. Carbonell indicated he will draft an overview and present it to the committee at the next meeting.

Moved for adjournment, Carried. Meeting adjourned 12:15 PM.

Respectfully submitted Jim Warakois, Secretary

Documents distributed:

- FCC 03-99 The 4.9 GHz Band Transferred from Federal Government Use, Wt docket No.00-32 MEMORANDUM OF OPINION AND ORDER AND THIRD REPORT AND ORDER, Adopted: April 23, 2003 Released May 2, 2003
- A copy of a Power Point Presentation, by Bob Speidel, June 6 2003, <u>regarding 4.9 GHz</u> <u>rulings by the FCC.</u>
- Associated Press, Thursday, May 29, 2003, "State of Maine. System upgrade with new technologies."

September 2003 Minutes

Meeting of The FCC Region 19 700 MHz Technical Advisory Committee Tuesday September 9, 2003 Connecticut Fire Academy, 34 Perimeter Road, Windsor Locks, CT

The meeting was call to order at 10:00am.

Present were the Chairman, Vice-Chairman, and Secretary. Attendees signed the attendance roster that was passed around.

Approval of Minutes-June 10, 2003

The chair provided copies of the agenda and previous meeting report. **Moved** by G. Carbonell and **Seconded** by Steve Brown that the minutes of the meeting of June 10, 2003 be approved. The previous meeting minutes was approved by consensus.

<u>Membership</u>

The chairman stated he will continue to request participation from those states that still need representation in this committee. Vermont has had no participation in this committee for several years.

The next meeting will be on December 9, 2003 at State Police Headquarters, Concord New Hampshire. Directions will be placed on the website at ner700mhz.org.

According to the committee's bylaws there should be an annual election at the fall meeting (this meeting). The Chairman announced that any person wishing to be a candidate for any of the three positions **Chairman**, **Vice Chairman** and **Secretary** should make their candidacy known. No response was heard. G. Carbonell **moved** that the incumbent Chairman, George Pohorilak, Vice Chairman, Jerry Zarwanski and Secretary Jim Warakois continue in their positions for the coming year. **Seconded** by Steve Brown and **Voted unanimously** to continue the current leadership.

State Update

Connecticut is attempting to form a State Executive Interoperability Committee (SEIC). The Connecticut committee has been distributing 800 MHz radios designed strictly for interoperability use.

Massachusetts has a SEIC committee that is conducting meetings at various venues across the state for the purpose of enlightening the Public Safety Community on the current availability of interoperability plans, facilities, and working groups.

Vermont representation was absent.

New Hampshire indicated that December is the target date for the SEIC to meet. Mr. Kowalik indicated that the state of New Hampshire has many homeland security projects and additional requests for other radio communications projects.

Maine and Rhode Island representation was absent.

New York State announced their first SEIC meeting to be held on December 2, 2003. New York State will establish working groups for the various disciplines.

Mr. Schlieman indicated that the two regions in New York would review other 700MHz plans (region 5, 24, 33, etc) to ensure uniformity of such plans. He reported that the NCC has a recommendation for standardized nomenclature. In regards to the state licensed channels New York State submitted a proposal for dealing with border sharing issues. Canada has agreed to set aside Channels 63 and 68 for border areas.

The Chairman, George Pohorilak indicated Jerry Zarwanski and he would attend the Region 8 meeting that will be held September 10, 2003 in NYC.

FCC Update

NCC report- All recommended rule changes from the NCC subcommittees were forwarded to the NCC. A recommendation for wide band interoperability and various completed documents were forwarded to the steering committee. Mr. Eierman indicated that TIA TR8 committee has a document in ballot that will be acted on in the next TIA meeting session.

CAPRAD

Chair indicated that this committee will use CAPRAD. However, at this time the committee has used up all the funds available for training.

It was reported that there was discussion (at the FCC) that the use of CAPRAD be made mandatory. Regional Planning committees will have to make use of the database to provide accurate information to adjacent regions. Mr. Kowalik noted that the CAPRAD web site has information available for all regions and data associated with all regions.

Plan Development - Scoring Matrix

New Hampshire indicated that the committee adopted the matrix in the previous meeting. Typographical errors were pointed out. The chair reminded the committee that the matrix document is a working document and changes or modifications are welcome.

Mr. Eierman indicated that the FCC has not approved any 700MHz Regional Plans to date. The Region 5 original plan submission was initially rejected due to various reasons including; Tribal Nation notification, adjacent region approval, attachments including all regional planning activity documents associated with the region, etc. Region 5 has re-submitted their plan to the Commission with additional information.

The insertion of a footnote was recommended for addressing language on Section 4, first paragraph...For an analog system 0 points...

The footnote would read "Where allowed for LP or mobile only or subscriber equipment". It was clarified that no analog operations is allowed for interoperability channels.

Presentations

Mr. Speidel (M/A Com) presented "700MHz Update and Other Assorted Topics." A copy of the presentation was made available.

Mr. O'Hara (SRC) presented "Final 700MHz General Use Narrow Band Allotment Pool-Region 8." A copy of the presentation was made available.

Mr. O'Hara also discussed how the 700MHz Pool allotments were generated.

4.9 GHZ

The Chairman moved for this committee to convene their first 4.9GHz meeting in conjunction with the next 700MHz Regional Planning Committee meeting in December 2003. The **motion** was **approved** by consensus.

New Business

No new business identified.

Meeting adjourned by motion at 12:20 pm.

Minutes by: Jim Warakois, Secretary

DECEMBER 2003 MINUTES

Meeting of The FCC Region 19700 MHz Technical Advisory Committee Tuesday December 9, 2003 New Hampshire State Police Headquarters, 33 Hazen Drive, Manchester, NH

The meeting was called to order at 10:00am.

Present were the Chairman, and Secretary. Attendees signed the attendance roster.

Approval of Minutes

The Chairman provided a copy of the attendance list for circulation and requested all present initialize the list or add their name to the list. He asked that all check their record of attendance and bring to his attention any discrepancies in the record.

MOVED by Mr. Leary, and SECONDED by Mr. Welch that the minutes of the previous meeting, September 9, 2003 be **ACCEPTED**. There was no discussion and the Minutes were **APPROVED** unanimously.

Membership

Mr. Kowalik noted that there are changes to the New Hampshire representatives on the committee. The AASHTO representative will be Mr. Dave Chase. Mr. Herrick of NH, Emergency Management has resigned and will be replaced by Mr. Don Keeler.

Mr. Kowalik requested the committee add Mr. Don Bardwell of NH State Police Communications for membership/nomination into the committee. His membership would be identified as the New Hampshire Police representative.

The Chairman requested a written letter of nomination for Mr. Bardwell, Mr. Chase, and Mr. Keeler from higher administrative authorities in their respective discipline before the committee can accept approval for membership.

The Chairman noted various vacancies in the committee representation. He expressed concern that those who are not participating will not reap the future benefits as the committee moves forward. Further contact will be made with the administrations of those entities that are minimally represented on the committee in hopes of increasing attendance and membership.

State Update

Connecticut - There is an attempt being made to formalize a "State Interoperability Executive Committee". Draft proposals have been submitted. The need for coordination of interoperability is recognized. Progress is being made.

New Hampshire - Mr. Kowalik described the "New Hampshire State Police Digital Interoperability Expansion Project". This program will provide an upgrade to the existing infrastructure. The formation of a State Interoperability Executive Committee will allow certain related issues to be addressed formally. After describing the current and proposed statewide system Mr. Kowalik answered specific questions from the group.

NCC Update

The Chairman noted that additional funding would be made available to the Regional Committees, as in the past.

FCC Update

There is no current news from the FCC regarding 700 MHz activity.

CAPRAD

Mr. Carbonell reported that Regional CAPRAD updates would occur.

The Chairman noted that further training in the use of CAPRAD could be funded in part by the upcoming Regional Committee funding via NCC.

Plan Development

The Chairman noted that paper copies and a CD of the draft have been mailed to all committee members. Corrections were distributed for Section 6. Page 3, (General use) Paragraph one, second sentence, the frequency groups are changed to 6.25 kHz rather than 25 kHz.

Mr. Carbonell noted that the "general limits" sentence was omitted during the correction. It will be reinserted in the next printing.

Part 1, section 9, page 2 is deleted. It is not applicable to Region 19.

Appendix G, page 19, "Rhode Island", change Paul Leary to FCCA inquiry. Delete EMS inquiry reference.

Section I, Page 2. Update certain of the contact addresses.

The Chairman projected Committee approval of the Plan at the March meeting. Thereafter, the plan will be submitted to the FCC and adjacent regions.

Plan for 4.9 GHz

Plan development for the 4.9 GHz band is slowly starting to form. Development of this plan was described as "repairing Humpty Dumpty after he was pushed off the wall."

Mr. Derdak questioned the enforceability of a 4.9 GHz Plan after the incumbents are already operating systems.

New Business

No new business was introduced.

Moved by Mr. Carbonell, and **seconded** that the meeting adjourn. Meeting **adjourned** at 11:30 am.

Respectfully submitted James Warakois, Secretary

March 2004 Minutes

Meeting of the FCC Region 19 700 MHz Technical Advisory Committee Tuesday March 9, 2004 Massachusetts State Police General Headquarters 470 Worcester Road, Framingham, MA

The meeting was called to order by the Chairman at 10:05 AM.

Present: Mr. Pohorilak, Chairman, Mr. Zarwanski, Vice Chairman, Mr. Warakois, Secretary. All members present were asked to initial the attendance roster next to their printed names and correct any associated errors. Any one attending for the first time was asked to compete all the columns at the end of the attendance roster.

Previous Minutes discussion:

Mr. Kowalik moved to correct the minutes of the December 2003 meeting, second paragraph to read ".... Mr. Tom Bardwell..." Moved to accept minutes **as corrected**.

Accepted by unanimous vote.

The Chairman requested representatives from each State provide an update of State activities.

Connecticut.

Mr. Pohorilak reported that representation from multiple agencies has been coordinated and meetings conducted to form the "Interoperability Committee." This committee will implement the distribution of technology to aid communications interoperability and future communications planning. Mr. James (Skip) Thomas is the Chairman. Mr. Pohorilak has offered to share information with Mr. Sutherland of Massachusetts.

Massachusetts

Mr. Sutherland reported that the Executive Office of Public Safety has convened an ad hoc working group for interoperability. Meetings have been held at various regions throughout the State to expand existing infrastructure. Consultant studies have been made and approved by the ad hoc group. The effort has gone into planning for the orderly release of Federal Interoperability funds when they become available. Funding will be disbursed to identified consortiums to aid with their interoperability planning. Effort is being made to coalesce such groups where they are not organized. The Office of the Secretary of Public Safety is supporting this activity.

New Hampshire

Mr. Kowalik noted that several interoperability projects have begun. The "I-95" corridor project with the New Hampshire Department of Transportation and other State agencies. The New Hampshire State Police infrastructure is expanding gateways into other frequency bands. Another Interoperability Committee is working with Fire and EMS communities to bring them together using ICAL, ITAC and ITIA gateways. The separate working groups have yet to congeal into a single Interoperability group.

Rhode Island

A communications working group has been formed under the Governor's Disaster Subcommittee. A virtual radio channel called "Right Turn" connects all of state dispatch facilities through an 800 MHz backbone. Washington County, the southern most part of the State, will eventually merge into a statewide 800 MHz system. The current DOT and RIPTA (Rhode Island Public Transit Authority) systems will be merged to form part of a larger statewide system.

Maine -

No report

Vermont -

No report

NCC

NCC filed the final report.

FCC

Mr. Carbonell noted that the FCC notice regarding license cancellations will take effect very soon. Letters of Construction should be completed and on file with the FCC.

CAPRAD

The Committee is ready to utilize CAPRAD when the time comes to assign frequencies. Two Committee members have been sent for CAPRAD training. More will be sent when funding becomes available.

4.9 GHz

The 4.9 GHz meeting will follow the end of the 700MHz meeting. A separate agenda has been created for a 4.9GHz meeting.

700 MHz Plan Update

The Chairman reviewed the progress of the 700MHz meeting to date and acknowledged the editing efforts of Joan Carrasqillo, CT OSET and Vice Chairman, Mr. Zarwanski. Comments have been received from Bette Reinhardt, Motorola and others. Conference calls among technical members of the committee have been held to finalize aspects of the document.

Discussion:

Mr. Sutherland inquired as to the number of plans that have been already submitted to the FCC. Mr. Zarwanski indicated that two or three plans have been submitted to the FCC, none have been accepted. The FCC has provided reply comments back to those plans that have been reviewed.

Most plans have been developed around the NCC and NPSTC suggestions.

The Chairman suggests that all members thoroughly review the plan before the next meeting in June 2004. Vote for adoption of the plan will occur in the next meeting in Vermont.

Mr. Warakois questioned the tables of allocation based on county allotments whereas the New England states frequently identify population bodies by municipal boundaries, being contiguous with one and another. Mr. Kowalik noted that Appendix L will be updated as the allocations commence. Mr. Carbonell noted that the Region borders might generate some problems in assignment of frequencies.

Mr. Zarwanski noted that the Drafts of the Plan were distributed to the Region 8 and Region 30 committees for preview.

Mr. Carbonell questioned if Part I Section 3, 2.4. <u>Suspension or Removal from the</u> <u>committee</u> would be in effect for the next meeting. The Chairman noted that attendance issue would be considered for the final acceptance. The suggestion was made that video conferencing should be considered for some of the future meetings. The benefits/drawbacks were discussed by the committee. The availability of such video conference bridge facilities was discussed.

The Chairman noted that a pre June meeting would be held by telephone conference bridge in May, the date to be determined. All members will be notified.

Mr. Carbonell wished a clarification of **Part I Section 6, page 6, -second paragraph,**<u>Procedures for frequency coordination</u>. He noted that to reduce confusion, distances should be noted consistently in units of English or metric values.

Mr. Derdak noted further changes to be made in the text regarding the "20-foot rule" being also known as the "6.1-meter rule".

This concluded the 700MHZ meeting. The meeting continued on as the 4.9 GHz Advisory Committee Meeting.

APPENDIX G

MEETING NOTIFICATION METHODS

New England Region 19 uses various methods to notify its members and the public of meeting notices.

Meeting notices have been posted on the Federal Communications Commission website. Meeting notices have been posted on the New England Region 19 700 MHz website. Meeting notices have been posted on the Connecticut Department of Public Safety website.

Emails have been sent to all those who have requested to be notified by this means. Notices have been posted in the APCO Atlantic chapter newsletter. Notices have been posted in the Connecticut E9-1-1 newsletter. Letters have been sent to public safety officials within the Region.

Samples of these notices are attached.



PUBLIC NOTICE

Federal Communications Commission 445 12th St., S.W. Washington, D.C. 20554

News media information 202 / 418-0500 Fax-On-Demand 202 / 418-2830 TTY 202 / 418-2555 Internet: http://www.fcc.gov ftp.fcc.gov

> DA 03-2520 July 28, 2003

WIRELESS TELECOMMUNICATIONS BUREAU ACTION

REGION 19 (NEW ENGLAND) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES TWELFTH PLANNING MEETING

The Region 19 (New England) 700 MHz Public Safety Planning Committee announces that its twelfth meeting will be held on September 9, 2003 at 10:00 a.m., at the Connecticut Fire Academy, 34 Perimeter Road, Windsor Locks, Connecticut. The purpose of the meeting is to continue developing a Regional plan to meet the needs of the 700 MHz spectrum users including Public Safety, Public Health, Emergency Management and Utility services.

The Region 19 Public Safety Planning Committee meeting is open to the public. All eligible public safety providers whose sole or principal purpose is to protect the safety of life, health, or property in Connecticut, Massachusetts, Rhode Island, Maine, Vermont and New Hampshire may utilize these frequencies. It is essential that not only public safety, but all government, Native American Tribal, and non-governmental organizations eligible under Section 90.523 of the Commission's Rules be represented in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate and represent your agency's needs.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band should plan to attend. For further information, please visit the Region 19 web site at www.ner700mhz.org or contact:

> George Pohorilak, Chairman Region 19, 700 MHz Public Safety Planning Committee Department of Public Safety

New England Region 700 MHz

TECHNICAL ADVISORY COMMITTEE MEETING

June 8, 2004

NEW ENGLAND (REGION 19) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES PLANNING MEETING

15th meeting of the Region 700 MHz Public Safety Regional Planning Committee and 4.9GHz will be held Tuesday, June 8, 2004 at 10:00 a.m.- 12:00p.m., at the Brattleboro, Vermont Municipal Center, Grove St., Brattleboro, Vermont 05301

The meeting of the Region 700 MHz National Public Safety Regional Planning committee will convene at 10:00 a.m. The purpose of this meeting is to continue developing a Region plan to meet the needs of the 700 MHz spectrum users including Public Safety, Public Health, Emergency Management and Utility services.

All eligible public safety providers whose sole purpose or principal purpose is to protect the safety of life, health, or property in Region 19 would utilize these frequencies. It is essential that not only public safety, but all government, Native American Tribal, and non-governmental organizations eligible under Section 90.523 of the Commission's Rules be represented in order to ensure that each agency's future spectrum needs are considered in the allocation process.

Interested parties wishing to participate in the planning process for utilization of the new public safety spectrum in the 700 MHz band are encouraged to attend. For additional information concerning this meeting, please contact either the Region 19 Chairman or Vice-Chairman listed below or visit the committee web site at www.ner700mhz.org.

George Pohorilak, Chairman Jerry Zarwanski, Vice-Chairman

Department of Public Safety Department of Public Safety
Division of Fire, Emergency and Building Services Division of Fire, Emergency and Building Services
1111 Country Club Road 1111 Country Club Road
P.O. Box 2794 P.O. Box 2794
Middletown, CT 06457-9294 Middletown, CT 06457-9294

Phone: 860-685-8108 Phone: 860-685-8157

Fax: 860-685-8363 Fax: 860-685-8363

Email: george.pohorilak@po.state.ct.us

Email: jerry.zarwanski@po.state.ct.us

YAHOO! Maps Map of Grove St Brattleboro, VT 05301-2839

Directions to Grove St Brattleboro, VT 05301-2839

Future meeting dates and locations

September 2004 - Maine December 2005 - Rhode Island March 2005 - Connecticut June 2005 - New Hampshire September 2005 - Massachusetts December 2005 - Vermont

Back to main

PLANNING COMMITTEE MEETING

REGION 19 (NEW ENGLAND) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES FIRST MEETING

By this notice, the Region 19 (New England) 700 MHz Public Safety Planning Committee announces that its first meeting will be held on December 7, 2000 at 9:00 a.m. The purpose of the meeting is:

- 1. Establish procedural rules.
- Election of a Chairman.
- Review of plan elements.
- Review NCC progress.
- 5. Form workgroups to develop the regional plan.
- Address any new business.

In accordance with the provisions of FCC <u>Docket 96-86</u> the Chairman of the New England 800 MHz Regional Plan Update Committee announces the first Regional Planning Committee meeting for 700 MHz.

The meeting will be held at:

Daniel Webster College 20 University Drive Collings Auditorium Nashua, NH 03063-1300

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band should plan to attend. For further information, please contact:

Jerry Zarwanski

From:

Jerry Zarwanski [ZarwanskiJ@attglobal.net]

Sent:

Friday, February 22, 2002 8:43 AM

To:

Annemarie Stanford (E-mail); Bill Porter (E-mail); Blair Sutherland (E-mail); Bob Crvikshank (E-mail); David Eierman (E-mail); David Troup Jr. (E-mail); Elliot A. Derdak (E-mail); Ernie Morris (E-mail); Frank Aiudi (E-mail); Gary Gutowski (E-mail); George Carbonell (E-mail); George Pohorilak (E-mail); Gregory Richardson (E-mail); James P. Kowalik (E-mail 2); James P. Kowalik (E-mail); James W. Bell (E-mail); James Warakois (E-mail 2); James Warakois (E-mail); John Giacomini (E-mail); John Pinkham (E-mail); Mark Cady (E-mail); Mark Poole (E-mail); Michael Doucette (E-mail); Michael J. Baril (E-mail); Michael Stemmler (E-mail); Rick Pollak (E-mail); Robert DiBella (E-mail); Stephan Brown (E-mail); Stephan Verbil (E-mail); Terry LaValley (E-mail); Thomas Crotty (E-mail); Thomas Walsh (E-mail)

Subject:

700 MHz Meeting

Attached you will find an agenda for the next 700MHz meeting which is scheduled for March 12, 2002 from 10:00am to 1200pm at the Connecticut DOT(directions are on page 2 of the agenda). The Region 19 821MHz meeting will follow after a 10 minute break. In addition, minutes of the last 700MHz meeting are attached. Hope to see you all there. If you have any questions, please call me at 860-685-8157. Jerry





march02.doc

700MHZ AGENDA 1 MINUTES121101 edited doc



APCO International lantic Chapter

CHAPTER NEWSLETTER

Terry LaValley, President

David McClelland, President Elect

Mark Poole, 1st Vice President

Pieri R. Hayes, Managing Editor

Distribution 2:2

October 10, 2000



The conference is over, and oh what a conference it was. This will be one for the record books. I am sharing, below, some of the comments that I received about the conference. I know personally, that though I worked every day and had to put my feet up every night when I got back to my room, I would not trade one minute of the time that I spent.

Editor

A Job Well Done

The 66th APCO International Conference and Exposition in Boston has come and gone. To those who missed it, sorry; and you can believe those who were there will be talking about this one for some years to come. Without exception this conference excelled in every aspect.

The reasons for this level of success are a combination of factors. But at this time I want to concentrate on primarily one area. And that area is our volunteers. As most of you know I had the honor

of serving as your volunteer chairperson. What an experience for me. I made new friends and worked with old friends while accomplishing the many necessary tasks for the conference. Working with this group of volunteers was beyond all expectations. They were there to do whatever needed to be done, and with a smile. Let me tell you that the members of the association who attended the conference noticed. The compliments we received were outstanding.

I though maybe you would like to know a little bit about our volunteers. We used 126 during the conference, not including chairpersons, co-chairpersons, and a few people who worked exclusively for committee a chairperson. They came from 47 agencies in the chapter area, 3 agencies outside the chapter area, retired members, corporate members, family members and understudies from the Salt Lake City conference committee. They worked covering 15 different areas of the conference.

As your chairperson for this, the greatest conference so far, I would like to thank each and every person

who volunteered to assist with the conference. Without your efforts we never could have accomplished the tasks necessary to produce a quality conference for our association. Many members of the association have passed along their compliments for a job well done to the conference committee staff.

I will not attempt to name each person, as I am sure I would miss some. I had the opportunity to speak with only a few of the volunteers and give them my personal thanks. You all know who you are and for those I missed, please know I could not have done this without your help. I wish to express my warmest thanks to all for a job well done.

I would like to mention my two key assistants in the volunteer room who made my job easier.

Without them I never could have done the job.

Many of you volunteers also had the opportunity to meet or work with these two individuals, John (Jack) Gallagher, Lynn Fire Department and David Diamond, Barnstable County Sheriff's Department.

Cambridge (MA) Emergency Communications

Paula Snow appointed Chief of Operations for the combined dispatch operations center replacing Tom Cahill who retired after 38 years service.

New Supervisor Appointments
Christina Giacobbe
Kirk Wornum
Joe Sullivan

The Cambridge Emergency Communications Center had representatives volunteer countless hours at the Boston APCO Conference in August:

Ron Richard George Fosque
Bob Morrison Kirk Wornum
Paula Snow Larry Silva
Matt Ansello Mike Medeiros
Rich Moschler Skip Botelho
Val Watson

News from the Institute

The APCO Virtual College started it's first semester. They had planned on having 10 to 15 enrollees and ended up with 50.

Obviously, more people than planned are realizing the benefits of continuing their education.

Good luck to them all.

How many can we enroll next semester?

Educational Opportunities

Communications Center Supervisor Course

November 14 - 16, 2000 8:00am - 5:00pm \$329.00

Co-host:

Massachusetts Communications Supervisors Associations

Location: Northampton FD 26 Carlon Dr. Northampton, MA 01060

Lodging:

Inn at Northampton (413) 586-1211 Best Western (413) 586-1500

Contact: James Lake (413) 587-1147

Emergency Medical Dispatch Course

November 13 - 17, 2000 8:00am - 5:00pm \$439.00

Co-host:

Montgomery County Emergency Medical Services

Location: Emerg, Operations Ctr. 50 Eagleville Road. Eagleville, PA 19403

Lodging: Comfort Inn (610) 962-0700 Hampton Inn (610) 962-8111

Contact: James Traub (610) 631-6521 **Tech News**

REGION 19 (NEW ENGLAND)
700 MHz
PUBLIC SAFETY PLANNING
COMMITTEE
ANNOUNCES FIRST
MEETING

By this notice, the Region 19 (New England) 700 MHz Public Safety Planning Committee announces that its first meeting will be held on December 7, 2000 at 9:00 a.m. The purpose of the meeting is:

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In accordance with the provisions of FCC Docket 96-86 the Chairman of the New England 800 MHz Regional Plan Update Committee announces the first Regional Planning Committee meeting for 700 MHz. The meeting will be held at:

Daniel Webster College 20 University Drive Collings Auditorium Nashua, NH 03063-1300

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band should plan to attend. For further information, please contact:

George J. Pohorilak, Convenor Office of Statewide Emergency Telecommunications 1111 Country Club Road Middletown, CT 06459294 (860) 685-8108 (voice) (860) 685-8363 (FAX) A publication of the Connecticut Office of Statewide Emergency Telecommunications

E9-1-1

Commission Members Volunteer Fire Service:

Ernest Herrick, Chairman 860-563-9375

Connecticut Conference of Municipalities:

Frank B. Connolly 203-315-6000

Office of Emergency Management:

Paul Gibb, Jr. 860-566-3377

Municipal Police Chiefs: Chief Milton J. King 860-465-3141

Municipal Fire Chiefs: Chief Alfred F. Dudek, Jr. 860-665-6748

Council of Small Towns: **Honorable Craig A. Miner** 860-567-7550

State Fire Administrator: Jeffrey Morrissette

860-627-6363

Wireless Services:

Donald Richardson 860-513-7586

Office of Emergency Medical Service:

Gordon K. Shand 860-509-7981

Connecticut State Police: Michael Stemmler

860-685-8280

PSAP Representative: Jeffrey Vannais

860-528-4401 x. 568

Established by CGS Sec. 28-29a to advise OSET in the planning, design, implementation and coordination of the state-wide emergency 9-1-1 telephone system.

Public Act 00-151: What you need to know...

Governor Rowland signed Public Act 00-151 "An Act concerning Emergency Medical Services Data Collection and Emergency Medical Dispatch" on May 26, 2000.

The Act specifically requires the following for Connecticut PSAPs:

✓ Starting on 1/1/01, PSAPs are required to begin collecting the following data for submission to OSET on a quarterly basis: 1) the number of E911 calls during the quarter that involved a medical emergency 2) the elapsed time period from the time the call was received to the time emergency response services were dispatched or the call was transferred;

✓ Not later than 7/1/04, each PSAP shall provide emergency medical dispatch (EMD) or arrange for EMD to be provided by a public safety agency. Documentation of such an arrangement must be forwarded to OSET for review;

▶ EMD programs shall include but are not limited to: 1) medical interrogation, dispatch prioritization and prearrival instructions for all E911 calls requiring EMS 2) a medically approved EMD priority reference system;

✓ Maintain on-going EMD education program;

✓ A mechanism to detect and correct discrepancies between EMD protocols and EMD practice;

✓ A quality assurance program to monitor the following:

1) EMD time intervals 2) the quality of EMD instructions and dispatch protocols 3) utilization of EMD components. The Q. A. program should be developed with the assistance of a physician trained in emergency medicine who should provide on-going review;

✓ OSET shall provide or approve EMD training and continuing education.

In order to accomplish the above mandates, OSET is developing the following:

✓ A system to approve NHTSA EMD providers;

✓ PSAP reimbursement process for EMD training;

✓ Development of a continuing education program;

✓ Development of quality assurance information to assist PSAPs in implementing in-house Q.A. programs;

Data collection methodologies.

If you need clarification, please contact Paul Connelly at OSET 860-685-8124. © 9-1-1

800 MHz Window Opening

The New England Planning
Committee (FCC Region 19)
announces the opening of a new
frequency application window for
821-824 / 866-869 MHz radio
band. The Region 19 area includes the states of Maine, New
Hampshire, Vermont, Rhode
Island, Massachusetts and four
counties in Connecticut, including
New London, Windham, Tolland,
and Hartford counties.

Applications to be accepted for a eighth window filing for the 821-824 / 866-869 MHz radio band must be postmarked on or after October 1, 2000 and prior to November 30, 2000. No applications will be accepted that are postmarked before or after these dates.

Subsequent window filings will be open every October 1 and April 1 and close 60 days from window opening.

Evaluation of applications will be conducted by the Region 19 Committee. Each application will be rated and scored for completeness of the application, systems need, coverage, loading, funding availability and other technical criteria. Applications receiving a high ranking may not necessarily receive a frequency assignment as certain areas in Region 19 may be depleted of 800 MHz by previous window filings and corresponding channel assignments.

For further information and an application, contact: George Pohorilak, Region 19 Committee Chairman, New England Planning Committee, c/o Department of Public Safety, Office of Statewide Emergency Telecommunications, P. O. Box 2794, Middletown, Connecticut 06457-9294.

Mr. Pohorilak's telephone number is 860-685-8080. © 9-1-1

Region 19 (New England) 700 MHz Public Safety Planning Committee Announces 1st meeting

By this notice, the Region 19 (New England) 700 MHz Public Safety Planning Committee announces that its first meeting will be held on December 7, 2000 at 9 a.m. The purpose of the meeting is to:

- 1. Establish procedural rules;
- 2. Election of a Chairman;
- 3. Review plan elements;
- Review NCC/FCC progress;
- 5. Form work groups to develop the regional plan;

6. Address any new business. In accordance with the provisions of FCC Docket 96-86, the Chairman of the New England 800 MHz Regional Plan Update Committee announces the first Regional Planning Committee meeting for 700 MHz.

The meeting will be held at:
Daniel Webster College
20 University Drive
Collings Auditorium
Nashua, NH03063-1300
All interested parties wishing

to participate in the planning for the use of new public safety spectrum in the 700 MHz band should plan to attend. For further information, please contact:

George Pohorilak, Convenor Office of Statewide Emergency Telecommunications
1111 Country Club Road
Middletown, CT 06457-9294
(860) 685-8108 (Voice)
(860) 685-8363 (Fax)
Email:
george.pohorilak@po.state.ct.us



NEW ENGLAND RADIO PLANNING COMMITTEE FCC AREA 19 PLAN UPDATE COMMITTEE

July 12, 2000

Mr. Mark Poole Maine State Police 36 Hospital Street Augusta, ME 04330

Dear N

In anticipation of conducting a meeting for a 700 MHz planning initiative, I am requesting that you provide a mailing list for public safety representatives within your state. If possible, I would like that list in an electronic format to facilitate the creation of a master list and labels.

As convenor of the meeting I have arranged for a meeting at Daniel Webster College in Nashua, New Hampshire. Nashua is geographically centered and has ample parking at the college. The auditorium will accommodate 350 people. I have reserved that room for December 7, 2000 at 9:00 a.m. to noon.

Please provide your mailing list as soon as possible so that I can put the master list together. I believe that the appropriate contact would be the police chief, fire chief, EMS director for their respective public safety organizations in your state. State public safety agencies should be included. I will handle notification of federal entities for the New England States. While the mailing may be extensive, previous experience has indicated that only a limited number will attend.

If you have any questions, please contact me at (860) 685-8108.

Sincerely,

George J. Pohorilak Chairman, RPUC

GJP:js

P.S. My e-mail is: george.pohorilak@po.state.ct.us.

860-6135-8108

DIRECT CORRESPONDENCE TO THE COMMITTEE

Region 19 2015 Agendas and Minutes up to Amended Plan Filing to FCC

New England Region 19 700 MHz TECHNICAL ADVISORY COMMITTEE MEETING

Tuesday, March 10, 2015

10:00A.M. – 11:30 A.M.

LOCATION: Kennebunkport Fire Dept. 32 North Main St. Kennebunkport, ME 04046

Directions: www.ner700mhz.org

AGENDA

- 1 Approval of Minutes December 9, 2014
- 2 State Update
 - A.) State of Connecticut PSDN, NG911 & CSP Radio
 - B.) State of Massachusetts Public Safety Network
 - C.) State of New Hampshire SafeNet
 - D.) State of Rhode Island High Performance Data (HPD)
 - E.) State of Maine
 - F.) State of Vermont
- 3 FCC Update
 - A.) FCC 14-172
 - 1. 700MHz reserve channels for T-Band
 - B.) State License
 - C.) Public Safety 700MHz broadband legislation H.R. 3630 (D Block)
- 4 Application Engineering
 - A.) Spreadsheet format
 - B.) Technical Subcommittee
 - C.) CAPRAD
- 5 Region 19 Plan/Applications

- 6 Region 8 & 30 Concurrence Request
 - A.) Middlesex County, NJ
 - B.) Bergen County, NJ
 - C.) City of Newark, NJ in Essex County, NJ
- 7 NRPC
- 8 4.9 GHz
- 9 New Business
 - A.) Meeting dates & locations

Meeting Minutes New England Region 19 700 MHz Technical Advisory Committee Meeting

Tuesday, March 10, 2015

Kennebunkport Fire Dept. 32 North Main St. Kennebunkport, ME 04046

Mr. Jerry Zarwanski of CT chaired the meeting. The meeting was opened at 10:05 AM. An agenda and minutes to the previous meeting were emailed to all committee members prior to the meeting and copies were also available for those attending the meeting.

Chairman Zarwanski noted that a Quorum of committee members was present for this meeting. Attendees participating by Conference Bridge:

Joe Yurman - NY Region 8
Alan Demco - NY Region 8
David Sturn - NY Region 8
George Carbonell - CT
Steve Brown - CT
Tom Guthlein - RI
Bob Isby - NY Region 30
Tom Andross - NH
Steve Verbil - CT (Vice Chair)
Ed Luczkowski - CT
Blair Sutherland - MA
Billy Carter - IL

Agenda Item 1: Approval of Minutes

A copy of the December 9, 2014 minutes from the last meeting was available to attendees. Motion was raised to approve the minutes as presented. Approved by Mr. Steve Verbil and seconded by Mr. George Carbonell. Minutes approved by unanimous voice vote.

Agenda Item 2: State System Updates

Connecticut: Mr. Steve Verbil provided an update of the State of Connecticut DESPP data network and the statewide Next Gen 911 call handling system.

The statewide Public Safety Data Network Data system is fully installed and functioning normally. The State is awaiting access applications from local entities that may want to

utilize the fiber connectivity for data. A committee with a governance structure receive, review and approve online applications for use of the fiber interconnect system. A DESPP technical committee finalizes the engineering configurations and works with the entities to set up a cost agreement. Usually the cost is related to equipment needed to work the new circuits into the system. There are approximately 60 applications with 40 pending at this time.

The state's NG911 system installation has been started. Previous snags to the project have been corrected and the expected completion time frame is end of 2015 or early 2016. New Britain will be receiving NG911 calls around March 25, 2015.

CT State Police statewide radio network – no update.

Rhode Island: Tom Guthlein reported that the State is working with the HPD system by working with RIPTA bus service communications to track new equipment being installed. Equipment procurement being discussed is the use of 4.9 GHz frequencies for video service on the buses.

Massachusetts: Mr. John Ruggiero reported that there has been significant funds expended to update legacy base stations from older MSF5000 models to new GTR8000. Dedicated funds totaling \$68 million is available. The State plans to replace the aging analog 800 SmartZone system with a new statewide 700/800 MHz trunking system to include replacement of existing mobile and portable radios. As the system is built out, 700 MHz frequencies will be added into the system to supplement capacity of the current 800 MHz radios.

New Hampshire: Mr. Kowalik reported that the New Hampshire Safenet shared IP microwave network is mostly completed with major stakeholders using the network on a daily basis. The New Hampshire SWIC is following up with FIRSTNET activities including a plan to attend the FIRSTNET consultation meeting in MA in a couple of days. A new project to replace the aging 20 year old VHF Astro system with new GTR8000 radios and linear simulcast is planned for 2015.

Maine: Bob Isby is doing some work with the statewide project in ME which is nearing completion with some cutovers still to be completed. There is no use of 700 MHz frequencies as the state 700 MHz license has been canceled. Steve Mallory, Maine SWIC, reports that the statewide network cutover is in final process and final acceptance tests are being held at this time. The next project related to the statewide analog system is to add interoperability with federal entities.

John Richards was noted as the current MSCOMMNET contact for State of Maine.

Vermont: No report from the State of Vermont.

Region 1 FEMA Interoperability update: Rich Andreano, FEMA regional interoperability coordinator provided a brief update of current SCIP plans. NH is

completed, MA draft is in the works, CT is requesting additional time, ME, RI and VT are scheduling meetings to begin updates of their state SCIP plan. Chairman Zarwanski noted that he provided a copy of the New York Interoperability plan which shows their planned use of 700 MHz interoperability frequencies. He noted that each New England (Region 19) State needs to put the 700 MHz interoperability information in their plans as they are updated. Mr. Kowalik noted that NH has entered the 700 MHz interoperability frequencies and have added the interoperability zone of newly purchased dual band VHF/700MHz radios. Mr. Ruggiero reported use of the 64 700 MHz frequencies within all 700 MHz capable radios but there is no fixed infrastructure equipment at this time in MA.

Agenda Item 3: FCC Update

A. 14-172 R&0 - 700 MHz

Chairman Zarwanski continued the discussion of the action items Region 19 must take to address the most recent release (December 2, 2014) of R&O 14-172 proposed rulemaking regarding 700 MHz narrowband operations. There were 12 items discussed by Chairman Zarwanski with attendees. Copies of FCC 14-172 were available to attendees. It was hoped that the needed changes to the Region 19 plan update will be inserted in the draft currently under way by the Technical Subcommittee. Once completed, the updated plan must receive adjacent region concurrence and sent to the FCC by June 2015, unless the FCC approves an extension of time.

Two main items which require immediate attention by each state are an update to the 700 MHz region 19 membership list and proposed changes created by the reallocation of T-Band frequencies. There are hundreds of licensed Region 19 users within the 50-Mile designated areas of T-Band who must relocate to 700 MHz reserve channels. The T-Band migration to 700MHz will be the item that most impacts the Region 19 planning and frequency allocations in the Boston, MA areas in addition current T-Band users have priority access to the reserve channels.

NRPC Chairman, Billy Carter joined the meeting. He has begun discussions with all Regional Planning committees regarding the R&O 14-172 during NRPC conference calls. More discussion will be held in the next few months. Mr. Carter spoke briefly of the NRPC recommendations regarding migration of T-Band users to 700 MHz reserve channels. He indicated the deployable channels option will not be made available to T-Band users, rather the T-Band licensees must exchange a T-Band frequency(s) one for one with a 700 MHz reserve channel(s), including matching the existing parameters of the T-Band License. The Region will only have authority to recommend allocation of the 700 MHz reserve channels. The applicant, States, Counties, and Municipalities must follow the normal regional application process to obtain a new call sign from the FCC.

Chairman Zarwanski advised all state 700 MHz regional advisory committee members to hold in-depth meetings to discuss each proposed change outlined in 14-172.

B. State Licenses.

Vermont and Maine have notified the FCC that they wish to cancel their 700 MHz State License. Once the general use frequencies are used up in ME and VT, the RPC committee may then consider assigning former ME and VT state pooled frequencies to applicants in ME and VT. No applications have been received for 700 MHz frequencies from ME and VT to date.

Chairman Zarwanski briefly reviewed a case where CT SP submitted a FCC compliance letter in June for 700 MHz state license use which was questioned by FCC regarding the population figures in their submission. The chairman described a feature soon available from APCO's current version of ATDI Spectrumwatch which allows applicants to pull population data from the National Census Bureau. This information is found to be acceptable to the FCC when reviewing population coverage by a county or statewide 700 MHz system.

C. FIRSTNET.

Chairman Zarwanski provided an update to the HR 3630 D-Block (FIRSTNET) 700 MHz broadband Network. FIRSTNET is continuing to perform preliminary consultations and outreach meetings with states. MA has already held its consultation, NH is scheduled for June 9. FIRSTNET is recruiting technical staff under a new First Responder Network Authority. The State of Vermont has filled a FIRSTNET consultant position (Tess Gauthier) who will be attending the MA consultation meeting.

Agenda Item 4: Application Engineering

A. Comstudy, Compass, FreqEasy vs Spectrum E. Mr. Zarwanski updated the attendees regarding the status of the different engineering software platforms in use in Region 19, 8, and 30. The issue is whether each platform can use a standard transmitter site data spreadsheet which will return similar results for site propagation results. George Carbonell (ASSHTO) advised the Chairman he will provide the spreadsheet format needed to submit information in the Region 19 spreadsheet format. There has been no further information on whether the FCC, through the NRPC, may fund each region to receive funds to purchase and use the same engineering platform for frequency coordination and channel allocations. In the meantime, each Region will attempt to turn around concurrence applications within the 30 day window using their respective software programs.

<u>B. Technical Subcommittee</u>. Chairman Zarwanski reported that the Technical Subcommittee has been meeting regularly each month or more often as needed. Region 19 is reviewing adjacent state concurrences in a timely manner at this time. Region 8 and 30 technical members are invited to attend the technical subcommittee conference calls.

<u>C. CAPRAD</u>. Chairman Zarwanski advised that the Technical Subcommittee is still moving forward with updating the data in the CAPAD database. Chairman Zarwanski advised that Region 8 and 30 have requested they receive Region 19 applications for

adjacent region review in CAPRAD. A proposed addition to the updated Region 19 plan will be a request for applicants to apply for frequencies on CAPRAD and provide 3 hard copies and one CD copy for review.

Agenda Item 5: Region 19 Plan/Applications

Chairman Zarwanski noted that the update to the Region 19 plan includes updating the membership lists for each state. There are 11 positions for each state to fill for a total of 66 possible voting members in the Region19 Committee.

Discussion with Region 8 and 30 attendees was held regarding matching up the technical parameters used by each region for coverage areas used to allocate frequencies. The technical teams conversed on co-channel and adjacent channel engineering data differences. Once each region completes its draft document, each region will need to concur with each adjacent region's plan so further details may need to be discussed.

Agenda Item 6: Region 8 and 30 700 MHz Concurrence Applications

The Technical Subcommittee has received and completed a Region 8 adjacent state 700 MHz concurrence application from Middlesex County, NJ. The application was approved and a concurrence letter was forwarded to Region 8.

Bergen County, NJ has submitted an application which was reviewed by the Region 19 technical subcommittee. Members in attendance at the technical subcommittee meeting requested an extension of time to further review the application until today's meeting. A motion to approve the application was put forth by John Ruggiero and the remainder of the technical subcommittee members in attendance voted to approve the application.

The City of Newark, NJ, Essex County, application was discussed by technical subcommittee members and approved by unanimous voice vote.

Agenda Item 7: National Regional Planning Committee (NRPC)

The NRPC Chairman Billy Carter provided comment earlier on the teleconference bridge and no further discussion regarding the NRPC activities were discussed.

Agenda Item 8. 4.9 GHz

Chairman Zarwanski discussed the importance of notifications to the Region 19 committee when 4.9 GHz systems are put in operation. Chairman Zarwanski noted once

again that if the user has not notified the RPC of the use, and, if the FCC modifies the 4.9 GHz rules to reallocate the spectrum for FIRSTNET, those who are not on record may not receive reallocation assistance.

Agenda Item 9. New Business

<u>2014 Meeting Dates and Locations</u>: The FCC has put out a public notice for Region 19 meetings. A handout was available identifying the 2015 meetings. The next 700 MHz meeting will be held June 9, 2015 at the Rhode Island Emergency Operations Center, Cranston, RI.

Seeing no further comments or new business, Chairman Zarwanski declared a recess at 12:15 AM until 12:25 at which time he will commence the Region 19 800 MHz RPC meeting.

Submitted - Jim Kowalik - Secretary

MARCH 10, 2015

700/800 MAZ Sign IN

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New England Region 19 700 MHz TECHNICAL ADVISORY COMMITTEE MEETING

Tuesday, June 9, 2015

10:00A.M. – 11:30 A.M.

LOCATION: Rhode Island Emergency Management 645 New London Avenue Cranston, Rhode Island 02920

Directions: www.ner700mhz.org

AGENDA

- 1 Approval of Minutes March 10, 2015
- 2 State Update
 - A.) State of Connecticut PSDN, NG911 & CSP Radio
 - B.) State of Massachusetts Public Safety Network
 - C.) State of New Hampshire SafeNet
 - D.) State of Rhode Island High Performance Data (HPD)
 - E.) State of Maine
 - F.) State of Vermont
- 3 FCC Update
 - A.) FCC 14-172
 - 1. 700MHz reserve channels for T-Band
 - 2. Region Plan Review/Approval
 - B.) FirstNet
- 4 Applications Engineering
 - A.) Spreadsheet format
 - B.) Technical Subcommittee
 - C.) CAPRAD
- 5 Region 19 Applications

- 6 Region 8 & 30 Concurrence Request
- 7 NRPC
- 8 4.9 GHz
- 9 New Business
 - A.) Next Meeting date & location

Meeting Minutes New England Region 19 700 MHz Technical Advisory Committee Meeting

Tuesday, June 9, 2015

Rhode Island Emergency Operations Center 645 New London Ave Cranston, RI 02920

Mr. Jerry Zarwanski of CT chaired the meeting. The meeting was opened at 10:10 AM. An agenda and minutes to the previous meeting were emailed to all committee members prior to the meeting and copies were also available for those attending the meeting.

A Quorum of committee members was present for this meeting. At least one representative from each state was present. Attendees participating by Conference Bridge:

David Stern – NY Region 8
Bob Isby – NY Region 30
Scott Wright – CT
Lee Savory – NH
Richard Fiske – MA
Robert White –
Jessica Stoltz – VT

Agenda Item 1: Approval of Minutes

A copy of the March 10, 2015 minutes from the last meeting was available to attendees. A discussion regarding name misspelling and minor corrections was held. A motion was raised by Brian Glancy to approve the minutes with the identified changes. Seconded by Mr. George Carbonell. Minutes were approved by affirmative voice vote. There was one committee member who voted to abstain.

Agenda Item 2: State System Updates

Connecticut: Chairman Zarwanski provided an update of the State of Connecticut PSDN data network and the statewide Next Gen 911 call handling system.

The statewide Public Safety Data Network Data system has been operational for the last 5 to 6 years and is functioning normally. The PSDN network is primarily used for COLLECT, Radio Interoperability and NG911 The State is accepting applications from local entities for PSDN use.

The state's NG911 system installation has been started. Currently there are 10 pilot PSAP's that have been cutover. There is one additional location scheduled to be cutover, which is today and that is DESPP/Division of Statewide Emergency Telecommunications (DSET) for training and administrative purpose. At this location, DSET will have statewide monitoring of 911 calls. In addition, reports can be run for the entire state or a particular PSAP, or on a particular call taker. Administrative functions such as creating user names, passwords and statewide speed dial lists from DSET are possible. At this time, the cutover of additional sites is on hold until some problems are resolved. This may slightly delay the completion of the installation and cutover of NG911 to the second quarter of 2016. Previous expected completion of NG911 was early 2016.

CT State Police deconsolidation of dispatching from two troops is underway. Troop L will no longer dispatch for Troops A and B. Troops A and B will get NG911 when they go back to dispatching. Troop C will no longer dispatch for Troops D, K and E. Troop E will be the first Troop with NG911 and is currently scheduled for cutover on July 28, 2015.

Mr. Scott Wright indicated CTS is looking to get radio interoperability contacts for interoperability use in Long Island Sound waters from NY to RI. Mr. Thomas Guthlein identified he has the contacts for Rhode Island, Massachusetts and the waters off of Cape Cod.

Massachusetts: Mr. John Ruggiero reported that there has been significant funds expended to update legacy base stations from older MSF5000 models to new GTR8000. Dedicated funds totaling \$68 million is in place. 700 MHz frequencies will be added into the system to supplement capacity of the current 800 MHz radios. The new administration in Massachusetts has decided to hire a consultant to review the current State Police radio system.

Vermont: Jessica Stoltz reported VT does not have any 700MHz systems. Vermont has a statewide VHF system in place

New Hampshire: Mr. Kowalik reported that the New Hampshire Safenet shared IP microwave network is mostly complete. The New Hampshire SWIC is meeting up with FIRSTNET today. A BTOP grant for dual band radios is in the process. A new project to replace the aging 20 year old VHF Astro system with new GTR8000 radios and linear simulcast is underway.

Maine: Steve Mallory reported here is no use of state 700 MHz frequencies as the state 700 MHz license has been canceled. The MSConnNet is a Harris digital simplex radio system. The statewide network cutover is complete and final acceptance tests are being completed. The next project related to the statewide analog system is to add interoperability with federal entities. Analog radios will be upgraded with P25 radios.

Steve Mallory reports that New Brunswick, Canada, DOT has secured funding of approximately \$156 million to build out infrastructure for a new 700MHz system. Mr. Bruce Grandy is the contact at New Brunswick, Canada.

Rhode Island: Thomas Guthlein identified the State of Rhode Island is redefining microwave loops and fiber connectivity into the statewide radio system. Rhode Island established a mobile command post for the Volvo International boat race. There were approximately 55,000 people/day in attendance.

Agenda Item 3: FCC Update

A. 14-172 R&0 - 700 MHz

Chairman Zarwanski indicated there is copies of a handout on the table with 12 bullet points from the FCC's 700MHz Narrowbanding Report and Order (14-172). He indicated that about half of the bullets need to be addressed within the 700MHz Amended Plan. When the FCC originally issued the order, Regional Planning Committees nationwide had until June of 2015 to submit their 700MHz Plan Amendments. The NRPC and NPSTIC requested that the FCC extend the date until January 2016. The FCC came back and issued a new date for Regions to submit their plan amendments by October 30, 2015. The Chairman indicated that Region 19 will comply with the FCC requirement of filing a Plan Amendment by October 30, 2015.

There are 24 700MHz reserve channels for T-Band. Current T-Band users get a 1 for 1 exchange, they give up a UHF channel and get a 700MHz reserve channel. Once all reserve channels are used they will get a CAPRAD allocated county general use channel. There are not enough channels in 700MHz for the exchange. Areas outside T-Band will also be assigned these channels once county general use is used up. There are also 6 of the 24 channels that are considered nationwide deployable outside of the T-Band Areas. The 6 identified deployable are not considered for assignment in T-Band areas.

The Chairman next projected the Region 19 700MHz Amended Plan for Committee review and comment. The Chairman had a sequential numbering system file format for each Part and Section of the Amended Plan. Each file was displayed and reviewed. Each Committee member received a CD copy of the Amended Plan prior to the meeting.

The review, corrections, explanation and editing took over an hour. The committee determined the following sections still need further review.

110 Part I, Section 7 Interoperability Channel Usage (area highlighted in green)237 Part II, Apprendix L (area highlighted in yellow)239 Part II, Appendix N, Inter Region Coordination & Dispute Resolution (area written in blue)

A motion was raised to allow the Region 19 700MHz Plan Amendment to move forward to Region 8 and 30 for Concurrence. Noting to both Regions that the updated sections will be forth coming as soon as the committee can confirm the written section and data. The motion was approved by Mr. Michael Varney and Seconded by George Carbonell. Each Committee member present was asked individually by name whether they approve by saying "yes", "abstain", or "no" to the motion on the table. The 15 members present

and on the conference bridge all voted with a "Yes" to the motion. Chairman Zarwanski indicated that he would make the edits/changes to the Plan, make CD's and send a cover letter to the Chairman of Region 8 and 30 identifying the areas requiring further attention ASAP. The Chairman also indicated that in the original plan the Tribal Nations were given an opportunity to comment on the plan and that he would send a letter with CD of the amended Plan to the 10 Tribal Nations in New England. The comment period would be 30 days. The Chairman displayed the Tribal Nations contact information and the members of that State confirmed that each Tribal Nation was accounted for.

B. FirstNet

Chairman Zarwanski indicated FirstNet has received 50 of 56 completed consultation checklists. Meetings with some New England states have taken place. Meeting in Maine took place on 5/20, Connecticut on 5/27, New Hampshire meeting is occurring today, 6/9 and the Vermont meeting will be held on 6/16. He did not have the Massachusetts or Rhode Island dates. FirstNet continues to move forward with the planning process for the initiative to buildout out a nationwide public safety broadband system.

4. Application Engineering

A. Spreadsheet Format

Chairman Zarwanski indicated he has the Excel spreadsheet format for Spectrum E. He continues to ask for Comstudy, Compass and FreqEZ Excel spreadsheet format.

B. Technical Subcommittee

The technical subcommittee continues to meet on a monthly basis. Applications have been completed or additional information can be obtained quickly using this process. The technical committee has caught up on reviewing applications.

C. CAPRAD

Chairman Zarwanski indicated that going forward Region 19 will use CAPRAD. New applications will need to be filed in CAPRAD along with the 601 form and engineering attachments. CAPRAD has the capability to accept attachments and files in different formats. The Amended 700MHz Plan and the revised application process require the use of CAPRAD. The Technical Subcommittee needs to quickly move forward with updating the data in Appendix L with the CAPAD database so the 700MHz amended plan can be approved by adjacent Region 8 & 30. Discussion took place on how the original CAPRAD sort was completed. The Chairman indicated Region 19 identified, a bandwidth of either12.5KHz or 25KHz, a channel separation of 250KHz and the use of the population model.

Region 19 Applications

There are no current pending Region 19 700MHz applications and none have been submitted this quarter.

Region 8 & 30 Concurrence Request

There are no pending Region 8 or 30 concurrence requests. However, the Chairman attended the Region 8 meeting on May 28, 2015 and Region 8 Secretary identified at least 10 pending applications which will be coming to Region 19 for concurrence.

Agenda Item 7: National Regional Planning Committee (NRPC)

NRPC continues to have a teleconference bridge once a month. Currently it is held on the third Wednesday of the month in the past it was held on the third Thursday of the Month. Attendance is now taken for those that attend the bridge.

Agenda Item 8. 4.9 GHz

Chairman Zarwanski discussed the importance of notifications to the Region 19 committee when 4.9 GHz systems are put in operation. Chairman Zarwanski noted once again that if the user has not notified the RPC of the use, and, if the FCC modifies the 4.9 GHz rules to reallocate the spectrum for FIRSTNET, those who are not on record may not receive reallocation assistance.

Agenda Item 9. New Business

A.Next Meeting Date and Location: Next Meeting will be held in Connecticut at the Fire Academy on September 8, 2015

Seeing no further comments or new business, Chairman Zarwanski declared a recess at 12:15 AM until 12:25 at which time he will commence the Region 19 800 MHz RPC meeting.

Submitted - Jim Kowalik - Secretary

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P.T. Graymon	RIEMA, DIK	401-462-7336
BILL PORTER (COMMDEX CONSULTING	508-429-4116
Lance Hamilton	M5I	860.710.2163
	North Klysolar, II File	860-355-8669
Var Woodside	RIOMA COMAS	401-261-3241
VSTSPHEN P. BROWN	POTCT	860 292 2065
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VSTENEN MACLORY	MEMA	201-624-4476 860-685-8146
Mithael Varney	CT DESPP	Michael-Vaineyect, gov
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New England Region 19 700 MHz TECHNICAL ADVISORY COMMITTEE MEETING

Tuesday, September 8, 2015

10:00A.M. – 11:30 A.M.

LOCATION: Connecticut Fire Academy 34 Perimeter Road Windsor Locks, CT 06096

Directions: www.ner700mhz.org

AGENDA

- 1 Approval of Minutes June 9, 2015
- 2 Annual Elections
- 3 State Update
 - A.) State of Connecticut PSDN, NG911 & CSP Radio
 - B.) State of Massachusetts Public Safety Network
 - C.) State of New Hampshire SafeNet
 - D.) State of Rhode Island High Performance Data (HPD)
 - E.) State of Maine
 - F.) State of Vermont
- 4 FCC Update
 - A.) FCC 14-172
 - 1. Region Plan Review/Approval
 - B.) FirstNet
- 4 Applications Engineering
 - A.) Spreadsheet format
 - B.) Technical Subcommittee
 - C.) CAPRAD
- 5 Region 19 Applications

- 6 Region 8 & 30 Concurrence Request
- 7 NRPC
- 8 4.9 GHz
- 9 New Business
 A.) Next Meeting date & location

Meeting Minutes New England Region 19 700 MHz Technical Advisory Committee Meeting

Tuesday, September 8, 2015

Connecticut Fire Training Academy Headquarters 34 Perimeter Road Windsor Locks, CT 06096

Mr. Jerry Zarwanski of CT chaired the meeting. The meeting was opened at 10:00 AM. An agenda and minutes to the previous meeting were emailed to all committee members prior to the meeting and copies were also available for those attending the meeting. Chairman Zarwarnski noted that a Quorum of committee members was present for this meeting. Several members called in on the telephone conference bridge.

Attendees participating by Conference Bridge:

Tom Guthlein – RIEMA
Ed Luczkow - CT
David McCarron – ME FIRSTNET
Bill Woodside – RI
David Stern – Region 8 NY

Agenda Item 1: Approval of Minutes

A copy of the minutes from the last meeting was available to attendees. Motion made by Mr. George Carbonell to approve the minutes as written. Motion seconded by Mr. Steve Brown. Mr. John Ruggiero noted a correction to the minutes regarding the MA State Police State Summary to change the model of the base stations to MSF5000. Corrections accepted and a vote to accept the minutes as corrected approved by unanimous vote.

Agenda Item 2: Annual Election of Officers

The annual elections were held as required by the Chapter Bylaws.

Mr. Bob DiBella nominated Jerry Zarwanski to remain as chairman of the committee, seconded by Mr. Steve Verbil. Motion made by Mr. George Carbonell to close nominations for Chairman, seconded by Steve Brown. Vote to close nomination unanimous.

Mr. Steve Brown nominated Steve Verbil to remain as Vice Chairman, seconded by Blair Sutherland. Motion made by George Carbonell to close nominations for Vice Chairman, seconded by Steve Brown. Vote to close nomination unanimous.

Mr. George Carbonnell nominated James Kowalik to remain as Secretary, seconded by Tom Bardwell. Motion made by George Carbonell to close nominations for Secretary, seconded by Steve Brown. Vote to close nomination unanimous.

A motion to have the secretary cast a single ballot to elect the nominated personnel was presented by Mr. George Carbonell and seconded by Steve Brown. Seeing no further nominations or discussion, Chairman Zarwarnski instructed Secretary Kowalik to cast one vote for each nominee to fill the slate of officers. Secretary Kowalik acknowledged and the elections were completed.

Agenda Item 3: State System Updates

Connecticut: Mr. Verbil provided an update of the State of Connecticut DESPP Public Safety Data Network (PSDN) statewide 911 system. The Next Gen 911 dispatchers are now utilizing headsets which presented new challenges for some dispatchers who were not familiar with wearing and adjusting a comfortable volume with them.

Continued testing will proceed with an expectation to have the system accepted in early 2016. Connecticut is interested in state to state interoperability with the State of Massachusetts. Mr. Verbil related further information to attendees and persons on the conference call. He explained the flexibility of the new NG911 IP-Based (I3) network which will replace the existing ISDN Network with legacy equipment once testing is completed at 10 selected PSAP's. The requirement is to handle text to 911 calls and possible future capabilities and functions for handling data such as photos and video. Mr. Verbil communicated discussions to be held to create an across the border 911 call forwarding interoperability plan with adjacent state MA.

Mr. Scott Wright gave a brief update on the progress of CT State Police Statewide P25 700/800 MHz system. The State is working with a vendor to roll out the system including new applications for frequencies in both bands.

Chairman Zarwanski and Mike Varney related similar issues related to the headset volume problem in the call taking system, some feedback and echoing.

Massachusetts: Mr. Blair Sutherland provided an update on the NG911 project. He identified project scheduling discussions have been held with their vendor GDIC to extend the target date for completion of the network from June 2016 to ensure the system works as planned and meets the bid standards for MA emergency response. Once NG911 gets rolling, additional systems in other areas of the state will be completed.

John Ruggiero discussed the enhancement of the existing legacy statewide radio system with a 700 MHz complement radio system through a contract with Motorola. MA SP will be applying for multiple 700 MHz general use frequency allocations related to this project by year's end. The purpose is to create a 700 MHz system which may be

compatible and present possibilities for future expansion of the radio system under the FIRSTNET nationwide broadband proposal.

New Hampshire: Mr. Jim Kowalik provided a short update on the Department of Safety (DOS) IP-Based microwave system and statewide VHF P25 infrastructure. DOS is moving forward with an effort to utilize NH Capital funds and FIRSTNET SLIGP planning funds to put out an RFP to hire a consultant firm. The selected vendor will collect data and asset information associated with improving coverage for existing systems and potential collaboration with FIRSTNET. The vendor will create additional RFP's for the purposes of providing additional LMR equipment to improve coverage for existing two-way radio systems and a system plan that may meet the basic FIRSTNET 700 MHz system requirements.

Rhode Island: Mr. Tom Guthlein provided a brief update advising that the State of RI is continuing their efforts to upgrade equipment within the aging state radio infrastructure. RI is purchasing approximately forty GTR8000 radios and additional microwave system equipment. Mr. Guthlien explained an additional benefit from the purchase of a software program to better monitor the system and report on the quality and usage of the system. Mr. Wright from CT asked about potential interoperability between CT and RI and a meeting was agreed to.

Maine: No Report from the State of Maine at this time.

Vermont: No Report from the State of Maine at this time.

Agenda Item 4: FCC Update

- A. FCC 14-172 Regional Plan Review/Approval. Chairman Zarwanski related continued discussions with the FCC regarding the submittal deadline for the amended 700 MHz Regional Plans. FCC indicated that October 30th, 2015 will remain as the deadline. Regions may request extensions but must be submitted in writing directly to the FCC. Region 19 is awaiting adjacent region concurrence from Region 8 and 30 at this time. Region 30 has indicated they will concur with the proposed Region 19 plan amendments if Region 8 does so also. Chairman Zarwanski will attend and meet with Region 8 officers, Morty Leifer and David Stern at the Region 8 meeting of September 17th to determine the status of Region 8 concurrence approval of the Region 19 amended plan. One issue to be discussed is the "interregional dispute resolution" process between regions and Chairman Zarwanski expects to resolve the issue at the meeting. Handouts and a CD with the Region 19 Plan documents were provided to attendees and the plan documents will be made available upon request.
- B. <u>FIRSTNET</u>. Attendees were advised of the latest updates regarding planning efforts. As of today's meeting, all New England Region 19 states have held their first consultation meetings with FIRSTNET representatives. Chairman Zarwanski

reiterated the availability of FIRSTNET documents online and some additional handouts are provided at this meeting.

Agenda Item 5: Application Engineering

<u>A. Spreadsheet Format</u>. Mr. Zarwarnski updated the attendees regarding the status of the engineering software platform conversations between the Regions 19, 30, and 8 technical committees. Region 19 requests applicants to provide frequency data information using a csv - delineated Excel spreadsheet file.

George Carbonnell discussed differences between Spectrum E and Comstudy programs. Discussion related to the means to acquire antenna patterns from each program or via the manufacturer. Concurrence was reached indicating the importance of importing the proper antenna data into the spreadsheet to make software program results comparable. Antenna patterns are requested in Region 19 applications.

B. Technical Subcommittee. The Region 19 RPC Technical Subcommittee meets every month via an online conference call application, usually on a Thursday of each month and has been very successful. Applications are moving faster and the committee members appear to be able to participate via shared online programs. A suggestion was made to request funding assistance from APCO Atlantic Chapter for a yearly subscription to a "Go to Meeting" application or similar. Mr. Kowalik advised Chairman Zarwanski that a proposal to do that can be introduced at the October 2015 Atlantic Chapter Conference in Vermont.

<u>C. CAPRAD</u>. More discussion was held regarding the continued use nationwide of the CAPRAD system. Users who do not have access to CAPRAD can request access from the CAPRAD administrators, George Carbonell and Jim Kowalik. There is a separate user name and password needed to access a different region's CAPRAD data.

Agenda Item 6: Region 19 Applications

Mr. Zarwanski noted that there are currently no Region 19 700 MHz application filings to discuss at this time.

Agenda Item 7: Region 8 and 30 700 MHz Concurrence Applications

Mr. Zarwanski noted that there are currently no Region 19 700 MHz adjacent region application filings to discuss at this time. It was noted that Region 8 will be filing a large number of 700 MHz concurrence applications in the next month or two.

Agenda Item 8: National Regional Planning Committee (NRPC)

The NRPC meets by conference call every third Thursday of each month. The NRPC held an all day training session during the APCO Annual Conference in Washington, DC

in mid August. The NRPC meeting was attended by most states and informational sessions covered NRPC, FCC guidelines for Regional planning, and CAPRAD updates. The NRPC is continuing to research funding sources that may lead to the purchase and provide a common software engineering package to each region.

Agenda Item 9: 4.9 GHz

Chairman Zarwarnski once again discussed the importance of notifications to the Region 19 committee when 4.9 GHz systems are put in operation. The Region has submitted a 4.9 GHz Plan to the FCC and users should be able to follow the FCC guidelines including the notification procedure which identifies the itinerant or permanent use of the 4.9 GHz frequencies. Users may reference the existing temporary license in their application but still must amend their license/call sign if the build out plan is for fixed or point to point sites. Users who are not on record with Region 19 on their 4.9 GHz frequencies may be subject to the FCC reallocating those frequencies.

A suggestion by George Carbonell was made to request funding assistance from APCO Atlantic Chapter for funds to purchase additional web site application assistance to update the Region 19 web site as needed. Mr. Kowalik advised Chairman Zarwanski that a proposal to do that can be introduced at the October 2015 Atlantic Chapter Conference in Vermont.

New Business

2015 Meeting Dates and Locations:

The next meeting will be held at the New Hampshire Department of Safety in Concord, NH. Jim Kowalik will be hosting the meeting on December 8, 2015. Chairman Zarwanski requested an email from Mr. Kowalik to confirm the NH meeting.

Mr. Zarwanski indicated that he needs to send to the FCC Region 19 2016 meeting dates, time, and locations for public Notification. Once he receives a confirmation from the hosting states he will send a letter to the FCC with the quarterly meeting dates, time, and locations

A brief discussion was held regarding a request for a new member from Massachusetts. After discussion it was noted that there is no designated membership category available for the applicant to fill. The applicant will receive a email/letter from Chairman Zarwanski indicting there is no slot available.

Chairman Zarwanski noted the dates and location of the October 2015 Atlantic Chapter Conference. The conference will be held October 25-28, 2015 in South Burlington, VT. The Atlantic Chapter web site is available with full conference information. www.apco-atlantic.org

Scott Wright asked for clarification regarding the recently allocated deployable frequencies taken out of the reserved frequencies. Further discussion related to these frequencies and the T-Band frequencies was held. Chairman Zarwanski directed Scott to reference the frequencies in the FCC 14-172_Report & Order, NRPC recommendation and Region 19 amended plan which will control and direct the use of those frequencies.

Seeing no further comments or new business, Chairman Zarwarnski asked for a motion to adjourn. Mr. Carbonnell motioned for adjournment and Mr. Brown seconded the motion. All members voted unanimously to adjourn at 11:21 AM

Submitted - Jim Kowalik - Secretary

OT FIRE TRAINING CENTER WINDSON LOCKS, OT

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NEW ENGLAND REGION 19 700 MHZ MEETING - ATTENDANCE for 9/8/2015

Name	Agency	Signature/email
Adarns, Samuel	RI Health	
Allen, Angela	Vermont Public Safety	
Andrcano, Rick	DHSOEC REGION 1	
Aiken, Douglas	IMSA	
Arias, Carolyn	Providence, RI	
Ball, Jennifer	MA Emergency Mgmnt.	
Balboni, Phillip	Boston EMS	
Barber, Bill	Motorola	
Bari1, Michael	Central MA Public Safety	
Bardwell, Tom	NH Public Safety	There Edwed
Beausoleil, Richard		
Beckwith, Peter	USAR	
Bell, James	RI Emergency Management	
Biron, Peter	Rhode Island State Police	
Blain, Bruce	Microwave Networks	
Boucher, Norm	Communications Design Consulting Group	
Brooks, Joesph	Boston Fire	
Brown, Stephan	Bradley Airport, CT	Strev n. Bro
Bruce, Gary	CMED New Haven	
Budzenski, Paul	RI Emergency Management	
Bucci, Joseph	RI Dept. of Transportation	
Cady, Mark	Worcester Fire Dept. MA	
Carbonell, George	AASHTO CT Frequency Advisor	You should no cheing 2
Caarin, Keith	Data Radio	
Celli, Andy	Motorola-CT	
	The second secon	

Name	Agency	Signature/email	
Chase, David	NII DOT - AASHTO	Jan 3, Chare.	
Clemons, David	Worcester, MA ECC		
Couture, Dennis	Cumberland PD		
Crotty, Thomas	RI State Police		
Cruikshank, Bob	Motorola-MA		
Daly, Marganet	SRC		
Daniels, Craig	Marcus Communications		
Decker, Harold			
Delgludice, Joesph	City Of Providence, RI	KARLED L. 508 GUARCED PROVIDENCENT. CC	EON
Derdak, Elliot	Boston EMS		
Denning, Donals	1000		
DiBella, Bob	Town of Glastopury, GT	Falet Libolla	
DiRaimo, Sal	Harris Corp		
Dobbins, Caleb	TOCH		
Doherty, Mary	M/A COM Lowell, MA		
Donahue, Kevin	M/A Com		
Dooley, John	GBPC		
Eierman, David	Motorola		
Fisher, Marc			
Fletcher, Rhonda	Maine DOT		
Fitzgerald, Bruce	Maine Emergency Management		
Gaudet, Joesph			
Giacomini, John	Motorola		
Glancy, Brian	RI ICC Member	May Ken	
Gore, Ben	York County 911		
Gustafson, John	CT Emergency Mgmt.	0	
Gutkowski, Gary	MA State Police	San Garre	
Hack, Christopher	WPCS		

12. 12. y	CT Emergency Mgmt.	
	Newport, RI Fire Dept.	
	3	
	e Police	
	Microwave Radio Communications	
	Narragansett, RI PD	
	3	
	Police	9,12,12 consider
	Police	7.
	New Hampshire - FCCA	
T and London Damento	C-NYS	
Lomoarao, Domenic		
Litos, Manny WPCS		
Lucien, Len		
Lupton, Lee The Gene	The Genesis Group	
Mallory, Steve Maine SWIC	WIC	
Manning, Michael VT State Police	: Police	
Mansfield, Bill Nashua, NH PD	NH PD	
n	Marcus Communications	
- NYS -	OFT	
Masciadrelli, John CT OSET	T	
Matson, Mark CT State Police	Police	
McGarry, Joseph Providence, RI	ice, RI	
sei	Hartford Fire Dept.	
	1	
Mosely, John MA State Police	e Police	
Muise, Thom MA Emer	MA Emergency Mgmnt.	

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Name	Agency	Signature/email
O'Brien, Arthur		
O'Donnell, Bernie	CT DOIT	
O'Hara, Sean	Syracuse Research-NYS	
O'Rourke, Patrick	Boston Fire	
Otto, Jeffery	QVECC, CT Fire Service Rep.	
Ouellette, Andy	CFPC East Windsor	
Passanante, Dominick		
Pinkham, John	MA State Police	
Plante, William	ME DOT	
Poole, Mark	Maine State Police	
Pollack, Rick	Motorola-MA	
Prairie, Carl	Springfield PD	
Porter, Bill	Retired from Motorola	
Reardon, Gerald	Cambridge, MA Fire Department	
Romanoski, Shawn	Boston PD	
Ruggiero, John	MA State Police	1
Sakalouski, Jerry		
Savary, Lee	NHDOT	2 Smyler Cobt. strate
Scott, Edward	RI Public Transport Authority	
Schlieman, Robert	NYS-OFT	
Schroll, Ted	CT Fire Chiefs TAC	
Smith, David	Narragansett, RI PD	
Spraque, David	MA State Police	
Speidel, Bob	M/A-COM	
Staffier, Steve	MA Emergency Mgmnt.	
Stanford, Annemarie	M/A COM Meriden, CT	
Stango, Gary	New Haven CMED	
Stevens, Jeff	RI Dept. of Health	

52.25

Name	Agency	Signature/email
Steven, John	NH SWIC	
Stowell, Jennifer		
Sutherland, Blair	MA State Police	40 KM
Taylor, James	Providence Fire Dept.	
Thompson, Carey	CT Dept. of Public Safety OSET	
Thomson, Ralph		
Topliff, Alan	Wright Communications-	
Tremblay, Ray	Harris Corp	
Troup, David	Boston Police Dept.	
Vail, Jason	M/A COM Lowell, MA	
Varghan, Don	C-Com Consulting Group	
Varney, Michael	CT DESPP - CT SWIC	Mescer
Vittner, John		
Verbil, Stephen	CT DSET	1 Jon ()
Wade, Tony		
Walsh, Michael	RIEMA	
Walsh, Thomas	CT DEMHS	
Warakois, James	Boston PD - Retired	
Welch, Chuek	NH OEM	
White, Robert T		
Woznica, James	Microwave Radio Communications	0
Wright, Scott	DESPP - CT State Police	
Wood, William	NH Bureau of EMS	
Youell, William	CT DSET	
Zarwanski, Jerry	CT DSET	
shomes Guthleyn	RE EMA	Cant Midden
Ed Carleans	C)_	0 0
Dave MeCarcon	ME FROTITE	· ·
Bill boodside	PZ	ì
Davidstern	Magion 8 NY	7

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APPENDIX H

NEW ENGLAND REGION 19 REGIONAL PLANNING COMMITTEE FUNDING

Support Funding Program

The Regional Planning Committee Support Funding Program is being made available by the National Institute of Justice AGILE Program to promote the efforts of Regional Planning Committees convened to plan for the use of the newly allocated 700 MHz public safety spectrum. Funds are distributed through the National Public Safety Telecommunications Council (NPSTC) Support Office as hosted by the University of Denver.

Requests for funding must be initiated by the designated regional convener or by the established 700 MHz RPC chairperson. In order to obtain funding, each region must identify a single public safety host organization that agrees to take fiduciary responsibility for the proper allocation of the awarded funds through a simplified accountability process based on a standardized form for financial summary reporting.

The New England Region 19 Regional Planning Committee applied for and received \$2,500.00. The APCO Atlantic Chapter serves as the treasurer for these fund monies.

Expenditures

As of February 1, 2004, New England Region 19 has incurred the following expenditures:

Revenues - Initial Funding Grant	\$2,500.00
Expenditures	
A. Outreach	
New England Region 19 website development and maintenance	< \$252.00 >
B. Regional Database Training	
CAPRAD Training (for two people)	< \$1,269.12 >
C Regional Plan Preparation and Distribution	
Meeting Expenses	< \$170.55 >
Office Supplies	< \$179.48 >
Mailing	< \$85.50 >
Total Expenditures	< \$1,956.65 >
Balance Remaining	\$543.35

Prohibited Use Of Funds

The use of funds obtained through this support funding program is subject to review at any time. Certain uses of these funds are prohibited and include but are not necessarily limited to those listed below.

Funds may **NOT** be used for:

- The purchase of alcohol, alcoholic beverages, tobacco, tobacco products, or any illegal substance
- The purchase or acquisition of equipment (includes computers, electronics, furniture or other office equipment)
- Salaries or compensation for hours worked by committee members (except as noted in the plan preparation section)
- Lobbying efforts.



ATLANTIC CHAPTER - APCO, Inc.

WWW.APCO-ATLANTIC.ORG

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Susan M. Gorham Portland Regional Communications Center Portland, ME 04101-4104 207-767-5285

SECRETARY Charlene A. Fisk, RPL Norton Public Safety Communications Department 82 East Main Street Norton, MA 02766-2310 508-285-0207

TREASURER

E. Douglas Hackett Hanover Police Department 46 Lyme Road Hanover, NH 03755-1209 603-640-3333

April 17, 2015

To Whom it May Concern;

The APCO Atlantic Chapter Treasurer maintained the monies for the Region 19 700 MHZ Group. This money was all completely expended by October 4, 2006. There are currently no funds left.

Sincerely,

E. Douglas Hackett

Ciponglas Hackett

APPENDIX I

NEW ENGLAND REGION 19 NATIONAL ASSOCIATIONS AND ORGANIZATIONS THAT WERE NOTIFIED OF THE FIRST PLANNING MEETING

American Association of State Highway and Transportation Officials (AASHTO)

American College of Emergency Physicians

American National Red Cross

Association of Public Safety Communications Officers (APCO)

Federal Bureau of Investigation

Federal Communications Commission Public Notice Process

Federal Emergency Management Agency (FEMA)

Federal Law Enforcement Wireless Users Group (FLEWUG)

Forestry Conservation Communications Association (FCCA)

International Association of Chiefs of Police (IACP)

International Association of Fire Chiefs (IAFC)

International Bridge Turnpike & Tunnel Association (IBTTA)

International Municipal Signal Association (IMSA)

Local & State Government Advisory Committee

National Association of Counties

National Association of State EMS Directors

National Governors Association

National League of Cities

National Public Safety Telecommunications Council (NPSTC)

Office of Emergency Management Directors

Public Safety Wireless Network (PSWN)

US Coast Guard

US Conference of Mayors

Federal Communications Commission 445 12th St., S.W. Washington, D.C. 20554

News media information 202 / 418-0500 Fax-On-Demand 202 / 418-2830 TTY 202 / 418-2555 Internet: http://www.fcc.gov ftp.fcc.gov

> DA 00-2282 October 18, 2000

WIRELESS TELECOM ACTION

REGION 19 (NEW ENGLAND) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES FIRST MEETING

By this notice, the Region 19 (New England) 700 MHz Public Safety Planning Committee announces that its first meeting will be held on December 7, 2000 at 9:00 a.m., E.S.T. The purpose of the meeting is to:

- 1. Establish procedural rules,
- 2. Election of a Chairman,
- 3. Review of plan elements,
- 4. Review NCC progress,
- 5. Form workgroups to develop the regional plan, and
- 6. Address any new business.

In accordance with the provisions of FCC Docket 96-86, the Chairman of the New England 800 MHz Regional Plan Update Committee announces the first Regional Planning Committee meeting for 700 MHz. Region 19 (New England) is defined as the States of Massachusetts, Rhode Island, Maine, Vermont, New Hampshire and the Counties of New London, Wind ham, Tolland and Hartford within the State of Connecticut. The meeting will be held at:

Daniel Webster College 20 University Drive Collings Auditorium Nashua, New Hampshire

All interested parties wishing to participate in the planning for the use of new public safety

spectrum in the 700 MHz band should plan to attend. For further information, please contact:

George J. Pohorilak, Convenor Office of Statewide Emergency Telecommunications 1111 Country Club Road Middletown, CT 06457-9294 (860) 685-8108 (voice) (860) 685-8363 (fax)

Email: george.pohorilak@po.state.ct.us

FEDERAL COMMUNICATIONS COMMISSION 445 Twelfth Street, S.W. WASHINGTON, D.C. 20554

DA 01-2112

News media information 202/418-0500 Fax-On-Demand 202/418-2830 Internet: http://www.fcc.gov ftp.fcc.gov

Released: September 10, 2001

PUBLIC SAFETY 700 MHz BAND – GENERAL USE CHANNELS APPROVAL OF CHANGES TO REGIONAL PLANNING BOUNDARIES OF CONNECTICUT AND MICHIGAN

By this *Public Notice*, the Wireless Telecommunications Bureau accepts and approves the decisions of Connecticut and Michigan to "opt out" of their assigned planning regions for purposes of the regional planning process established by the Commission for the General Use channels in the 700 MHz public safety band. As a result of these "opt out" decisions, the 700 MHz planning regions are hereby modified as set forth in the **Attachment** hereto.

By way of background, in 1998 the FCC decided that the 700 MHz public safety band regional planning committees (RPCs) would be based on the same fifty-five planning regions used in the 800 MHz band.² However, the FCC also decided to allow states or territories not in regions defined by state boundaries to "opt out" of their existing regions to form or join a planning region that corresponds with their state's geographic boundaries.³ The deadline date for reporting "opt out" decisions was July 2, 2001.⁴

Connecticut was eligible to "opt out" because it was part of Region 8 and Region 19. The Chairman of the 700 MHz Public Safety Band Region 19 RPC reports that all RPC members from Connecticut have agreed to "opt out" of Region 8 to join the 700 MHz Public Safety Band Region 19 with boundaries redrawn to encompass all of Connecticut.⁵

¹ See Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010, WT Docket No. 96-86, *First Report and Order and Third Notice of Proposed Rulemaking*, 14 FCC Rcd 152, 191 ¶ 78 (1998).

² *Id.* and at 263, Appendix D (List of Regions).

 $^{^{3}}$ *Id.* at 191-92 ¶¶ 80, 85.

⁴ Public Safety 700 MHz Band General Use Spectrum Deadline for Changing Regional Boundaries is July 2, 2001, *Public Notice*, 16 FCC Rcd 726 (WTB PSPWD 2001). *See also* Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010, WT Docket No. 96-86, *Second Memorandum Opinion and Order*, 15 FCC Rcd 16844, 16876 ¶ 68 (2000). Pursuant to timely filed requests, the deadline date was extended until November 2, 2001, and January 2, 2002, for the 700 MHz Public Safety Band Region 42 RPC and the 700 MHz Public Safety Band Region 8 RPC, respectively. *See* Letter to David R. Warner, Convener, Virginia Region 42, from D'wana R. Terry, Chief, Public Safety and Private Wireless Division (PSPWD), WTB (June 29, 2001); Letter to Rosalind K. Allen, Esq., Counsel for the City of New York, from D'wana R. Terry, Chief, Public Safety and Private Wireless Division, WTB (Aug. 3, 2001).

⁵ See Letter to D'wana R. Terry, Chief, Public Safety and Private Wireless Division, WTB, from George Pohorilak, New England 700 MHz Chairman (dated May 2, 2001).

Michigan was eligible to "opt out" because it comprised Region 21 and part of Region 54. The Chairman of the 700 MHz Public Safety Band Region 21 RPC reports that all RPC members from Michigan have agreed to "opt out" of Region 54 to join the 700 MHz Public Safety Band Region 21 with boundaries redrawn to encompass all of Michigan.⁶

For further information, contact Bert Weintraub, Esq., of the Policy and Rules Branch, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, at (202) 418-0680, TTY (202) 418-7233, or via email to bweintra@fcc.gov.

Action by the Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau.

- FCC -

⁶ See Letter to Joy Alford, WTB, from Stephen Todd, Region 21 Chairman (dated June 26, 2001).

Public Safety - 700 MHz Band - Regional Planning Committees*

Number	STATES, COUNTIES & TERRITORIES INCLUDED IN REGIONS (700 MHz)
1.	ALABAMA
2.	Alaska
3.	ARIZONA
4.	ARKANSAS
5.	CALIFORNIA-SOUTH (to the northernmost borders of San Luis Obispo, Kern, and San Bernardino Counties)
6.	CALIFORNIA-NORTH (that part of California not included in California-South)
7.	Colorado
8.	NEW YORK-METROPOLITAN - NEW YORK: Bronx, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Dutchess, and Westchester Counties; NEW JERSEY: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, Warren, Middlesex, Somerset, Hunterdon, Mercer, and Monmouth Counties
9.	FLORIDA
10.	GEORGIA
11.	HAWAII
12.	Ірано
13.	ILLINOIS (all except area in Region 54)
14.	INDIANA (all except area in Region 54)
15.	Iowa
16.	Kansas
17.	KENTUCKY
18.	Louisiana
19.	New England - Maine; New Hampshire; Vermont; Massachusetts; Rhode Island; Connecticut

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^{*} Regions 8, 19, 21, and 54 are in bold to highlight the results of "opt out" decisions reported to the Commission as of July 2, 2001. Pursuant to timely filed requests, the deadline date was extended until November 2, 2001, and January 2, 2002, for the 700 MHz Public Safety Band Region 42 RPC and the 700 MHz Public Safety Band Region 8 RPC, respectively. *See* Letter to David R. Warner, Convener, Virginia Region 42, from D'wana R. Terry, Chief, Public Safety and Private Wireless Division (PSPWD), WTB (June 29, 2001); Letter to Rosalind K. Allen, Esq., Counsel for the City of New York, from D'wana R. Terry, Chief, Public Safety and Private Wireless Division, WTB (Aug. 3, 2001). This attachment also corrects several typographical errors/omissions on earlier versions of this list.

Number	STATES, COUNTIES & TERRITORIES INCLUDED IN REGIONS (700 MHz)
20.	MARYLAND; WASHINGTON, D.C.; VIRGINIA – NORTHERN (Arlington, Fairfax, Fauquier, Loudoun, Prince William and Stafford Counties; and Alexandria, Fairfax, Falls Church, Manassas and Manassas Park Cities)
21.	MICHIGAN
22.	MINNESOTA
23.	MISSISSIPPI
24.	Missouri
25.	Montana
26.	Nebraska
27.	Nevada
28.	NEW JERSEY (except for counties included in the New York-Metropolitan, Region 8, above) PENNSYLVANIA (Bucks, Chester, Montgomery, Philadelphia, Berks, Delaware, Lehigh, Northampton, Bradford, Carbon, Columbia, Dauphin, Lackawanna, Lancaster, Lebanon, Luzerne, Lycoming, Monroe, Montour, Northumberland, Pike, Schuylkill, Sullivan, Susquehanna, Tioga, Wayne, Wyoming and York Counties); DELAWARE
29.	New Mexico
30.	NEW YORK – ALBANY (all except area in New York - Metropolitan, Region 8, and New York - Buffalo, Region 55)
31.	NORTH CAROLINA
32.	NORTH DAKOTA
33.	Оню
34.	ОКLАНОМА
35.	Oregon
36.	PENNSYLVANIA (all except area in Region 28, above)
37.	SOUTH CAROLINA
38.	SOUTH DAKOTA
39.	TENNESSEE
40.	TEXAS - DALLAS (including the counties of Cooke, Grayson, Fannin, Lamar, Red River, Bowie, Wise, Denton, Collin, Hunt, Delta, Hopkins, Franklin, Titus, Morris, Cass, Tarrant, Dallas, Palo Pinto, Parker, Rockwall, Kaufman, Rains, VanZandt, Wood, Smith, Camp, Upshur, Gregg, Marion, Harrison, Panola, Rusk, Cherokee, Anderson, Henderson, Navarro, Ellis, Johnson, Hood, Somervell and Erath)
41.	Uтан
42	VIRGINIA (all except area in Region 20, above)
43.	Washington
44.	WEST VIRGINIA

Number	STATES, COUNTIES & TERRITORIES INCLUDED IN REGIONS (700 MHz)
45.	WISCONSIN (all except area in Region 54)
46.	WYOMING
47.	PUERTO RICO
48.	U.S. VIRGIN ISLANDS
49.	TEXAS - AUSTIN (including the counties of Bosque, Hill, Hamilton, McLennan, Limestone, Freestone, Mills, Coryell, Falls, Robertson, Leon, San Saba, Lampasas, Bell, Milam, Brazos, Madison, Grimes, Llano, Burnet, Williamson, Burleson, Lee, Washington, Blanco, Hays, Travis, Caldwell, Bastrop, and Fayette)
50.	TEXAS - EL PASO (including the counties of Knox, Kent, Stonewall, Haskell, Throckmorton, Gaines, Dawson, Borden, Scurry, Fisher, Jones, Shackelford, Stephens, Andrews, Martin, Howard, Mitchell, Nolan, Taylor, Callahan, Eastland, Loving, Winkler, Ector, Midland, Glasscock, Sterling, Coke, Runnels, Coleman, Brown, Comanche, Culberson, Reeves, Ward, Crane, Upton, Reagan, Irion, Tom Green, Concho, McCulloch, Jeff Davis, Hudspeth, El Paso, Pecos, Crockett, Schleicher, Menard, Mason, Presidio, Brewster, Terrell, Sutton, and Kimble)
51.	TEXAS - HOUSTON (including the counties of Shelby, Nacogdoches, San Augustine, Sabine, Houston, Trinity, Angelina, Walker, San Jacinto, Polk, Tyler, Jasper, Newton, Montgomery, Liberty, Hardin, Orange, Waller, Harris, Chambers, Jefferson, Galveston, Brazoria, Fort Bend, Austin, Colorado, Wharton, and Matagorda)
52.	TEXAS - LUBBOCK (including the counties of Dallam, Sherman, Hansford, Ochiltree, Lipscomb, Hartley, Moore, Hutchinson, Roberts, Hemphill, Oldham, Potter, Carson, Grey, Wheeler, Deaf Smith, Randall, Armstrong, Donley, Collingsworth, Parmer, Castro, Swisher, Briscoe, Hall, Childress, Bailey, Lamb, Hale, Floyd, Motley, Cottle, Hardeman, Foard, Wilbarger, Witchita, Clay, Montague, Jack, Young, Archer, Baylor, King, Dickens, Crosby, Lubbock, Kockley, Cochran, Yoakum, Terry, Lynn, and Garza)
53.	TEXAS - SAN ANTONIO (including the counties of Val Verde, Edwards, Kerr, Gillespie, Real, Bandera, Kendall, Kinney, Uvalde, Medina, Bexar, Comal, Guadalupe, Gonzales, Lavaca, Dewitt, Karnes, Wilson, Atascosa, Frio, Zavala, Maverick, Dimmit, LaSalle, McMullen, Live Oak, Bee, Goliad, Victoria, Jackson, Calhoun, Refugio, Aransas, San Patricio, Nueces, Jim Wells, Duval, Webb, Kleberg, Kenedy, Brooks, Jim Hogg, Zapata, Starr, Hidalgo, Willacy, and Cameron)
54.	Chicago – Metropolitan – Illinois: Winnebago, McHenry, Cook, Kane, Kendall, Grundy, Boone, Lake, DuPage, DeKalb, Will, and Kankakee Counties; Wisconsin: Kenosha, Milwaukee, Washington, Dodge, Walworth, Jefferson, Racine, Ozaukee, Waukesha, Dane, and Rock Counties
55.	NEW YORK - BUFFALO (including the counties of Niagara, Chemung, Schuyler, Seneca, Erie, Chautauqua, Cattaraugus, Allegany, Wyoming, Genesee, Orleans, Monroe, Livingston, Steuben, Ontario, Wayne, and Yates)

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> DA 00-2566 November 2, 2001

WIRELESS TELECOM ACTION

NEW ENGLAND (REGION 19) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES PLANNING MEETING

The New England (Region19) 700 MHz Public Safety Planning Committee announces that its next meeting will be held on Tuesday, December 11, 2001 at 10:00 a.m., at the Emergency Operations Center, Office of Emergency Management, 645 New London Avenue, Cranston, Rhode Island. The purpose of the meeting is to:

- 1. Approve Minutes of the September 26, 2001 Meeting,
- 2. Initiate the State License Application Process,
- 3. Discuss the 700 MHz FCC Planning Process, and
- 4. Formulate Committee and Review Plan Development.

The Region 19 700 MHz Public Safety Planning Committee meeting is open to the public. All eligible public safety providers whose sole purpose or principal purpose is to protect the safety of life, health, or property in the States of Massachusetts, Rhode Island, Maine, Vermont, New Hampshire, and the Counties of New London, Windham, Tolland and Hartford within the state of Connecticut would utilize these frequencies. It is essential that participants be representatives of all eligible public safety providers in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate and represent their agency's needs.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band should plan to attend. For further information, please contact:

George J. Pohorilak, Chairman Region 19, 700 MHz Public Safety Planning committee Office of Statewide Emergency Telecommunications 1111 Country Club Road Middletown, CT 06457-9294 (860) 685-8108 (voice) (860) 685-8363 (fax)

Email: george.pohorilak@po.state.ct.us



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November 9, 2001

ERRATUM

WIRELESS TELECOMMUNICATIONS BUREAU CORRECTS DEFINITION OF NEW ENGLAND AREA (REGION 19) IDENDIFIED IN 700 MHz PLANNING MEETING ANNOUNCEMENT

By this Erratum, the Wireless Telecommunications Bureau corrects the definition of Region 19 for 700 MHz Public Safety planning as described in a Public Notice, DA 01 2566, released on November 2, 2001, to include the entire states of Connecticut, Massachusetts, Rhode Island, Maine, Vermont and New Hampshire. This correction reflects the change in the New England Area's regional boundaries approved by the Commission in Public Notice DA 01-2112 on September 10, 2001, to include the entire state of Connecticut.

For additional information, contact Ms. Joy Alford, Wireless Telecommunications Bureau (202) 418-0694, TTY (202) 418-7233.



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> DA 03-2520 July 28, 2003

WIRELESS TELECOMMUNICATIONS BUREAU ACTION

REGION 19 (NEW ENGLAND) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES TWELFTH PLANNING MEETING

The Region 19 (New England) 700 MHz Public Safety Planning Committee announces that its twelfth meeting will be held on September 9, 2003 at 10:00 a.m., at the Connecticut Fire Academy, 34 Perimeter Road, Windsor Locks, Connecticut. The purpose of the meeting is to continue developing a Regional plan to meet the needs of the 700 MHz spectrum users including Public Safety, Public Health, Emergency Management and Utility services.

The Region 19 Public Safety Planning Committee meeting is open to the public. All eligible public safety providers whose sole or principal purpose is to protect the safety of life, health, or property in Connecticut, Massachusetts, Rhode Island, Maine, Vermont and New Hampshire may utilize these frequencies. It is essential that not only public safety, but all government, Native American Tribal, and non-governmental organizations eligible under Section 90.523 of the Commission's Rules be represented in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate and represent your agency's needs.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band should plan to attend. For further information, please visit the Region 19 web site at www.ner700mhz.org or contact:

George Pohorilak, Chairman Region 19, 700 MHz Public Safety Planning Committee Department of Public Safety Division of Fire, Emergency and Building Services 1111 Country Club Road P.O. Box 2794 Middletown, Connecticut 06457-9294 (over)

PH: 860-685-8108 FX: 860-685-8363

Email: george.pohorilak@po.state.ct.us or

Jerry Zarwanski, Vice-Chairman Department of Public Safety Division of Fire, Emergency and Building Services 1111 Country Club Road P.O. Box 2794 Middletown, Connecticut 06457-9294

PH: 860-685-8157 FX: 860-685-8363

Email: jerry.zarwanski@po.state.ct.us

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Federal Communications Commission 445 12th St., S.W. Washington, D.C. 20554

> DA 03-2933 September 24, 2003

WIRELESS TELECOMMUNICATONS BUREAU ACTION

NEW ENGLAND (REGION 19) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES PLANNING MEETING

The New England (Region 19) 700 MHz Public Safety Planning Committee announces that its next meeting will be held on Tuesday, December 9, 2003 at 10:00 a.m., at the New Hampshire Department of Safety, Division of State Police, 10 Hazen Drive, Concord, New Hampshire.

The purpose of this meeting is to continue developing a Regional Plan to meet the needs of the 700 MHz spectrum users including Public Safety, Public Health, Emergency Management and Utility services.

The Region 19 700 MHz Public Safety Planning Committee meeting is open to the public. All eligible public safety providers whose sole purpose or principal purpose is to protect the safety of life, health, or property in the States of Massachusetts, Rhode Island, Maine, Vermont, New Hampshire, and Connecticut would utilize these frequencies. It is essential that participants be representatives of all eligible public safety providers in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate and represent their agency's needs.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band should plan to attend. For further information, please contact:

George J. Pohorilak, Chairman Region 19, 700 MHz Public Safety Planning Committee Division of Fire, Emergency and Building Services 1111 Country Club Road Middletown, CT 06457-9294 (860) 685-8108 (voice) (860) 685-8363 (fax) Email: george.pohorilak@po.state.ct.us

Jerry Zarwanski, Vice-Chairman Department of Public Safety

(over)

Division of Fire, Emergency and Building Services P.O. Box 2794 Middletown, CT 06457-9294 (860) 685-8157 (voice) (860) 685-8363 (fax) Email: jerry.zarwanski@po.st.us



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Federal Communications Commission 445 12th St., S.W. Washington, D.C. 20554

> DA 04-134 January 23, 2004

WIRELESS TELECOMMUNICATONS BUREAU

NEW ENGLAND (REGION 19) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES PLANNING MEETING

The New England (Region 19) 700 MHz Public Safety Planning Committee announces that its next meeting will be held on Tuesday, March 9, 2004 at 10:00 a.m., at the Massachusetts State Police General Headquarters, 470 Worcester Road, Framingham, Massachusetts.

The purpose of this meeting is to continue developing a Regional Plan to meet the needs of the 700 MHz and 4.9 GHz spectrum users including Public Safety, Public Health, Emergency Management and Utility services.

The Region 19 700 MHz Public Safety Planning Committee meeting is open to the public. All eligible public safety providers whose sole purpose or principal purpose is to protect the safety of life, health, or property in the States of Massachusetts, Rhode Island, Maine, Vermont, New Hampshire, and Connecticut would utilize these frequencies. It is essential that participants be representatives of all eligible public safety providers in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate and represent their agency's needs.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band and/or the newly allocated 4.9 GHz band within Region 19 should plan to attend. For further information, please contact:

George J. Pohorilak, Chairman Region 19, 700 MHz Public Safety Planning Committee Division of Fire, Emergency and Building Services 1111 Country Club Road Middletown, CT 06457-9294 (860) 685-8108 (voice) (860) 685-8363 (fax)

Email: george.pohorilak@po.state.ct.us

Website: www.ner700mhz.org

or

Jerry Zarwanski, Vice-Chairman
Department of Public Safety
Division of Fire, Emergency and Building Services
P.O. Box 2794
Middletown, CT 06457-9294
(860) 685-8157 (voice)
(860) 685-8363 (fax)

Email: jerry.zarwanski@po.st.us



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> DA 04-1311 May 11, 2004

WIRELESS TELECOMMUNICATONS BUREAU

NEW ENGLAND (REGION 19) 700 MHz PUBLIC SAFETY PLANNING COMMITTEE ANNOUNCES PLANNING MEETING

The Region 19 (New England) 700 MHz Public Safety Regional Planning Committee announces that the 15th meeting of the Region 700 MHz Public Safety Regional Planning Committee and 4.9GHz will be held Tuesday, June 8, 2004 at 10:00 a.m.- 12:00p.m., at the Brattleboro, Vermont Municipal Center, Grove St., Brattleboro, Vermont 05301

The meeting of the Region 700 MHz National Public Safety Regional Planning committee will convene at 10:00 a.m. The purpose of this meeting is to continue developing a Region plan to meet the needs of the 700 MHz spectrum users including Public Safety, Public Health, Emergency Management and Utility services.

The Region 19 700 MHz Public Safety Planning Committee meeting is open to the public. All eligible public safety providers whose sole purpose or principal purpose is to protect the safety of life, health, or property in the States of Massachusetts, Rhode Island, Maine, Vermont, New Hampshire, and Connecticut would utilize these frequencies. It is essential that participants be representatives of all eligible public safety providers in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate and represent their agency's needs.

All interested parties wishing to participate in the planning for the use of new public safety spectrum in the 700 MHz band and/or the newly allocated 4.9 GHz band within Region 19 should plan to attend. For further information, please contact:

George Pohorilak, Chairman Department of Public Safety 1111 Country Club Road P.O. Box 2794 Middletown, CT 06457-9294 Jerry Zarwanski, Vice-Chairman Department of Public Safety 1111 Country Club Road P.O. Box 2794 Middletown, CT 06457-9294 Phone: 860-685-8108 Phone: 860-685-8157 Fax: 860-685-8363 Fax: 860-685-8363

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