AGENDA FOR THE REGULAR MEETING
DUNSMUIR CITY COUNCIL
COUNCIL CHAMBERS
5902 DUNSMUIR AVE, DUNSMUIR, CA
DECEMBER 15, 2016
CLOSED SESSION: NONE
REGULAR SESSION: 6:00 PM

As a courtesy, please turn off cell phones and electronic devices while the meeting is in session. Thank you.

1. **CALL TO ORDER**
2. **ROLL CALL**
3. **FLAG SALUTE**
4. **APPROVAL OF AGENDA**
5. **APPROVAL OF MINUTES**
   - **A. Adjourned regular meeting of December 7, 2016**
   - **B. November 3, 2016**

6. **COMMITTEE REPORTS**
   - **a. Economic Development/Tourism**
   - **b. Finance**
   - **c. Public Facilities and Services**
   - **d. Public Safety**
   - **e. Airport**
   - **f. Solid Waste**
   - **g. Emergency Plan Task Force**
   - **h. Veteran's Memorial**
   - **I. Mossbrae Trail**

7. **ANNOUNCEMENTS AND PUBLIC COMMENT**

Regular City Council meetings are televised on Channel 15 to keep City residents informed of City Council actions and deliberations that affect the community. Meetings are scheduled to be televised on the 1st and 3rd Thursday of each month. Meetings that take place on dates other than the 1st and 3rd Thursday will not be televised.

This time is set aside for citizens to address the City Council on matters listed on the Consent Agenda as well as other items **not** included on the Regular Agenda. If your comments concern an item noted on the Regular Agenda, please address the Council when that item is open for public comment. **Each speaker is allocated three (3) minutes to speak. Speakers may not cede their time to another speaker.** Comments should be limited to matters within the jurisdiction of the City. Speaker forms are available from the City Clerk, 5915 Dunsmuir Ave, Dunsmuir, on the City's website, or on the podium. The City Council can only take action on matters that are on the Agenda, but may place matters brought to their attention at

this meeting on a future Agenda for consideration. If you have documents to present to members of the City Council, please provide a minimum of seven (7) copies.

8. **ANNOUNCEMENTS AND REPORTS FROM COUNCIL AND STAFF:**
Members of the Council or staff may ask questions, request reports for a later meeting, or ask that an item be placed on a future agenda on any subject within the Council's jurisdiction.

9. **PRESENTATIONS:**

10. **CONSENT AGENDA**
The Consent Agenda consists of proposed actions on business matters which are considered routine and for which approval is based on previously approved City policy or practice. The Consent Agenda will be approved by a single motion to "Adopt the Consent Agenda" and Council Members will vote without debate. Council Members may remove a Consent Agenda matter for any reason and request that it be placed on the Agenda for discussion and consideration. Matters removed from the Consent Agenda will be placed on the agenda as an item of "New Business" for discussion and consideration.

A. Approve attendance at League of California Cities New Mayors and Councilmembers Academy for Councilmember Shanta, January 18-20, Sacramento
B. Authorize Mayor to execute professional consulting contract with Columbia Telecommunications Corporation (ctc technology & energy) for development of broadband strategic and business plan for Mt. Shasta, Weed and Dunsmuir

11. **PUBLIC HEARING: NONE**
Public Hearing Protocol:
   a. **Mayor will describe the purpose of the Public Hearing.**
   b. **City Staff will provide the Staff Report.**
   c. **City Staff will respond to questions from the City Council.**
   d. **Mayor will open the Public Hearing.**
   e. **Citizens wanting to comment will come to the podium, provide the City Clerk with their name and address and provide their comments.**
   f. **Mayor will close the Public Hearing.**

12. **OLD BUSINESS**

13. **NEW BUSINESS**
A. Consider and provide direction to staff regarding initiation of meet and confer process with employees' union for 2017 and beyond
B. Consider and introduce Ordinance No. 2016- amending and updating parking regulations contained in the Zoning Ordinance
C. Consider and approve extension of videography services contract with Siskiyou Media Council

14. **ADJOURNMENT:**

Copies of this agenda were posted at City Hall, Dunsmuir City Library, Dunsmuir Park and Recreation District Office and at the Post Office on or before 6:00 PM December 12, 2016.

The City of Dunsmuir does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disability or any other legally protected classes in employment or provision of services. Persons who need accommodations for a disability at a public meeting may call City Hall at (530) 235-4822 for assistance. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to accommodate participation in the meeting.

CERTIFICATION

This is the official Dunsmuir City Council Agenda, created and posted in accordance with the Dunsmuir City Council Protocols.

Julie Iskra, Deputy City Clerk

12-09-2016
Date

DUNSMUIR CITY COUNCIL
December 7, 2016
ADJOURNED REGULAR SESSION: 6:00 PM

1. CALL TO ORDER

Meeting called to order by Vice Mayor Craig at 6:01 pm.

2. ROLL CALL

Council members present: Craig, Keisler, Deutsch, Shanta, Spurlock
Staff present: ICM Johnsen

3. DISCUSSION REGARDING RECRUITMENT OF CITY MANAGER

The meeting was turned over to Dave Clarno who introduced members of Ad Hoc City Manager Recruitment Committee and presented slides regarding recruitment process, evaluation of application materials and selection process, priority job duties of City Manager, partial list of qualities/abilities desired in City Manager, and requested feedback on what citizens of Dunsmuir would like to add to the process specifically qualities desired and questions about major issues to be asked of candidates.
Comments included:
Should be recruiting outside California
Needs knowledge of laws, regulations for municipal operations
Needs to be leader, not lap dog
Must be in good health
Needs ability to administer grants, knowledge of accounting, and experience in public works
Understand creative concepts of economic development
Ability to develop Community Support
Willingness to listen and respond to citizen inquiries
Willingness to take Historic District seriously
Must be technology savvy
Live in Dunsmuir

Issues and concerns:
Sidewalks
Lack of professional planning
Lack of professional staff and support
Lack of vision, where will City be in 5/10 years
Green waste
Water supply
How to preserve Historic District
Run down storefronts on Dunsmuir Ave.
Law Enforcement, crime, graffiti, speed enforcement, hold Sheriff accountable
How to deal with forest waste

4. ADJOURNMENT:

The meeting was adjourned by Mayor Spurlock at 7:14 pm.

_____
Mayor Spurlock

ATTEST:

_____
Randy L. Johnsen, Interim City Manager

DUNSMUIR CITY COUNCIL
NOVEMBER 3, 2016
REGULAR SESSION: 6:00 PM
MINUTES

1. **CALL TO ORDER**
   Meeting called to order by Mayor Spurlock at 6:00 pm.
2. **ROLL CALL**
   Council members present: Craig, Keisler, Shanta, Deutsch, Spurlock
   Staff present: Interim City Manager Johnsen, Deputy City Clerk Iskra
3. **FLAG SALUTE**
4. **APPROVAL OF AGENDA**
   Motion by Keisler to approve the November 3, 2016 agenda, seconded by Deutsch.
   Voice vote: 5-0-0-0
5. **APPROVAL OF MINUTES**
   A. September 15, 2016 Regular Meeting
   B. September 27, 2016 Special Meeting
   Motion by Deutsch to approve the September 15, 2016 Regular Meeting minutes and the September 27, 2016 Special Meeting minutes, seconded by Keisler. Voice vote: 5-0-0-0
6. **COMMITTEE REPORTS**
   a. Economic Development/Tourism
   No meeting
   b. Finance
   No meeting
   c. Public Facilities and Services
   No meeting
   d. Public Safety
   No meeting
   e. Airport
   No meeting
   f. Solid Waste
   No meeting
   g. Emergency Plan Task Force
   No meeting
   h. Veteran's Memorial
   Keisler stated the flagpole has been purchased but installation has been postponed until after January, 2017. He thanked the Dunsmuir Rotary Club, Stock family, Dinges family, Dunsmuir Fire Department for their contributions. Next meeting Monday, Nov 7 in Council Chambers

i. Mossbrae Trail

Met with Conservancy who are experts in easements, for a free consultation. Also spoke with Arias but has no update until possibly after the election.

7. ANNOUNCEMENTS AND PUBLIC COMMENT

Regular City Council meetings are televised on Channel 15 to keep City residents informed of City Council actions and deliberations that affect the community. Meetings are scheduled to be televised on the 1st and 3rd Thursday of each month. Meetings that take place on dates other than the 1st and 3rd Thursday will not be televised.

This time is set aside for citizens to address the City Council on matters listed on the Consent Agenda as well as other items **not** included on the Regular Agenda. If your comments concern an item noted on the Regular Agenda, please address the Council when that item is open for public comment. **Each speaker is allocated three (3) minutes to speak. Speakers may not cede their time to another speaker.** Comments should be limited to matters within the jurisdiction of the City. Speaker forms are available from the City Clerk, 5915 Dunsmuir Ave, Dunsmuir, on the City's website, or on the podium. The City Council can only take action on matters that are on the Agenda, but may place matters brought to their attention at this meeting on a future Agenda for consideration. If you have documents to present to members of the City Council, please provide a minimum of seven (7) copies.

Tim Holt thanked Keisler for the help with mural and noted the sealant needs to be applied. He also asked about the TUT. He thought the funds were only for the Library and Park District. Confirmed distribution of funds at second Council meeting in January.

8. ANNOUNCEMENTS AND REPORTS FROM COUNCIL AND STAFF:

Members of the Council or staff may ask questions, request reports for a later meeting, or ask that an item be placed on a future agenda on any subject within the Council's jurisdiction.

Spurlock asked about a press release regarding the radar enforcement on Dunsmuir and Sacramento Avenues for speeding.
Deutsch gave an update on the broadband group. Met with CalOr and other cities who are now waiting for the study.
Sgt Mero noted that the department is finishing the process for radar enforcement, appreciated the recognition of his promotion to Sergeant, department will be observing the "no shave" month of November and will donate to the Cancer Society
Keisler said the Rotary Club is donating backpacks to students with healthy foods and anyone who would like to donate may talk with him
Craig asked the Interim City Manager to research the Safe Paths to School program to research funding for sidewalks

9. PRESENTATIONS: NONE

10. CONSENT AGENDA

The Consent Agenda consists of proposed actions on business matters which are considered routine and for which approval is based on previously approved City policy or practice. The Consent Agenda will be approved by a single motion to "Adopt the Consent Agenda" and Council Members will vote without debate. Council Members may remove a Consent

Agenda matter for any reason and request that it be placed on the Agenda for discussion and consideration. Matters removed from the Consent Agenda will be placed on the agenda as an item of "New Business" for discussion and consideration.

A. Approve Check Register Report dated October 28, 2016
B. Authorize Finance Director to attend League of California Cities Municipal Finance Institute Nov 30 – Dec 1
C. Receive and file Form 6D regarding Butterfly Bridge Project with current budget estimates
Motion by Keisler to approve items A, B and C of the Consent Agenda, seconded by Craig.
Voice vote: 5-0-0-0

11. PUBLIC HEARING: NONE

Public Hearing Protocol:

a. **Mayor will describe the purpose of the Public Hearing.**
b. **City Staff will provide the Staff Report.**
c. **City Staff will respond to questions from the City Council.**
d. **Mayor will open the Public Hearing.**
e. **Citizens wanting to comment will come to the podium, provide the City Clerk with their name and address and provide their comments.**
f. **Mayor will close the Public Hearing.**

12. OLD BUSINESS

A. Consider and authorize repairs to Verdin street clock on Dunsmuir Ave in the amount of $6,725

ICM Johnsen reported that previously the City Council asked to look at repairs to the clock on Dunsmuir Avenue. The Verdin Company bid is $6725.00 and the Public Works Department is asking for approval to order the parts.
Shanta asked what the options are
ICM Johnsen stated that the items must be replaced, cannot be repaired
Public Comment:
Carolyn Rivard thanked the Council for keeping this item in the budget
Council Comment:
Craig asked about the validity of spending $7,000 on the clock when we have a very small budget and asked when this work would be done
Deutsch suggested we look at fund raising to get money for this item
Keisler said it is a beautiful clock and he supports a fund raiser for the money
ICM Johnsen stated the work would begin in about three weeks, weather permitting.
Motion by Keisler to authorize repairs to Verdin street clock on Dunsmuir Ave in the amount of $6,425, seconded by Deutsch.

Roll call vote:	Craig	yes	
	Keisler	yes	
	Shanta	yes	
	Deutsch	yes	
	Spurlock	yes	5-0-0-0

13. NEW BUSINESS

A. Consider and authorize City Manager to execute Notice of Completion on North Dunsmuir Water Main Replacement Project and deem project acceptable on recommendation of City Engineer

ICM Johnsen stated this is the North Dunsmuir water line grant. The Engineer/project manager deemed this project complete. There is a 20% retention of funds to give time for filing of liens, then payments will be completed. The City was very fortunate to have reserves to make payments until we receive the reimbursement.

Public Comment: None

Council Comment:

Motion by Deutsch to authorize City Manager to execute Notice of Completion on North Dunsmuir Water Replacement Project and deem project acceptable on recommendation of City engineer/Project Manager for this project, seconded by Keisler.

Voice vote: 5-0-0-0

B. Consider and authorize City Manager to execute documents disencumbering $265 of CDBG funds leftover from grant 13-CDBG-8968 on recommendation of CDBG consultant

Jim Cook explained that after the Water Master Plan and water rate study were completed, there is $265 leftover from grant. Recommendation is to return funds to the State of California.

Public Comment: None

Council Comment:

Motion by Keisler to authorize City Manager to execute documents disencumbering $265 of CDBG funds leftover from grant 13-CDBG-8968 on recommendation of CDBG consultant, seconded by Craig.

Roll call vote:	Craig	yes	
	Keisler	yes	
	Shanta	yes	
	Deutsch	yes	
	Spurlock	yes	5-0-0-0

C. Consider and approve City Council statement on ballot initiatives

ICM Johnsen reported that the City Attorney said the City may take a position on the Initiatives. The statement could be printed and mailed on Saturday.

Discussion among Council members regarding initiatives.

Public Comment: None

Council Comment:

Discussion among Council members regarding their concerns about the initiatives.

Motion by Keisler to approve, adopt, authorize and publicize the City Council position on the ballot initiatives, seconded by Deutsch.

Roll call vote:	Deutsch	yes	
	Shanta	yes	
	Keisler	yes	
	Craig	yes	
	Spurlock	yes	5-0-0-0

D. Consider and authorize a plan and budget for recruitment of City Manager

Mario Rubino stated that the committee to recruit a new City Manager has been meeting. Deutsch and Shanta plan to create a pool of candidates. The committee is open to recruit Assistant City Managers, Public Works Supervisors, City Administrators and City Managers through the ICMA and other email lists. The committee is hoping to advertise in Western City Magazine and other trade magazines with an application close date of January 31, 2017. In February 2017 the applications will go to local City Managers to evaluate the candidates, then to the City Council.

Deutsch suggested a Town Hall meeting on November 15 at 6:00 pm in the Council Chambers with David Clarno as moderator. This meeting will discuss the responsibilities, duties and attributes of a City Manager for Dunsmuir.

Public Comment:

Carolyn Rivard asked if anyone has done a study to see if the City is competitive with our salary and benefits

Council Comment:

ICM Johnsen stated that the benefit package is a City Council decision.

Deutsch said that most people with skills will not make enough money in Dunsmuir, need to look at younger people who want to live here.

Motion by Craig to authorize up to $8,000 and accept the process to hold a Special Town Hall meeting on November 15, 2016 at 6:00 pm to look at the criteria for the new City Manager, seconded by Keisler.

Roll call vote:	Deutsch	yes	
	Shanta	yes	
	Keisler	yes	
	Craig	yes	
	Spurlock	yes	5-0-0-0

ICM Johnsen suggested looking at other ads for design of Dunsmuir ad

14. ADJOURNMENT:

Motion to adjourn the meeting at 7:34 pm by Keisler, seconded by Spurlock.

Voice vote: 5-0-0-0

_____

Mayor Spurlock

ATTEST:

_____

Julie Iskra, Deputy City Clerk

New Mayors and Council Members Academy Scheduled for Jan. 18–20 in Sacramento

November 18, 2016

The League has opened registration for the 2017 New Mayors and Council Members Academy. Scheduled for Jan. 18–20 in Sacramento, the conference is expected to sell out quickly.

This conference is programmed specifically for newly elected city officials, with courses on the basic legal and practical framework in which mayors and council members operate. Sessions will focus on a range of topics including:

- Your League and How to Use It;
- Effective Advocacy & Key City Officials;
- Your Legal Powers and obligations;
- Policy Role in Land Use Planning;
- Relationship between City Council and City Manager Staff:
- Communications and the New Media; and
- Financial Responsibilities, City Revenues Workshop.

The conference also features AB 1234 Ethics Training, which is required for all elected and appointed officials to complete every two years in specific laws and principles.

Full conference registration includes the following:

- Two-and-a-half days of sessions, including AB 1234 training;
- Wednesday lunch and reception, Thursday breakfast and lunch and Friday breakfast; and
- Electronic access to all program materials.

Registration

Register online by Friday, Jan. 6. Due to high demand for this conference, and the large numbers of newly elected mayors and council members, it is expected to sell out before the registration deadline.

Questions

Please contact Caitlin Cole with any questions about the conference or Megan Dunn about registration.

Print

City Manager

From: Tim Stearns <timstearns13@gmail.com>
Sent: Thursday, December 08, 2016 10:05 AM
To: Kathryn Wilson; Bruce Pope; Jeffrey Collings; Ken Palfini; Bryce Craig; Ron Stock; City Manager
Subject: Re: Proposed CTC contract and Attachment

It appears the final version that we received back from CTC conforms to the proposed draft contract that we sent to CTC, i.e., it contains the mediation / arbitration clause (in Sacramento), consideration of alternative delivery systems for broadband, use of local labor to keep costs down, and a prompt delivery date. Hope that all 3 cities are satisfied with the form and content, and can readily execute the contract.

Thanks to all for your courtesy and cooperation in this matter.

Tim Stearns

On Thu, Dec 8, 2016 at 10:01 AM, Tim Stearns <timstearns13@gmail.com> wrote:

On Thu, Dec 8, 2016 at 10:01 AM, Tim Stearns <timstearns13@gmail.com> wrote:
Kathy, thanks for comparing the document.

On Thu, Dec 8, 2016 at 9:00 AM, Kathryn Wilson <kwilson@mtshastaca.gov> wrote:

Hi Tim-

I could not find any differences in the two contracts. Please let me know if I can help with anything else.

I hope you are enjoying the snow!

Kathryn M. Wilson

Deputy City Clerk

Administrative Assistant

City of Mt SHASTA

305 N. Mt. Shasta Blvd

Mt. Shasta, CA 96067

(530) 926-7510

kwilson@mtshastaca.gov

From: Tim Stearns [mailto:timstearns13@gmail.com]
Sent: Wednesday, December 07, 2016 12:08 PM
To: Kathryn Wilson <kwilson@mtshastaca.gov>
Subject: Fwd: Proposed CTC contract and Attachment

Please compare these attachments with what we received today.

---------- Forwarded message ----------
From: **Tim Stearns** <timstearns13@gmail.com>
Date: Tue, Nov 29, 2016 at 9:25 PM
Subject: Proposed CTC contract and Attachment
To: hmills@ctcnet.us
Cc: Jeffrey Collings <jcollings@mtshastaca.gov>

Heather,

Attached is the proposed CTC contract and Attachment, with the proposed additions that we discussed recently.

Thank you for your courtesy and cooperation in this matter. We look forward to working with you and your team.

Tim Stearns
Member, Mt. Shasta City Council

City Manager

From: Tim Stearns <timstearns13@gmail.com>
Sent: Wednesday, December 07, 2016 9:38 AM
To: City Manager
Subject: Fwd: CTC contract and proposal/sow
Attachments: CTC Proposal to Cities of Mt. Shasta Weed and Dunsmuir - Final Revised -....docx; Mt. Shasta CA - DRAFT Contract - as sent - 2016-12-07.doc

---------- Forwarded message ----------
From: **Tim Stearns** <timstearns13@gmail.com>
Date: Wed, Dec 7, 2016 at 9:33 AM
Subject: Fwd: CTC contract and proposal/sow
To: Bruce Pope <bpope@mtshastaca.gov>, Ken Palfini <kenpalfini@gmail.com>, Bryce Craig <councilmancraig@gmail.com>, Bruce Deutsch <brucend75@yahoo.com>, Ron Stock <stock@ci.weed.ca.us>, admin@ci.dunsmuir.ca.us
Cc: Jeffrey Collings <jcollings@mtshastaca.gov>

We have just received back from CTC the proposed final contract which consists of the contract form + the attached proposal (Tasks 1-8). At first glance, it appears to include the proposed modifications we requested to be added, e.g., mediation/arbitration clause (Sacramento), investigation and reporting of alternative delivery systems to fiber, etc., and use of local personnel where feasible and cost-efficient to keep the Cities' costs down.

Please review and, if the contract appears satisfactory in form and content, have the mayors execute the contract so that CTC may begin its work for us. If you have any questions, please do not hesitate to contact Jeffrey Collings and/or me.

Thank you,

Tim Stearns
Member, Mt. Shasta City Council

---------- Forwarded message ----------
From: **Heather Mills** <hmills@ctcnet.us>
Date: Wed, Dec 7, 2016 at 9:03 AM
Subject: CTC contract and proposal/sow
To: Tim Stearns <timstearns13@gmail.com>, Jeffrey Collings <jcollings@mtshastaca.gov>

Good morning!

I got the final ok's from Joanne this morning. Attached are the updated versions.

Thanks!

Heather

Heather D. Mills

Director of Operations | CTC Technology & Energy

10613 Concord Street, Kensington, MD 20895

Office: 301.933.1488 xt. 11| Cell: 202.701.4526 | Fax: 301.933.3340

hmills@ctcnet.us | www.ctcnet.us

June 15, 2016

Mr. Jeffrey Collings
Mayor, City of Mt. Shasta
Mr. Ken Palfini
Mayor, City of Weed
Mr. Josh Spurlock
Mayor, City of Dunsmuir

Via email for distribution: jcollings@mtshastaca.gov

Re: *Proposal to develop broadband strategic and business plan*

Dear Mr. Collings, Mr. Palfini, and Mr. Spurlock:

CTC Technology & Energy (CTC) is pleased to provide this proposal to develop a broadband strategic plan and business plan for the cities of Mt. Shasta, Weed, and Dunsmuir. We believe that your interest in working together will create not only project efficiencies, but also greater scale to attract potential private partner interest.

Since 1983, we have provided independent technical and business planning guidance to hundreds of local governments nationwide—including the cities of Santa Cruz, San Francisco, Seattle, and Westminster, Maryland, as well as the Town of Holly Springs, North Carolina.

Over the past two decades, our staff has undertaken feasibility analysis on public sector broadband for more than 50 cities, towns, and counties. Many of our engagements have focused on public sector strategies to build or expand infrastructure; enhance the availability of high-bandwidth services; increase broadband competition; and promote economic development.

We are experts at investigating public sector broadband options. Among our current clients are the cities of Boulder, Colorado and Palo Alto, California; we are conducting a range of fiber feasibility studies, market analyses, engineering, business modeling, and stakeholder engagement tasks for each.

In addition to our work directly with clients, we are also nationally recognized for our leadership in developing best practices for enabling public sector broadband initiatives, including public–private partnerships. For example:

- CTC principals Joanne Hovis and Andrew Afflerbach authored "Gigabit Communities," an independent white paper on municipal gigabit-facilitation strategies commissioned by Google.[1] (Google has stated that the recommendations we developed in our white paper formed the basis for the Google Fiber City Checklist.) We have also authored fiber development guides for the New America Foundation, Utilities Telecom Council, and Tennessee Valley Public Power Association.[2]

[1] www.Gigabit-Communities.com
[2] www.CTCnet.us/library

- Ms. Hovis recently authored "The Emerging World of Broadband Public–Private Partnerships: A Business Strategy and Legal Guide" (published by the Benton Foundation).[3]

- Ms. Hovis played a key role in helping the Cities of Urbana and Champaign and the University of Illinois identify and negotiate with a private partner that will finance and operate an FTTP expansion of the coalition's middle-mile network; commenting on the partnership, FCC Chairman Wheeler said that it "provides a valuable model for communities and companies throughout the country and a demonstration of the creativity that is stimulated when localities are free to work with the private sector to improve broadband offerings."[4]

- We are the lead business and technical consultant to the Commonwealth of Kentucky in its partnership strategy and negotiations with Macquarie Capital—an agreement that, to our knowledge, represents the largest broadband public–private partnership in the United States.

- Ms. Hovis and our other senior staff are currently assisting a range of other public entities in developing innovative public–private partnerships, including the City of Boston and New York State.

CTC's reputation rests on our track record of providing independent, objective, and unbiased guidance. We are proudly conservative in our approach and specialize in quantifying and explaining risk. We do not hide the challenges of municipal fiber networks; rather we explain those challenges and assist communities to develop strategies and tactics to mitigate risk and build toward the future.

We are appropriately suspicious of so-called "partnerships" that entail public risk and private benefit. We focus on identifying funding opportunities and developing business models that achieve community purposes while appropriately allocating risk among the public and private entities.

We are also true believers in public sector fiber initiatives. The President cited our study on public broadband options in his report on the benefits of municipal broadband projects.[5]

Please do not hesitate to contact me if I can provide additional information about CTC. We look forward to the opportunity to work with the Cities.

Best Regards,

Joanne S. Hovis

Joanne S. Hovis, President
jhovis@ctcnet.us | 301.933.1488

[3] https://www.benton.org/sites/default/files/partnerships.pdf
[4] http://www.fcc.gov/document/fcc-chairman-tom-wheeler-stmt-uc2b-and-itv-3-gigabit-announcement
[5] http://www.whitehouse.gov/sites/default/files/docs/community-based_broadband_report_by_executive_office_of_the_president.pdf

Contents

1. CTC's Experience and References 4
About CTC 4
Representative Past Projects 6
References .....
.....
2. Project Team 13
3. Scope of Work 15
Task 1: Conduct On-Site Strategy Session 15
Task 2: Prepare Competitive Assessment of Incumbent Services 16
Task 3: Evaluate Community and City Needs 16
Task 4: Develop High-Level Design and Cost Estimates for FTTP Network 17
Task 5: Develop Business Plan for Candidate Network 17
Task 6: Examine Range of Network Business Models and Funding Mechanisms 19
Business Models 19
Funding Mechanisms 19
Task 7: Identify and Analyze Potential Partners 20
Task 8: Prepare Final Report and Present Recommendations 20
4. Project Cost and Hourly Rates 22
Appendix A: Team Resumes 23
Joanne S. Hovis, Esq. | President and Director of Business Consulting 23
Andrew Afflerbach, Ph.D., P.E. | CEO and Director of Engineering 26
Thomas J. Asp, BSEE, MBA | Principal Engineer and Analyst 29
Matthew DeHaven | Principal Engineer and Project Manager 32
Charlie Hamm | GIS Specialist and Staff Engineer 36
Marc Schulhof | Senior Analyst and Technical Writer 38
Eric Wirth | Senior Project Engineer 39

1. CTC's Experience and References

We are in an industry that is changing by the day with respect to regulatory frameworks, technology, and potential business models. What distinguishes CTC is that we are engaging those issues every day, developing new strategies for leveraging public sector investment to enable sustainable last-mile connectivity.

About CTC

CTC is an established, woman-owned consulting firm that offers a unique combination of qualifications and capabilities in broadband financial analysis, business planning, engineering, and network strategic planning. Founded in 1983, we have extensive experience providing independent financial, strategic, and technical, guidance for public and non-profit communications networks, including those of state and local governments, non-profit consortia, universities, and municipal utilities.

CTC has deep experience with the financial and technical aspects of municipal-owned fiber networks. We have advised more than 100 communities, including the cities of Seattle, San Francisco, and Portland, Oregon, regarding the feasibility of building fiber, and have supported the government of New Zealand on the design of its nationwide open access FTTP broadband network.

We have advised jurisdictions of all sizes, from the very small (Lake City, CO; Sturgis, MI) to the very large (Los Angeles, District of Columbia, Seattle City Light), regarding business planning and operations of fiber networks. Our staff of experienced financial analysts, business strategists, and engineers has analyzed both proposed fiber projects and ongoing operations; identified business hurdles and opportunities; and prepared well-documented financial projections to support decision-makers.

CTC has written requests for proposal (RFP), requests for information (RFI), invitations to bid, bills of materials (BOM), and other procurement documents for clients ranging from state entities to regional consortia and municipal utilities. We have also supported many clients in the analysis and evaluation of responses to procurement documents, and have negotiated subsequent contracts with and on behalf of clients for a range of projects.

Our analysts are also experienced with developing marketing and operations plans for public fiber networks, and with assisting clients to understand and market to potential customer segments, to plan appropriate products and services, and to price those products and services.

We have a robust roster of national and international clients, and our workload reflects that success. As we have proven over the past three decades, however, we are adept at managing our clients' needs and our staffing levels. We have a proven track record of completing projects on time, regardless of the size or complexity of the tasks at hand—or the time zone in which the projects are located. We commit to providing an exceptional level of service and to meeting your timeline.

We pride ourselves on our research and analysis, and our ability to translate complex technical issues into clear, concise, and actionable reports. For example, CTC principals Joanne Hovis and Andrew Afflerbach recently authored "Gigabit Communities," an independent white paper on gigabit-facilitation

strategies (www.Gigabit-Communities.com) commissioned by Google.[6] Ms. Hovis and Dr. Afflerbach also co-authored, with the New America Foundation's Open Technology Institute, a report on local broadband networks: "The Art of the Possible: An Overview of Public Broadband Options" (http://www.ctcnet.us/publications/the-art-of-possible-an-overview-of-public-broadband-options/). That study was recently cited in President Obama's report on municipal fiber networks, "Community-based Broadband Solutions: The Benefits Competition and Choice for Community Development and High Speed Internet Access."[7]

Our philosophy has always been one that emphasizes both self-reliance in the public sector, and the potential benefits of governmental provisioning of services to meet local needs. Our reputation rests on our track record of providing independent guidance.

Our reputation rests on our track record of providing independent guidance. For three decades, we have served the public sector in evaluating its broadband deployment efforts and in bringing an independent, sometimes critical, eye to communications efforts. We are not affiliated with equipment manufacturers or cable operators. To ensure that we can provide independent guidance, we have, as a policy, no financial stake in the strategies you choose. Unlike some consultants, *we do not have a hidden agenda to become an operator of your network.*

In addition to our strategic, business, and technical planning of FTTP networks for cities such as San Francisco and Seattle, CTC recently helped to negotiate public-private FTTP partnerships for two municipal networks—one owned by the City of Westminster, Maryland; the other owned by the cities of Champaign and Urbana, Illinois.

Our philosophy has always been one that emphasizes both self-reliance in the public sector, and the potential benefits of governmental provisioning of services to meet local needs. We are also keenly aware of the potential that robust broadband infrastructure has to aid local economic development.

We have helped dozens of cities nationwide to evaluate and build the business case for municipal broadband networks. And we have often focused on fiber optics as a state-of-the-art technology that can meet current and future needs in a variety of environments. That said, our success as broadband consultants comes down to the fact that we do not minimize our assessment of costs or risks; nor do we make unreasonable assumptions about revenue factors such as take rates and service fees. If there is a reasonable business case for a City-owned broadband utility, we will help make it. But if the numbers do not add up, we will explain why they do not—and then work tirelessly to identify other options for meeting Mt. Shasta's broadband goals.

We are in an industry that is changing by the day with respect to regulatory frameworks, technology, and potential business models. What distinguishes CTC is that we are engaging those issues every day, developing new strategies for leveraging public sector investment to enable sustainable last-mile connectivity. We are true believers in the potential benefits of FTTP, including in rural areas, but follow a conservative philosophy around public risk; we think it is extremely important that our clients understand the challenges related to such initiatives.

---

[6] While this work was commissioned and supported by Google, CTC's analysis was entirely independent and focused on promoting city needs, rather than those of Google or any other network deployer.

[7] http://www.whitehouse.gov/sites/default/files/docs/community-based_broadband_report_by_executive_office_of_the_president.pdf

Representative Past Projects

As the examples below illustrate, we offer demonstrated experience and qualifications in the areas of network strategic planning, financial analysis, and business planning. These are just a few of the hundreds of client projects CTC has successfully completed over the past 32 years.

City of Albuquerque, New Mexico: CTC developed a strategy for connecting the City's key stakeholders and locations with a network that will have the most impact on its economic development and digital inclusion goals. CTC surveyed candidate network routes and developed a system-level design and pricing estimates for the construction and operation of fiber infrastructure. Our strategic design maximized potential economic development, minimized budgeting risks, and positioned the City for future network expansion. CTC then prepared the technical portions of an RFP for the City's procurement process to identify an expert partner for the proposed fiber and wireless construction.

Arlington County, Virginia: CTC currently is designing and managing the construction of ConnectArlington, the last-mile fiber network that will connect approximately 80 of the County's government buildings, schools, and public safety facilities. CTC staff members, including an on-site project manager, are overseeing every aspect of the project, from network mapping to construction supervision and acceptance.

CTC has also developed the business plan and strategy for the County's dark fiber leasing initiative, and is currently preparing an RFP for the County's use in selecting a fiber broker. This third-party broker innovation is the first of its kind among public entities in the United States.

Additionally, CTC staff are providing critical input into the design and testing for other phases of the County's self-managed fiber construction project, which will ultimately have close to 60 miles of backbone fiber.

City of Atlanta: CTC currently is advising the City on strategic and tactical approaches it can take to plan, build, and operate its own fiber network to cost-effectively serve its internal needs, promote private sector broadband investment, and enable competition in the City's residential and business broadband markets. We are assisting the City in its discussions with Google Fiber and other telecommunications providers about options for joint build and partnership, and providing technical due diligence for the City.

Village of Bald Head Island, North Carolina: CTC has supported the Village on a range of feasibility analysis, strategic planning, and business planning tasks related to meeting its broadband needs. We currently are conducting public–private partnership planning with the Village.

City of Boston: In an ongoing engagement, CTC is analyzing the City's strategic options for deploying fiber optics to connect public schools throughout the City. CTC's business analysts and engineers reviewed the engineering that the City had already completed; the stakeholders' previously identified needs and concerns; the extent of existing City infrastructure assets; and the general scope of the fiber network envisioned by the City. We are now exploring a wide range of public and public–private options for maximizing the benefits of the City's planned investment to get direct fiber connectivity to selected schools.

City of Culver City, California: CTC developed a high-level network strategy, design, and business model framework to support Culver City's planning of a fiber optic backbone and fiber optic connections to key

economic development sites. The proposed strategy is designed to ensure that broadband infrastructure in Culver City evolves over time to meet the needs of its businesses, and public institutions.

Over the course of this project, CTC met with key city staff to review economic development objectives; reviewed the potential to leverage existing fiber and conduit assets in serving the city's identified target areas; facilitated discussions with business stakeholders and other community representatives to understand their perceptions regarding availability, reliability, and affordability of broadband services; researched the region's available services and costs; prepared a preliminary fiber network design to provide redundant connectivity in the city's target areas; developed a business model framework to guide the city's decision-making.

State of Delaware: CTC has provided communications engineering consulting services to the State Department of Transportation for almost 20 years. Most recently, our engineers and business analysts wrote the statewide master plan for deploying an integrated broadband fiber and microwave network.

District of Columbia: CTC performed a business case and technology analysis for DC-Net, a fiber optic telecommunications network that provides voice and data services for the District of Columbia government. The network consists of resilient, interconnected fiber optic rings that will eventually connect more than 400 government buildings in the District, including Police Department, Emergency Management Agency, and Fire Department radio towers.

CTC's independent assessment analyzed public safety, government, and educational uses of the network. The project tasks included asset mapping and network description; cost comparison to leased/managed services; functional and technical comparison between dark fiber and alternatives; leveraging the ability to resell to other entities; identifying support mechanisms; and determining recommended business practices.

CTC serves in an ongoing role as strategic fiber advisor to the City, and is leading the technical team conducting FirstNet planning for the District.

EAGLE-Net: CTC reviewed the business plan and financial models of EAGLE-Net, an intergovernmental network organization serving more than 170 communities across Colorado. We analyzed the cost assumptions and projections, and proposed refinements as merited by economic changes in the service area and local market. We proposed a pricing structure for service to anchor tenants and suggested potential future network opportunities and appropriate strategies to capture additional users, both last-mile providers and anchor institutions. We prepared marketing and sales plans designed to realize revenues necessary to sustain the EAGLE-Net enterprise in the future.

Town of Holly Springs, North Carolina: CTC conducted a broadband needs assessment and developed a strategic approach and return on investment (ROI) analysis for the town's proposed fiber network implementation. Our team of project managers, outside plant engineers, and network engineers then designed and oversaw implementation of a middle-mile fiber network serving the town's community anchor institutions (e.g., schools and libraries) and major economic development partners. The first sites on the 19-mile network went live in June 2014.

As in our engagement with the City of Westminster, we also assisted the town in identifying a private partner to assume operating risk in providing services to the public. Ting Internet will build an FTTP network using the town's backbone infrastructure; the town announced its public–private partnership in

2015. For more details, see CTC's website: http://www.ctcnet.us/blog/ctc-helps-position-holly-springs-nc-to-attract-big-private-fiber-investment-through-smart-infrastructure-planning-and-best-business-practices/

Kansas Statewide Broadband Initiative: CTC supported the Kansas Statewide Broadband Initiative (KSBI), a program of the Kansas Department of Commerce, in a major analysis of broadband availability and usage across the state. The scope of work included a broadband needs assessment of schools, libraries, and hospitals, completed in 2013, and two additional reports on the broadband market in the residential and commercial sectors. All three reports were delivered to the state legislature.

Commonwealth of Kentucky: CTC recently completed a statewide project with the Commonwealth of Kentucky in which we provided consulting and planning services in support of the governor's proposed statewide, next-generation fiber optic network.

CTC engineers performed a technical assessment of the state's current network plans, developed a strategy for fiber construction, and provided detailed guidance on network operations. Our business analysts assessed the state's current network financial models, refined projections, and collaborated on the development of a sustainable governance and business model.

CTC also developed an RFI to identify potential fiber collaborators for the Commonwealth. The RFI attracted responses from more than a dozen candidates—including service providers, technology companies, equity partners, and concessionaires—and made it possible for the CTC team to refine the Commonwealth's business model and develop an RFP that more closely fit the business model and the firms' capabilities. The Commonwealth announced a $250 million to $350 million concessionaire agreement with a private sector partner in December.

CTC recently completed a statewide project with the Commonwealth of Kentucky in which we provided consulting and planning services in support of the governor's proposed statewide, next-generation fiber optic network. The Commonwealth announced a $250 million to $350 million concessionaire agreement with a private sector partner in late 2014.

Keystone Initiative for Network Based Education and Research (KINBER): CTC provided KINBER, a statewide fiber optic network in Pennsylvania and recipient of a $99.6 million federal grant, with extensive support in developing their business model and pricing schedule. Our team conducted interviews with KINBER project stakeholders to assess the statewide market for networking services. We combined this information with our existing, in-depth knowledge of public sector networking initiatives, markets, and pricing schedules. We then presented different business model scenarios based on varying take rates of the networking services offered. We gave preliminary marketing advice and conducted initial outreach on behalf of KINBER to potential new members. CTC also prepared engineering advice for how to cost-effectively provide networking services.

City of Lawrence, Kansas: CTC evaluated the state of broadband in Lawrence and proposed strategies for expanding network infrastructure to serve homes, businesses, and the public sector. In our project report, "Enhancing Broadband in Lawrence: A Range of Strategic Options," we identified ways in which Lawrence can maximize its current assets to encourage future technology development. It analyzes the existing

communications environment in Lawrence and provides recommendations with respect to various options to leverage the City's existing fiber optic infrastructure. (That report is available on our website: http://www.ctcnet.us/wp-content/uploads/2014/01/LawrenceBroadbandReport.pdf.) Following up on that engagement, we also recently evaluated issues and concerns for the City's consideration as it evaluates whether to require open access on privately funded fiber in the City.

Maryland Inter-County Broadband Network (ICBN): CTC was the lead engineer for the development of the ICBN project, a $72 million sub-grantee of the One Maryland Broadband Network (see below). We designed and engineered ICBN fiber routes for four large counties. In addition, a CTC Principal Engineer served as Portfolio Manager for the project across nine counties. He was the lead technical consultant overseeing the grant funds to build 800 miles of fiber optics and connect approximately 650 community anchor institutions.

Commonwealth of Massachusetts: CTC President Joanne Hovis advises the Massachusetts Technology Cooperative on a wide range of broadband issues, including last-mile network deployment, business planning, and managing statewide stakeholder relationships.

National Capital Region (NCR) Interoperability Program: CTC provided the concept, engineering design, and project management for the National Capital Region Interconnection Network—a 120-mile public safety network interconnecting 19 fiber-optic based government networks in the greater Washington, D.C. region. This network was conceived as a backbone for interoperable communications that could take advantage of existing fiber infrastructures the governments already controlled.

State of New Mexico: CTC wrote a guidebook for New Mexico's local governments to lead them through the business, financial, and strategic planning necessary to implement city- or county-owned broadband networks. We are currently engaged in developing a statewide strategic plan for deployment and adoption of broadband in the State, as well as in preparation of regional implementation plans.

State of New York: CTC currently is designing New York State's public–private partnership model—a key element in Governor Cuomo's $500 million "Broadband for All" initiative, which aims to deliver 100 Mbps services to every home and business in the state.

Government of New Zealand (Crown Fibre Holdings): CTC developed a reference architecture and technical guidelines for the New Zealand government's open access Ultra-Fast Broadband initiative. The project included establishing requirements for vendors bidding on the design, construction, and operation of a planned nationwide fiber network that will connect at least 75 percent of the country's population.

One Maryland Broadband Network (OMBN): Working closely with the Maryland Department of Information Technology (DoIT), CTC provided strategic guidance and was the lead engineering and business planning consultant in conjunction with the development of OMBN's successful $115 million federal grant application. Our services included network architecture, plant engineering, and detailed project preparation, with a focus on expanding the state's existing fiber optic network to reach underserved areas and achieve other program goals. CTC also provided extensive business planning, business modeling, and pro forma preparation.

City of Palo Alto: CTC engineers currently are supporting the City in developing a "dig once" ordinance and related processes.

In two parallel projects in 2015, CTC developed both a fiber-to-the-premises (FTTP) master plan and a wireless network plan for the City of Palo Alto. In the FTTP engagement, we worked with the City's Information Technology and Utilities departments to research and prepare a strategic plan that outlines the feasibility of expanding the City's existing fiber system to provide citywide FTTP. In the wireless engagement, conducted a system-level requirements analysis and a needs assessment, and recommending wireless technologies, network designs, and business models.

CTC previously provided strategic guidance and advice to the City on expanding its dark fiber network to create opportunities for enhanced municipal and commercial services. We assessed how to leverage existing infrastructure to promote commercial wireless broadband deployment and improve municipal Smart Grid and public safety technologies. We also prepared a framework for establishing a public-private partnership to encourage greater infrastructure deployment.

City of Raleigh: CTC recently completed a project with the City of Raleigh to develop a roadmap for meeting the City's future networking needs. CTC engineers performed a technical assessment of the City's network plans, developed a strategy for fiber construction, and providing detailed guidance on middle-mile network operations. Our business analysts assessed the City's current network financial models, refined those projections, and created a sustainable business model that will enable the city to capitalize on excess fiber to create revenue and other community benefits. CTC also supported the city on the completion of its Google Fiber Checklist.

City and County of San Francisco: CTC currently is developing technical specifications for a municipal "dig once" policy to facilitate the cost-effective expansion of broadband infrastructure throughout the city.

We previously prepared a series of path-breaking analyses of the feasibility of the City building and operating a fiber-to-the-premises (FTTP) network—including a system design and detailed analysis of candidate architectures and open access models. The project also included analysis of multiple business models and business recommendations customized for San Francisco's unique circumstances.

CTC also provided ongoing consulting and strategic guidance with respect to an FTTP pilot and related technology projects, and helped the City with business planning, financial analysis, and engineering design to support its preparation of an extensive application for federal grant funding. The market research analysis provided measurements to predict emission reductions and other ancillary benefits of facilitating work-at-home initiatives through an FTTP implementation.

City of Seattle / Seattle City Light: CTC currently is supporting the city with business, technical, and strategic guidance as it explores options for FTTP network deployment in light of the changing national marketplace and emergence of new business models.

This engagements follows on multiple significant projects we have completed with the city and its electric utility over the past six years. CTC has previously performed market research and developed a feasibility study, a business case analysis, and an "off-the-balance-sheet" benefits analysis for a proposed fiber network.

The first study, "FTTP Municipal Broadband Risks and Benefits Evaluation," included an internal needs analysis, market research of both residential and business customers; an assessment of competing services and technologies; and an evaluation of the business case and business risks.

Following on that report, CTC researched and wrote an "FTTP Benefits Evaluation," which explored the benefits of FTTP beyond the traditional balance sheet, including cost avoidance, monetary savings, and environmental impact. Notably, this report was one of the first of its kind to qualify and quantify (where possible) community-wide benefits of ubiquitous broadband connectivity such as enabling increased telecommuting, reductions in greenhouse gas emissions, and positive impacts on vulnerable populations such as the elderly and low-income residents.

In the third phase of this project, CTC advised the Mayor of Seattle regarding the U.S. communications market and business planning strategies for a citywide fiber enterprise. CTC led and facilitated a business planning working group comprised of the Mayor's senior staff, the directors of the City's electric and water/sewer utilities, and the City's Chief Technology Officer.

Cities of Urbana and Champaign / University of Illinois: CTC has been the strategic and business planning consultant to Urbana, Champaign, and the University of Illinois for more than five years—since the coalition first conceived of constructing a middle-mile fiber network to connect community anchor institutions. We prepared the network's successful federal Environmental Assessment, which enabled construction to begin. Following construction of the federally funded middle-mile project, we wrote a request for information (RFI) to enable the cities and the university to identify a private partner that would finance and operate an FTTx expansion of the network to serve 100 percent of the community. We evaluated potential partners' proposals, then helped to negotiate with two partners to reduce the community's risks and ensure that a partnership will achieve the coalition's policy goals for economic development and digital inclusion.

As a result of the coalition's final partnership—which Telecompetitor has called "a particularly good deal for the community"[8]—UC2B has secured an open access Gigabit FTTx network buildout that will protect its public policy interest by providing the same opportunity for access to the entire community. In return, UC2B's partner—the ISP and network operator iTV3—gets value through access to UC2B's existing middle-mile infrastructure (which it will operate) and the foundation of a significant last-mile consumer network.

Commenting on the partnership, FCC Chairman Wheeler said that it "provides a valuable model for communities and companies throughout the country and a demonstration of the creativity that is stimulated when localities are free to work with the private sector to improve broadband offerings."[9]

City of Vallejo, California: CTC recently was awarded a contract by the City to develop a fiber optic master plan to guide the feasibility, long-term planning, budgeting and implementation of a municipal broadband network. In our technical analysis and planning, we will conduct a detailed investigation of the City's existing conduit. And in our business planning tasks, we will focus on serving commercial customers—and on a model that will be self-funding over time.

City of Westminster, Maryland: CTC prepared a fiber feasibility study and business case for the City of Westminster in 2012 and 2013. Our report, which focused on maximizing available backbone network connectivity, included a technical design and cost estimates for two last-mile FTTP pilot projects (one focused on residential customers, one focused on businesses).

---

[8] http://www.telecompetitor.com/urbana-champaign-gigabit-network-will-open-access/

[9] http://www.fcc.gov/document/fcc-chairman-tom-wheeler-stmt-uc2b-and-itv-3-gigabit-announcement

Following the City's decision to move forward with the pilot projects, CTC is currently providing support on a range of fiber infrastructure engineering, network design, construction oversight, and quality assurance tasks.

We also assisted the city in identifying a private partner to assume operating risk in providing services to the public over the City's FTTP infrastructure; the city announced its public–private partnership in mid-January. For more details, see CTC's website: http://www.ctcnet.us/blog/maryland-city-announces-groundbreaking-fiber-partnership-with-ting-internet/.

References

We invite you to contact the following references about the quality, independence, and timeliness of CTC's work. Many additional references are available on request.

City and County of San Francisco
Mr. Brian Roberts
Senior Policy Analyst, Department of Telecommunications & Information Services
(415) 581-4061, brian.roberts@sfgov.org

City of Seattle
Mr. Tony Perez
Director, Office of Cable Communications
(206) 386-0070, Tony.Perez@Seattle.gov

City of Palo Alto, California
Mr. Jim Fleming
Management Specialist
(650) 566-4586, Jim.Fleming@CityofPaloAlto.org

Town of Holly Springs, North Carolina
Mr. Jeff Wilson
IT Director
(919) 567-4013, jeff.wilson@hollyspringsnc.us

City of Westminster, Maryland
Dr. Robert Wack
Common Council President
(443) 340-3227, rwack1@comcast.net

2. Project Team

Our primary team members for this project will be the following. Complete resumes for each staff member are attached in Appendix A below.

Joanne Hovis, CTC's President and Director of Business Consulting, will be the City's primary contact throughout the project, and will lead all strategic and business planning tasks. An attorney who has provided network business model analysis and recommendations for some of the largest public broadband networks in the country, she is a recognized authority on the broadband market and community broadband topics—and on the evolving role of government in the provision of communications services to the public. Ms. Hovis has extensive experience developing business case and business model scenarios for public sector broadband initiatives, and is also CEO of the Coalition for Local Internet Choice (http://www.localnetchoice.org/). Ms. Hovis leads the CTC team that advises the states of Kentucky, Massachusetts, New Mexico, and New York, the cities of San Francisco, Seattle, and Washington, D.C., and the statewide broadband networks in Colorado, Maryland, and Pennsylvania.

Joanne Hovis is a recognized authority on municipal broadband business models. She leads the CTC team that advises the states of New Mexico, New York, Kentucky, and Massachusetts, the cities of San Francisco, Seattle, and Washington, D.C., and the statewide broadband networks in Colorado, Maryland, and Pennsylvania.

Andrew Afflerbach, Ph.D., P.E., CTC's Director of Engineering, will oversee all technical research and analysis. A licensed Professional Engineer, Dr. Afflerbach has developed institutional networks for cities and counties, has overseen the build-out of last-mile fiber networks, and works extensively on regional fiber and wireless public safety networks. He is an experienced network planner who understands the business and financial implications of various network designs. He led the CTC team that developed a reference architecture and technical guidelines for the New Zealand government's open access FTTP initiative—a project that included establishing requirements for vendors bidding on the design, construction, and operation of a planned nationwide fiber network that will connect at least 75 percent of the country's population.

Tom Asp, MBA, a CTC Principal Engineer and Analyst, will lead all financial analysis tasks. He is regarded as one of the premier analysts in the United States in the field of municipal planning and deployment of broadband systems to meet economic development, digital inclusion, and other needs. Mr. Asp has more than 25 years of nationwide experience as an engineer and analyst in communications and public power systems. His experience includes telecommunication system design and evaluation of network feasibility. Mr. Asp has developed financial statements and prepared quantitative business plan analyses for numerous municipal and utility clients nationwide and is widely recognized as an expert in municipal broadband business and strategic planning. Mr. Asp has served as lead for more than 100 local government broadband projects during his career—both with CTC and, previously, as a partner at the public accounting firm Baker Tilley—and brings a wealth of practical fiber optic business planning experience to his projects.

Matthew DeHaven, a CTC Principal Engineer, is currently managing the deployment of an FTTP pilot initiative in Westminster, Maryland—the first step in what will become a public-private partnership with Ting Internet to provide service throughout the city. Over the past three years, he served as the Portfolio

Manager for the Maryland Inter-County Broadband Network (ICBN) project, overseeing $72 million in grant funds to build 800 miles of fiber optics and connect approximately 650 community anchor institutions, including schools, libraries, government buildings, and public safety agencies.

Charlie Hamm, a CTC GIS Specialist and Staff Engineer, works with a range of geographic design programs—including AutoCAD, ESRI ArcGIS, Google Earth, Microsoft Streets and Trips, and Quantum GIS—to enable large-scale network design and construction projects, as well as to illustrate geographic data for feasibility studies. He creates databases and maps to support network route planning, utility pole attachment, and permit application processes.

Marc Schulhof, a CTC Senior Analyst and Technical Writer, has more than 20 years of experience in technical writing, financial journalism, and public and corporate communications. Prior to joining CTC, Marc was the worldwide editor-in-chief of CIO program websites at IBM.

Eric Wirth, a CTC Senior Engineer, specializes in the evaluation of telecommunications networks. For example, he designed and implemented a fiber optic network for Norwich (Connecticut) Public Utilities. The project consisted of developing detailed fiber optic route design and cost estimates, network electronic design, and cost estimates, and a request for proposals (RFP) for Norwich's use in selecting a contractor to complete the installation.

3. Scope of Work

We understand that the cities of Mt. Shasta, Weed, and Dunsmuir ("the Cities") seek to develop a strategic and business plan for the potential deployment of a fiber-to-the-premises (FTTP) network or alternative, affordable and cost-effective high-speed (e.g., 1 Gbps) delivery system to businesses, homes, and public and governmental facilities; further, we understand that the Cities seek to develop the network with a private partner in order to promote economic development, community health, safety, and general well-being.

We are proud of the strategic, technological, and business planning advice we have provided dozens of cities as they have explored the feasibility of implementing or expanding government-owned broadband utilities. Our success as consultants comes down to the fact that we do not minimize our assessment of costs or risks; nor do we make unreasonable assumptions about revenue factors.

We will be the Cities' trusted adviser throughout this engagement, and will deliver an independent strategic and business plan that will guide the Cities' future steps.

We anticipate completing this project within 10 to 12 weeks of receiving notice to proceed. Wherever deemed efficient and cost-effective, we will seek to maximize use of local City staff and local volunteers to assist in gathering and providing local information, with the goal of cost-savings to the Cities while providing a quality product within the time constraints of the contract. Further, where we deem it feasible and cost-effective, we will seek to use remote technology such as WebEx, GoToMeeting, etc., to promote efficiency and cost-savings while staying within the contract deadline.

Task 1: Conduct On-Site Strategy Session

As a preliminary step, we will conduct a full-day, on-site strategy session. Our project team will meet with the Cities' personnel to discuss project goals and objectives, review relevant maps and documents, establish project parameters, and address the project team's primary questions and concerns.

The strategy session will enable us to understand the Cities' long-term vision and expected timeline. We will also seek guidance on any potential hurdles or areas of concern, as well as insight into existing broadband service availability and the Cities' knowledge of the incumbents' plans for future expansion.

We also view the strategy session as an opportunity to present an overview of relevant case studies and best practices in public sector dark fiber, broadband, and FTTP, as well as currently emerging technologies and high-speed broadband alternatives that may be feasible and cost-effective; discuss funding and financing issues; and explain the evolution of public–private broadband partnerships and business models—a topic in which we offer unparalleled expertise.

Specific agenda items will include:

- Identify project stakeholders
- Review project vision, goals, and objectives
- Review project schedule, key milestones, and deliverables
- Review perceived project strengths and weakness from the Cities' perspective
- Review Cities' existing network infrastructure and planned upgrades

- Review potential funding opportunities and sources
- Explore public–private partnerships and other likely business models
- Discuss framework for implementation roadmap
- Discuss the potential impact of competition from incumbent operators and new technologies
- Identify target FTTP construction and service areas (with a focus on a phased implementation)
- Identify feasible alternative delivery systems, if any, for the service areas (e.g., wireless or other technologies)
- Review potential users and markets for new and enhanced connectivity capabilities enabled by FTTP, including:
    - Telecommuters
    - Business segments (needs by type and size)
    - Cottage industries supported by economic development
    - Home use (personal and business)
    - Education (e.g., increased capabilities and access in students' homes)
    - Multi-dwelling units (collaboration and partnership opportunities)
    - Industrial and business parks
- Review project schedule, key milestones, and deliverables

Task 2: Prepare Competitive Assessment of Incumbent Services

We will identify and analyze the services and prices offered by the Cities' current incumbent providers. This competitive assessment will inform our business planning tasks.

Please note that with some services, it is not possible for a provider to guarantee service availability at a given location due to circuit quality, circuit loading, and other attributes. These providers often depict availability as a probability of getting service in a given zone. The provider will identify the total number of circuits in a given zone, and the total potential number of circuits that might support the broadband offering. At times the provider will share this information, and other times they will not.

Task 3: Evaluate Community and City Needs

To define and assess community broadband needs—including business, residential, and internal City needs—we will interview up to six key stakeholders or groups of stakeholders identified and invited by the Cities. We request that the Cities schedule the potential participants and provide sufficient meeting facilities; we anticipate conducting these meetings over the course of two days following our strategy session (Task 1).

During the interviews, we will be asking questions from a short survey/interview instrument to assist in guiding the discussions. The goal of the interactive discussions is to:

- Determine anticipated level of support from stakeholders
- Elicit and discuss stakeholder needs for services that can be offered over a broadband network
- Solicit feedback from stakeholders on policy, potential business models, and technology

- Receive feedback from stakeholders on any other aspects of the project

Interviews provide qualitative data that can assist in projecting future requirements and reactions to various "what if" scenarios.

We will summarize the results of each interview session in regard to participants' levels of support, their alignment with the Cities' vision, their drivers and motivations to participate, and their suggestions for policies, insights regarding business models, questions, and comments regarding technology. Discussion topics include, but are not limited to, the following:

- What types of connectivity and broadband services do the stakeholders currently use?
- What limitations do the stakeholders see in their current situation?
- What are their expectations for current and future high-speed needs, and how well does their current provider meet these needs?
- How aware are respondents of current high-speed options?
- What applications do the stakeholders currently use and plan to use in the future?

Task 4: Develop High-Level Design and Cost Estimates for FTTP Network

Based on the parameters established during our kick-off meeting, CTC engineers will develop a system-level design and high-level capital and operating cost estimates for the construction and operation of fiber infrastructure in the Cities and/or an alternative, affordable and cost-effective high-speed (e.g. 1 Gbps) delivery system (e.g., wireless technology) to businesses, homes, and public and governmental facilities. We will include in our design the technical elements that we deem necessary to achieve the Cities' goals, and will develop a preliminary timeline that estimates the Cities' potential time for construction and service implementation.

To survey candidate fiber routes and/or locations for an alternative delivery system and develop cost estimates, and to identify the most efficient and effective way to connect the Cities' existing infrastructure to these new routes, CTC engineers will perform onsite inspections of candidate fiber routing and/or locations for an alternative delivery system, including examination of any existing conduit and fiber resources. We will identify least-cost routing for a range of potential fiber topologies and/or locations for an alternative delivery system, and will consider construction and design practices to minimize overall cost, including planning construction in conjunction with capital improvements in the rights-of-way (e.g., road work, sidewalk replacement).

We will develop high-level cost estimates on a baseline set of fiber routes and/or an alternative delivery system, and identify incremental costs for enhancing construction methodology to include additional conduit capacity and access points to facilitate reduced-cost construction for potential future expansion and site additions. We will also identify areas of risk and a likely range of costs and schedules.

To be clear, we will not be providing a blueprint-level network design. Rather, we will be providing a conceptual design, high-level maps, and a system-level overview of the potential infrastructure—which in turn will become a roadmap for future decisions, including detailed engineering and contracting with private sector service providers.

Task 5: Develop Business Plan for Candidate Network

As we have done for public sector broadband networks nationwide, we will develop pro forma data for the Cities' broadband network operations based on the system-level design and the cost estimates for expansion. This high-level financial model for the Cities' proposed fiber construction and/or an alternative

delivery system will take into account a range of likely costs, including:

- Financing
- Operations
- Maintenance

We will outline operational attributes and processes including policies, staffing levels, maintenance agreements, and other considerations. Particular attention will be paid to back-office and other operating requirements, as well as working capital projections.

The model will include an overall analysis of viable potential services and will provide:

- Sensitivities of key assumptions including, but not limited to:
  - Customer segmentation
  - Market penetration
  - Pricing
  - Tiered revenue structures
  - Operating fees
  - System construction
  - Staffing levels

- Base, best, and worst-case analysis

The pro forma will follow accounting standards and will provide schedules that detail:

- Operating income and cash flow
- Net present value analysis
- Subscriber revenue by service
- Subscriber revenue by customer/customer class
- Debt service analysis
- Reserve fund requirements
- Uses and sources of funds
- Operating expenses
- Operational savings
- Depreciation summary
- Projected construction costs for network, hardware, buildings and other equipment
- Return on investment (ROI)

We will also prepare specific recommendations on market positioning, marketing strategies, and product/service development, including:

- Recommendations and analysis of the opportunities
  - Ascertain the telecom industry's plans to expand or upgrade, if any
  - Describe the current competitive dynamic within the telecom industry and its impact on the operations of the Cities' network
  - Describe availability gaps (geographic)
  - Identify affordability gaps (economic)
  - Identify performance gaps (bandwidth, other)

- Description of the potential benefits for economic development

- Description of the potential use and benefits of the Cities' network for publicsafety

- Estimates of anticipated subscriber take rates
  - What impact does pricing have?
  - What are the perceived performance requirements? How do these fit with the capabilities of wireless?
  - What are the attributes that will impact a given consumer's decision?

All of our assumptions and price sensitivities will be clearly stated and justified. This financial model will provide the Cities with an order-of-magnitude estimate of the overall project cost, and will support the implementation and funding roadmap by providing inputs for potential business models, funding options, and partnering opportunities.

Task 6: Examine Range of Network Business Models and Funding Mechanisms

Our report will consider a range of business models and funding options that might support the Cities' next steps and inform an implementation roadmap. Our business models, which will focus on public–private partnerships, will reflect our understanding of the Cities' desired roles and risk tolerances.

Business Models

We will bring to this engagement our experience in identifying the challenges of municipal network expansion in general, and FTTP implementation in particular—and our realistic approach to assessing project risks. We will be very frank about the level of funding needed for various levels of network expansion, and about the trade-offs among risk, benefits, and network control in various partnership approaches.

Over the past 15 years, we have seen communities raise public expectations very high before clearly understanding the challenges of FTTP financial models. This can be very disappointing to the public and politically challenging in the event that it does not work out. We will help you moderate public expectations and bring a dose of reality to the plans.

Notably, we have singular experience in developing broadband public–private partnerships on behalf of public sector clients. CTC supported the Commonwealth of Kentucky in developing and negotiating its $250 million to $350 million P3 concessionaire agreement. For both the Town of Holly Springs, North Carolina, and the City of Westminster, Maryland, we assisted the municipal governments in identifying a private partner to assume operating risk in providing services to the public under two significantly different partnership models, each aligned with the unique needs of these communities. We have also provided broadband P3 strategic and technical consulting to the City of Santa Cruz, California, the Village of Bald Head Island, North Carolina, and other cities nationwide.

Funding Mechanisms

Public sector network expansions, especially FTTP initiatives, reflect both an ambitious vision and, often, a public commitment to financing broadband access for all citizens. Many municipalities have pursued grant funding, taken out bonds, or otherwise sought funding for construction of publicly owned fiber networks.

Our goal in this task is to help the Cities develop realistic approaches to funding and financing. Our report will examine other viable options. And we will focus on demonstrating the business case as a means of working with the State, local organizations, or private partners under a range of these models.

We will draw on our hands-on knowledge of broadband funding opportunities and our research capabilities in this area to identify and compile a detailed list of potential funding opportunities for the

Cities to consider. To the extent possible, we will "rank" these opportunities in terms of the likeliness that they for successful funding.

We note, too, that many municipalities have decided that the benefits of supporting an FTTP network outweigh the financial costs. Those jurisdictions have examined an FTTP network's potential "benefits beyond the balance sheet" and determined that ubiquitous high-speed broadband has such value that it should be considered a public good, like water or electricity, and made available to all residents.

Task 7: Identify and Analyze Potential Partners

CTC is closely connected to current efforts by many cities and counties to enlist private sector partners for broadband services. Three of our clients have successfully signed partnership agreements for FTTP expansion and service delivery; others are in the process of identifying a qualified partner. For each of these public sector network owners, we helped develop a request for information (RFI) and guide them through the process of evaluating the RFI responses and negotiating with the finalists. We have a strong sense of the types of partners to prioritize for potential discussions, and the type of benefits that might accrue to the community from a partnership.

Based on the Cities' stated interest, CTC will assist the Cities with the following tasks:

- Performing a preliminary screen and identification of suitable potential partners, based on criteria developed together with the Cities.
- Identifying the respective roles for the Cities and a potential private sector partner.
- Developing the requirements for and writing an RFI or request for proposals (RFP) that, when published, will solicit responses from qualified potential partners.
- Identifying private sector partners. CTC will analyze responses that the Cities receive as a result of its RFI/RFP, and will prepare a memo that provides a detailed overview of the respondents, a recommended partner, and our rationale for the selection.

Following that, we would also be available to help with a range of other potential tasks, to be billed at our standard hourly rates. These tasks include, but are not limited to:

- Analysis of additional private partner proposals
- Support in negotiations with potential private partners
- Financial analysis of business elements of the potential partners' proposals
- Analysis of the viability and track record of the potential partners
- Assistance with due diligence, including speaking with other communities that have worked with or negotiated with the potential partners
- Analysis and vetting of the viability of the partners' proposed technologies

Task 8: Prepare Final Report and Present Recommendations

Our final deliverable will be a comprehensive strategic and business plan, including a succinct summary that presents our key findings and recommendations. The report will include the results and our analysis of all of the assessments and research conducted throughout the project.

Our written report will include a clear and concise narrative supported by charts, tables, graphics, and

maps. We will attribute and provide sourcing for our research. The study will include our analysis of several business models, as well as a high-level financial model and network design.

The report will present both an analysis of feasibility and, based on those findings, an action plan for next steps in terms of financing and an implementation timeline. As we noted above, we will not minimize our assessment of costs or risks; nor will we make unreasonable assumptions about revenue factors such as take rates and service fees.

Our strategic plan may thus include recommendations related to considering pilot projects, issuing a request for information (RFI) to identify potential partners, developing more detailed network designs and cost estimates, or other steps that we believe the Cities should consider.

We will provide the Cities' identified reviewers with an electronic draft of our report for initial review. We will incorporate the reviewers' feedback and edits within two weeks of receipt, and will deliver an electronic version of our final report. We will also conduct a presentation of the report and our recommendations via WebEx at a time to be selected with the Cities.

In recognition of the Cities' concern to introduce, promote and/or support possible legislation through the California Legislature during the 2017 legislative session, the final report will be completed by no later than April 1, 2017, assuming that the Cities provide CTC with notice to proceed no later than January 6, 2017. The parties recognize and agree that time is of the essence.

4. Project Cost and Hourly Rates

CTC proposes to perform the tasks described in the scope of work above for a not-to-exceed cost of $100,000, inclusive of all expenses including travel. This total cost, to be split among the three Cities, represents the significant project efficiencies created by performing these tasks simultaneously for all three cities (as compared to pursuing three separate engagements).

We will bill our work (as well as any additional work requested by the Cities, such as the potential follow-on support described in Task 7) at the following hourly rates:

Labor Category	Rate
Director of Business Consulting / Engineering	$170
Principal Analyst / Engineer	$160
Senior Project Analyst / Engineer	$150
Senior Analyst / Engineer	$140
Staff Analyst / Engineer	$130
Communications / Engineer Aide	$ 75

CTC's billing rates are inclusive of all routine expenses including administrative, accounting, and computer support, telephone calls, and photocopying. Non-routine expenses and long-distance travel are recovered at direct cost with no mark-up. Please note that CTC reserves the right to reallocate funds among task and staff categories so long as the total cost is not exceeded. Payment is due within thirty (30) days of invoice.

Appendix A: Team Resumes

Joanne S. Hovis, Esq. | President and Director of Business Consulting

Joanne Hovis is President of CTC. She is an attorney and business planner with a two-decade background in communications and broadband. Ms. Hovis is a recognized authority on the broadband market and community broadband topics—and on the evolving role of government in the provision of communications services to the public.

Ms. Hovis leads the CTC team that advises the states of New Mexico and Kansas; the cities of San Francisco, Washington, D.C., and Seattle; the American Recovery and Reinvestment Act (ARRA) funded UC2B (Champaign and Urbana, Illinois) and ICBN (central Maryland) networks; and the statewide broadband networks in Colorado, Maryland, and Pennsylvania. She advises the University of Illinois, Case Western Reserve University, and a number of other institutions regarding broadband planning.

Ms. Hovis also oversees all ongoing CTC research and analysis for local government clients and frequently provides business planning and analysis for communications networking initiatives such as San Francisco's planned fiber network and the public safety communications network currently under development in the Washington, D.C. metropolitan area. She also leads CTC's consulting on the federal E-Rate and Healthcare Connect Fund programs.

Ms. Hovis serves as Immediate Past President of the National Association of Telecommunications Officers and Advisors (NATOA), which represents local governments and promotes community interests in communications matters. She is a member of the boards of directors of the Benton Foundation, the Fiber to the Home Council, and OneCommunity, and is a charter member of the United States Unified Community Anchor Network (U.S. UCAN) project's Task Force on Community Anchor Network Economic Models. She is also CEO of the Coalition for Local Internet Choice (CLIC).

Ms. Hovis previously worked as an attorney with Jenner & Block in Chicago and Mintz, Levin, Cohn, Ferris, Glovsky, & Popeo PC in Washington, D.C. At those firms, she worked on complex communications and litigation projects for such clients as Salomon Brothers and AOL.

Business Planning and Feasibility Analysis

Ms. Hovis leads all of CTC's business planning efforts. She has spearheaded projects that explore a range of business models by which government clients can leverage their existing assets to build, expand, and incentivize broadband expansion. She is sought nationwide as an expert in municipal ownership and operational broadband business models, fiber and wireless markets, and public–private partnerships. Among the projects she has led are:

- **City of Seattle**. Ms. Hovis advised the Mayor of Seattle regarding the U.S. communications market and business planning strategies for a citywide enterprise. She reported the public subsidies a network would require, and delivered a full assessment of opportunities and risks. The report included internal needs analysis, statistically significant market research, an assessment of competing services and technologies, and an evaluation of the business case and financial risks. Ms. Hovis led further analysis of the benefits of FTTP beyond the traditional balance sheet. She led and facilitated a business planning working group comprised of the Mayor's senior staff, the directors of the city's two utilities (electric and water/sewer), and the city's CIO.

- Ms. Hovis advises the **State of New Mexico's Department of Information Technology** on broadband planning. She led a team of writers and analysts that produced a guidebook for New Mexico's local governments to guide them through the business, financial, and strategic planning necessary to implement city- or county-owned broadband networks. The book-length guidebook offers specific instructions for localities to research and document the telecommunications infrastructure in their communities, and discusses strategies for exploring public–private partnerships for broadband expansion.
- Ms. Hovis is working with the **State of Kansas Department of Commerce** on a large-scale needs assessment of the state's network infrastructure. She is conducting major market surveys among three core sectors across the state (residents, businesses, and community anchor institutions) to evaluate the current uses and needs of broadband infrastructure. She is also developing a strategy for the evolution of Kan-ed, the state-created broadband program that serves schools, hospitals, libraries, and higher education institutions.
- Ms. Hovis has advised officials in the **District of Columbia** government on a range of telecommunications and fiber-optic projects for almost a decade. She worked with the Office of the Chief Technology Officer (OCTO) to create a business plan and strategy for building a municipal fiber-optic network with a wireless overlay in the least-served wards of the city. She performed a business case and technology analysis (including five-year projections) for DC-Net, a fiber-optic telecommunications network that provides voice and data services for the District of Columbia. She analyzed governmental, educational, and public safety uses of the network. The project tasks included asset mapping and network description; developing a cost comparison to leased/managed services; identifying opportunities to resell to other entities; identifying support mechanisms; and determining recommended business practices. She performs an ongoing role as strategic fiber adviser to the Chief Technology Officer and the Director of DC-Net, and supports planning for the network's future—including expanding the network to a broader array of end users.
- Ms. Hovis advises the **Urbana-Champaign Big Broadband (UC2B) Coalition (University of Illinois and the cities of Champaign and Urbana)** on a wide range of business and strategic planning issues. She is currently evaluating the private sector bids to build out last-mile fiber connections in the cities. She took a leading role in preparing UC2B's successful application for a federal Broadband Technology Opportunities Program (BTOP) stimulus grant to support its proposed FTTP network.
- Ms. Hovis provided extensive business planning, market assessment, and strategic planning for the **City and County of San Francisco**. Ms. Hovis served as a key adviser to the city's Chief Information Officer. She conducted an independent evaluation of the feasibility of San Francisco constructing and operating a municipal FTTP network to serve businesses and residences. As a first step toward the FTTP network, she worked with the City to plan a migration of the leased telecommunications services connecting 250 government facilities to a City middle-mile fiber-optic network; she also supported the city's application for BTOP funding. She reviewed cost and pricing factors associated with using leased telecommunications services and circuits provided by private vendors, as compared with migration to government-owned fiber optics. She projected the return on investment and total cost of ownership (including a wide range of costs from deployment to staffing to maintenance to financing to cutover expenses). She evaluated potential efficiencies to be realized through in-house rather than outsourced provision of services and circuits.

Grant Planning & Management

Ms. Hovis' expertise includes the many funding opportunities available to local government broadband

planners through the federal government and other sources. She has guided clients through the grant process, from application writing to fund management.
Ms. Hovis' grant work has included:

- Supporting more than a dozen clients in securing American Recovery and Reinvestment Act (ARRA) funds through the Broadband Technology Opportunities Program (BTOP). Successful applicants included including the $22.5 million Urbana-Champaign Big Broadband (UC2B) project, the $115 million One Maryland Broadband Network (OMBN), the $32.1 million OpenCape project in Cape Cod, and Washington, D.C.'s $17.5 million Community Access Network (DC-CAN).
- Securing additional National Telecommunications & Information Administration (NTIA) funds from the **Public Safety Interoperable Communications (PSIC)** grant program on behalf of public health and public safety communications projects in the National Capital Region (NCR).
- Providing business case development and ongoing business planning support to significant **Urban Areas Security Initiative (UASI)** grant-funded projects in the NCR.

Speaking and Advocacy
Ms. Hovis is in wide demand as a speaker and expert source on broadband deployment issues. She has testified before the U.S. Congress on matters of broadband deployment and policy; has been interviewed by publications including *Business Week*, the *Washington Post*, and the *Baltimore Sun*; and has been featured on the C-SPAN show "The Communicators." She has provided expert presentations to the Federal Communications Commission, National League of Cities, the University of Illinois, Case Western Reserve University, the New America Foundation, and the Congressional Internet Caucus.

Ms. Hovis recently authored "The Emerging World of Broadband Public–Private Partnerships: A Business Strategy and Legal Guide" (published by the Benton Foundation). She is also author of "Gigabit Communities: Technical Strategies for Facilitating Public or Private Broadband Construction in Your Community"—an independent report sponsored by Google (available on CTC's website).

EDUCATION
***Juris Doctor*, with honors**, University of Chicago Law School, 1994
Bachelor of Arts, with distinction, University of Wisconsin, Madison, 1990

PROFESSIONAL CERTIFICATIONS/LICENSES
Member of Illinois Bar Association, Member of District of Columbia Bar Association

ORGANIZATIONS
- Coalition for Local Internet Choice, CEO
- National Association of Telecommunications Officers and Advisors, Immediate Past President
- Benton Foundation, Director
- Fiber to the Home Council, Director
- OneCommunity, Director
- United States Unified Community Anchor Network, Task Force on Community Anchor Network Economic Models, Charter Member

PRIOR TO COMING TO CTC IN 1997
1996–1997 Litigation/Communications Attorney, Mintz, Levin, Cohn, Ferris, Glovsky, & Popeo P.C.
1994–1996 Litigation Attorney, Jenner & Block

Andrew Afflerbach, Ph.D., P.E. | CEO and Director of Engineering

Dr. Andrew Afflerbach specializes in planning, design, and implementation of communications infrastructure and networks. His expertise includes emerging fiber and wireless technologies and state-of-the-art networking applications.

As Director of Engineering, he oversees all engineering work performed by CTC Technology & Energy. He is a licensed Professional Engineer in the Commonwealth of Virginia and the states of Delaware, Maryland, and Illinois.

Dr. Afflerbach has planned and overseen implementation of a wide variety of government and public safety networks, including the infrastructure of state and metropolitan area governments. He prepared extensive technical analyses for submission to the Federal Communications Commission (FCC) and policymakers on national fiber expansion to underserved schools and libraries, on due diligence for the IP transition of the telecommunications infrastructure, and on potential technical frameworks for wireless network neutrality. He also served as a senior adviser to Crown Fibre Holdings, the public entity that is directing New Zealand's national fiber-to-the-home project.

Broadband Planning and Engineering

Dr. Afflerbach has architected, designed, and overseen implementation of numerous broadband networks for local and state governments, including those of Washington, D.C.; Crown Fibre Holdings (Government of New Zealand); San Francisco; the Delaware Department of Transportation; the Maryland Transportation Authority; St. Louis Park, Minnesota; and many large counties. He oversaw the development of system level broadband designs and construction cost estimates for several cities including Seattle, Palo Alto, Madison, and Boulder, as well as for the states of Kentucky and Connecticut. He is overseeing the design of the city-built fiber-to-the-premises network in Westminster, Maryland.

Advisory Services

Dr. Afflerbach advises a wide range of policy think tanks, U.S. federal agencies, and non-profits regarding the engineering issues underlying key communications issues. For example, he:

- Leads the technical team conducting FirstNet planning for the District of Columbia.
- Provided expert testimony to the U.S. Federal Communications Commission (FCC) in the matter of the preparation of the national broadband plan as a representative of the National Association of Counties (NACo) and the National Association of Telecommunications Officers & Advisors (NATOA).
- Served as expert advisor regarding broadband deployment to the U.S. Conference of Mayors, NACo, National League of Cities, Public Knowledge, New America Foundation Open Technology Institute, and NATOA in those organizations' filings before the FCC in the matter of determination of the deployment of a national, interoperable wireless network in the 700 MHz spectrum.
- In connection with the FCC's ongoing Open Internet proceeding, advised the New America Foundation regarding the technical pathways by which "any device" and "any application" regimes could be achieved in the wireless broadband arena as they have been in the wireline area.
- Provided expert technical witness reports for municipal parties in litigation regarding a large commercial carrier's failure to complete construction of a citywide fiber network in a major North American city.
- Provided expert technical advice on the 700 MHz broadband and AWS-3 proceedings at the FCC for the Public Interest Spectrum Coalition.

- Prepared technical reports and analysis regarding fiber construction for submittal to the FCC, in connection with preparation of the National Broadband Plan, by NATOA, the City and County of San Francisco, and the Schools, Health, and Libraries Coalition.
- Served as technical advisor to the Naval Exchange in its evaluation of vendors' broadband communications services on U.S. Navy bases worldwide.
- Advised the U.S. Internal Revenue Service regarding the history of broadband and cable deployment and related technical issues in that agency's evaluation of appropriate regulations for those industries.
- Advised, during the height of the broadband "open access" debate, a variety of public interest associations and communities, including the City of Los Angeles and Stanford University, regarding the technical means by which cable networks could be opened to competition.
- Advised the Stanford Law School Center for Internet and Society on the technical issues for their briefs in the *Brand X* Supreme Court appeal regarding cable broadband.
- Provided technical advice to numerous non-profits, associations, and agencies as diverse as the Center for Internet and Society at Stanford Law School; the Internal Revenue Service, the Alliance for Community Media, the William Penn Foundation, the Center for Digital Democracy, and the FCC's Local and State Government Advisory Board (LSGAC).
- Has been invited to speak about communications technologies before such organizations as the Public Technology Institute, American Association of Community Colleges, ICMA, ILCMA, and the Practicing Law Institute.

Public Safety Network Interoperability and Interconnection

Dr. Afflerbach served as lead engineer and technical architect for planning and development of NCRnet, a regional fiber-optic and microwave network that links public safety and emergency support users throughout the 19 jurisdictions of the National Capital Region (Washington, D.C. and surrounding jurisdictions), under a grant from the U.S. Department for Homeland Security's Urban Areas Safety Initiative. He wrote the initial feasibility studies that led to this regional network interconnection project.

Smart Grid

Dr. Afflerbach and the CTC team provided expert testimony and advisory services to the Public Service Commission of Maryland regarding Advanced Metering Infrastructure (AMI). CTC provided objective guidance to the staff as it evaluated AMI applications submitted by three of the state's investor-owned utilities (IOUs). This contract represented the first time the PSC staff had asked a consultant to advise them on technology—a reflection of the lack of standards in the Smart Grid arena.

Instruction/Expertise

Dr. Afflerbach has served as an instructor for the U.S. Federal Highway Association/National Highway Institute, the George Washington University Continuing Education Program, the University of Maryland Instructional TV Program, ITS America, Law Seminars International, and the COMNET Exposition.

EMPLOYMENT HISTORY

1995–Present	CEO/Director of Engineering, CTC
	Previous positions at CTC: Principal Engineer, Senior Scientist
1990–1996	Astronomer/Instructor/Researcher
	University of Wisconsin–Madison, NASA, and Swarthmore College

EDUCATION
Ph.D., Astronomy, University of Wisconsin–Madison, 1996
Master of Science, Astronomy, University of Wisconsin–Madison, 1993
Bachelor of Arts, Physics, Swarthmore College, 1991

PROFESSIONAL CERTIFICATIONS/LICENSES
Professional Engineer, Commonwealth of Virginia and states of Delaware, Maryland, and Illinois

HONORS/ORGANIZATIONS

- Association of Public-Safety Communications Officials (APCO)
- SAFECOM Emergency Response Committee
- Board of Visitors, University of Wisconsin Department of Astronomy
- National Association of Telecommunications Officers and Advisors (NATOA) Technology and Public Safety Committees
- Armed Forces Communications and Electronics Association (AFCEA)
- Society of Cable and Telecommunications Engineers (SCTE)
- Institute of Electrical and Electronic Engineers (IEEE)
- Charleston Defense Contractors Association (CDCA)
- NASA Graduate Fellow, 1993–1996. Research fellowship in astrophysics
- Elected Member, Sigma Xi Scientific Research Honor Society
- Eugene M. Lang Scholar, 1987–1991, Swarthmore College

SELECTED PUBLICATIONS, PRESENTATIONS, and COURSES

- "LTE-U Interference in Unlicensed Spectrum: the Impact on Local Communities and Recommended Solutions," prepared for WifiForward, Feb. 2016
- "Mobile Broadband Networks Can Manage Congestion While Abiding By Open Internet Principles," prepared for the New America Foundation's Open Technology Institute – Wireless Future Project, filed with the FCC, Nov. 2014
- "The State of the Art and Evolution of Cable Television and Broadband Technology," prepared for Public Knowledge, filed with the FCC, Nov. 2014
- "A Model for Understanding the Cost to Connect Schools and Libraries with Fiber Optics," prepared for the Schools, Health & Libraries Broadband Coalition, filed with the FCC, Oct. 2014
- "The Art of the Possible: An Overview of Public Broadband Options," prepared jointly with the New America Foundation's Open Technology Institute, May 2014
- "Understanding Broadband Performance Factors," with Tom Asp, Broadband Communities magazine, March/April 2014
- "Engineering Analysis of Technical Issues Raised in the FCC's Proceeding on Wireless Facilities Siting," filed with the FCC (http://apps.fcc.gov/ecfs/document/view?id=7521070994), Feb. 2014
- "A Brief Assessment of Engineering Issues Related to Trial Testing for IP Transition," prepared for Public Knowledge and sent to the FCC as part of its proceedings on Advancing Technology Transitions While Protecting Network Values, Jan. 2014
- "Gigabit Communities: Technical Strategies for Facilitating Public or Private Broadband Construction in Your Community," prepared as a guide for local government leaders and planners (sponsored by Google), Jan. 2014

Thomas J. Asp, BSEE, MBA | Principal Engineer and Analyst

EXPERIENCE SUMMARY

Mr. Asp specializes in evaluating connectivity (voice, video, and data) options and recommending effective solutions for clients throughout the United States. He holds more than 25 years of experience as an engineer and analyst in communications and public power systems. His experience includes electric and telecommunication system design, network feasibility, evaluation of the financial impact of projects on operations, and provision of expert testimony.

Mr. Asp is recognized as an expert in evaluating and offering recommendations regarding municipal broadband communications systems. He has been actively involved with telecommunication market research and feasibility analysis for over a decade, both with CTC and previously as a partner at the public accounting firm of Virchow Krause (Baker Tilley). Mr. Asp also has significant experience in the communications industry working in the areas of cellular, cable TV, broadband, and mobile radio, including as a product manager in the Cellular Mobile Telephone, Automatic Meter Reading, and Distribution Automation industries.

Broadband Networks (Wired and Wireless)

Mr. Asp is regarded as one of the premiere analysts in the United States regarding municipal planning and deployment of broadband systems to meet economic development, digital inclusion, and other needs. He has assisted numerous local governments, municipal utilities, and municipal consortia to evaluate their communities' communications needs and determine the financial parameters and business case for meeting those needs.

In this area, Mr. Asp's experience includes preparing connectivity feasibility studies for municipal networks, including economic analysis, market assessment, technology review, vendor analysis, and business plan development. He has assisted numerous communities with evaluating the feasibility of advanced connectivity services alternatives including provider partnerships and city-owned networks. He has reviewed options under cable franchise agreement for municipal purchase and operation. Mr. Asp has reviewed offerings and operations of incumbent telecommunications providers and assisted in negotiations with incumbent telecommunications providers to enhance availability of existing services and to encourage new and innovative offerings.

Some select examples of his projects include:

- Provided Jackson (Tennessee) Energy Authority an independent evaluation of responses to JEA's 2010 request for proposals (RFP) soliciting vendors to provide wholesale voice services. With JEA staff input, he developed the evaluation system and scoring matrix to ensure a balanced approach that best met JEA's needs. Responses were evaluated on the basis of strategic fit, operational fit, reliability, and overall cost; recommended two respondents as finalists for further consideration by JEA; and assisted JEA in negotiating with those finalists. As a final step in the process, CTC presented to JEA management a written report recommending the "best-fit" vendor.
- Completed a business and technology plan for Los Angeles Department of Water and Power (LADWP) to determine the feasibility of expanding the connectivity services offered to the businesses and institutions over the Department's fiber network. Included in the analysis was a valuation of additional fiber routes that LADWP acquired from the City of Los Angeles.
- Served as a business consultant to the City and County of San Francisco. Investigated the feasibility of the city building and operating a fiber-to-the-premises (FTTP) network to every home and

business in San Francisco. The project included an analysis of multiple business models and business recommendations customized for San Francisco's unique circumstances.

- Developed a business case analysis for DC-Net, a District-owned and operated fiber optic telecommunications network that provides voice and data services. The network consists of resilient, interconnected fiber optic rings that connect more than 400 government buildings in the District, including Police Department, Emergency Management Agency, and Fire Department radio towers.
- Conducted a feasibility study, a business case analysis, and an "off-the-balance-sheet" benefits analysis for a fiber-optic network proposed by the mayor of the City of Seattle. The first study, FTTP Municipal Broadband Risks and Benefits Evaluation, sponsored by Seattle City Light, included the following elements:
    - Internal needs analysis
    - Market research of both residential and business
    - Assessment of competing services and technologies
    - Evaluation of the business case and business risks

  Following on that report, Mr. Asp researched and wrote an FTTP Benefits Evaluation for the City, which explored the benefits of FTTP beyond the traditional balance sheet, including cost avoidance, monetary savings, and environmental impact.
- Performed an expert assessment of a business and marketing plan for Utah Telecommunication Open Infrastructure Agencies (UTOPIA's) open access FTTP network. The project included a strategy session with key stakeholders, collection of relevant background material, an analysis of UTOPIA market research and marketing models, and an independent evaluation of UTOPIA's business plan. Mr. Asp's work focused on improving the participating UTOPIA communities' ongoing cash flow and increasing participation of households and businesses in those communities.
- Prepared a fiber optic business plan for Richland Utilities, Washington to meet the needs of city facilities, the electric utility, schools, hospitals, banks, and other institutions. Work included preparation of various business models, review of operational requirements, and preparation of pro-forma financial statements.
- Provided extensive business planning assistance to the State of Maryland's One Maryland program, which lead to build an interconnected fiber-optic broadband network that reaches every county and city in Maryland and will provide backbone and middle-mile capacity for commercial carriers.
- Managed project assisting Bountiful City, UT with the development of a business plan for a citywide wireless network. This project included the review of a conceptual design, reviewing proposed business relationships and staffing, and conducting a cost-benefit analysis.
- Project manager in assisting Ames, IA with the review of existing architecture, development of a network design, and preparation of detailed cost estimates for the acquisition and installation of WiFi hot spots and supporting infrastructure. This project has now moved into implementation preparations.
- Led consulting team in investigating WiFi deployment models, development of a business plan (including market research and financial analysis), and development of a partnership RFP for St. Louis Park, MN. Mr. Asp assisted the city to pilot the network and then prepared specifications and bid documents to identify both integrators and operators for the network.
- Assisted the City of Tucson, AZ with a wireless feasibility study that included market research, competitive industry assessment, internal and external needs assessments, financial analysis, and the development of a business plan.

- Assisted in the implementation of an Institutional Fiber Network (I-Net) for Norwich (CT) Public Utilities. Project included development of a plan and strategy for the Fiber Optic Enterprise.

DA, AMR, SCADA

In the areas of Distribution Automation (DA), Supervisory Control and Data Acquisition (SCADA), mobile radio, and Advanced Metering Infrastructure (AMI), Mr. Asp has assisted municipal utilities and public power cooperatives with extensive evaluative and design services. Specifically, he has prepared evaluations and submitted recommendations on AMI alternatives and benefits. He has assessed existing and evolving technologies and services to support AMI and DA for electric utilities and has developed and directed demonstration plans to test technologies to support distribution automation -- including providing recommendations for establishing vendor alliances, performing research and designs networks to combine multi-utility communications, and outlining, evaluating, and recommending communication requirements and options for electric utility DA, SCADA, mobile radio, and AMI.

TESTIMONY & VALUATION

In addition to assisting over 80 communities and counties in evaluating financial opportunities to provide voice, data, and video services, Mr. Asp has provided financial and technical testimony and expert advice. Some examples include:

- Conducted an exhaustive business case analysis and prepared expert witness testimony on behalf of the City of Alameda in a federal court case involving the business practices, business results, and ultimate sale of its fiber optic enterprise. The testimony included a comparative analysis of business models employed by municipal fiber networks nationwide and a review and valuation of several recent cable business transactions.
- Maryland Public Service Commission regarding Baltimore Gas & Electric's application for deployment of AMI and smart grid technologies. Written and sworn testimony included an analysis of smart grid technologies, vendor development, and impact to rates.
- Pacific Gas & Electric regarding the financial and technical viability of the use of Broadband over Power line (BPL) for Automatic Meter Reading (AMR) and support of new business opportunities. Mr. Asp prepared a report in anticipation of being called to testify before the California PUC
- The City of Lebanon, OH in connection with a dispute over an Assessment of Infrastructure Connectivity Fee with home-builders and Time Warner Cable. The Assessment and disposition regarded the reasonableness of the connection fee assessed to each new home by the municipal telecom department
- The City of Marshal, MO in determination of the value of the incumbent cable television system owned and operated by Time Warner.

EDUCATION

Bachelor of Science, Electrical Engineering, North Dakota State University, 1979
Master of Business Administration, University of St. Thomas, St. Paul, 1989

Matthew DeHaven | Principal Engineer and Project Manager

Matthew DeHaven specializes in wired and wireless communications and broadband telecommunications technology for public safety and other local government and institutional needs. He has over 13 years of extensive engineering experience designing, developing, installing, and overseeing integration of local and wide area networks for institutional, public safety, and Intelligent Transportation System (ITS) applications, video-networking solutions, and unified communications systems.

Mr. DeHaven has experience at many levels of network design, procurement, and implementation for high-capacity metropolitan-area networks to support converged video, voice, and data communications. He leads network designs and the preparation of specifications for competitive bid processes, serves as project manager overseeing implementation and testing for a wide range of government clients. Mr. DeHaven prepares designs and cost models to support decision-makers in the deployment of a range of data network technologies, traditional telephone systems, voice-over-IP (VoIP) networks, one-way video distribution, and two-way videoconferencing. His data network experience includes work with SONET, Ethernet, and ATM networks using a range of fiber optic, copper, and wireless technologies. He serves as CTC's lead engineer on numerous wide area network projects.

Among many other projects, he served as a one of the primary technical architects for the 19 jurisdiction fiber optic/microwave network currently deployed in the National Capital Region (NCRnet) to support public safety interoperable communications.

Inter-County Broadband Network

Originally serving as part of the grant application development team that successfully led the State of Maryland to a $115 million Broadband Technology Opportunities Program (BTOP) administered by the National Telecommunications and Information Administration (NTIA), Mr. DeHaven served as the Portfolio Manager for the One Maryland Inter-County Broadband Network BTOP grant project.

The ICBN is a nine-jurisdiction consortium in central Maryland led by Howard County, Maryland, and is a key sub-recipient of the State's grant award. Mr. DeHaven is the lead technical consultant overseeing the use of approximately $72 million in grant funds to build over 800 miles of fiber optics and directly connect approximately 650 community anchor institutions, including schools, libraries, government buildings, community colleges, and public safety agencies. Mr. DeHaven was tasked with overseeing numerous engineering and construction contractors, as well as playing a key role in overall network design during this aggressive three-year endeavor that began in late 2010.

Wireless Communications

Mr. DeHaven assesses clients' existing and projected wireless broadband needs and recommends potential strategies for using new technologies to enhance and improve network operations and services. Some select examples of his ongoing and past projects include:

- Engineering support of the ongoing deployment of a citywide 4.9 GHz public safety radio mesh network for the City of Port Angeles, WA. CTC conducted a needs assessment of the city's network and reviewed public safety mobile data communications considerations, which led to the development of network specifications and overseeing the procurement for the expansion of the city's fiber network and a citywide wireless network serving both public safety and public access needs.

- Provided an updated assessment and review to Cincinnati, OH of the city's current networks and recommended updates to the long-term strategic plan originally prepared in 2004. This project involves assessing and identifying new department and network application needs, assessing the current networks to meet identified needs, assessing emerging fiber and wireless technologies, recommending wireless strategies, and providing recommendations and strategies for meeting foreseeable needs.
- Developed a strategic plan for a wireless data network to meet public safety and local government needs in Seattle, WA. CTC previously conducted a feasibility study that identified theseneeds.
- Design of a broadband wireless network for Annapolis, MD that provides connectivity for a citywide video surveillance system. The network was designed to provide high-degrees of security and have substantial reserve capacity to support the addition of new video requirements, expand toll-quality IP-based voice and data services, and, potentially, provide backhaul for a future mobile wireless solution.
- Oversight of the design and implementation of a "wireless downtown" for Skokie, IL to enhance economic development and Internet accessibility for residents and visitors.
- Project oversight in developing an infrastructure plan to support the implementation of WiFi services throughout a downtown area targeted for economic development in Rockville, MD. The plan focuses on deploying a flexible architecture of physical support infrastructure to enable a wide range of wireless connectivity options for visitors, residents, and business tenants while maintaining the aesthetics of the development.
- Evaluation of bids from wireless service providers who responded to the city of Mesa, AZ's RFP. CTC also, in an earlier phase of the project, provided an assessment of WiFi technology and potential expansion of the fiber-optic infrastructure via mass wireless communications—potentially for an intelligent transportation system application and for free Internet access for citizens.
- Research on current and future wireless technologies and evaluation of the feasibility of implementing a secure public safety wireless network in Prince George's County, MD. Designed and implemented a pilot project to test the feasibility of a public safety network. A successful solution was deployed to enable Mobile Data Computers in emergency response vehicles to securely roam from a carrier CDMA network to private, County-operated WiFi hotspots.

Public Safety Networking

In addition to supporting the design and deployment of NCRnet, Mr. DeHaven is the lead engineer responsible for one of the key applications leveraging this regional network. Mr. DeHaven is responsible for the design, implementation, and ongoing operations of a regional videoconferencing network supporting Emergency Management among the 21 jurisdictions in the National Capital Region (DC, MD, VA). CTC developed the systems' designs and oversaw implementation under a grant from the Department of Homeland Security Urban Areas Security Initiative (UASI). This network now serves thousands of end users, integrated tightly with the ever growing videoconferencing and VoIP systems leveraged by these jurisdictions.

In Anne Arundel County, MD, Mr. DeHaven assisted with the deployment of traffic surveillance cameras. He provided analysis of candidate technical solutions for cameras using the County's high-speed fiber-optic I-Net to transport video and control signals, developed system specifications, and oversaw the implementation of the County's video surveillance capabilities.

Mr. DeHaven was also involved in the planning and implementation of a statewide network in Delaware for the purpose of providing traffic information and traffic control capabilities to transportation management facilities. Such a network allows remote control of traffic signal systems and variable message displays, while providing real-time traffic surveillance in the form of video images and microwave sensor data. He has developed expertise in the numerous forms of technology used in this type of project, ranging from fiber optics to wireless digital spread-spectrum communications.

Mr. DeHaven serves as CTC's lead engineer with respect to the Delaware Department of Transportation's Advanced Traffic Advisory Radio System, the first Advanced TARS system in the country. In that capacity, he is responsible for training and advising on-site staff, specifying and installing new equipment, and monitoring performance of the system.

Video and Broadcast Communications Engineering

Mr. DeHaven's experience includes the management, design, and procurement of video, voice, and data networks. Some select examples of his recent project work include:

- Analysis of the technical options to allow The Rockville Channel (Rockville, MD) to support live cablecasting from multiple facilities, including the implementation of an IP-based video and audio transmission system. He also managed the relocation of the master control and studio production systems for The Rockville Channel. CTC successfully executed the relocation during the tight window of opportunity between live production events, while making enhancements to system layout and cabling infrastructure and keeping the channel "on-air" during the process.
- Development and implementation of videoconferencing and teleconferencing tools for the 21 jurisdictions in the National Capital Region (DC, MD, VA) Emergency Operations Centers (EOCs) and Emergency Communications Centers (ECCs) over a state-of-the-art fiber-optic and microwave network.
- Preparation of system-level design recommendations and cost estimates for an extensive, countywide system to support interactive and on-demand video training communications for the Anne Arundel (MD) County Fire Department. CTC also developed the design for a video display system for the Fire Department's new dispatch center, intended to allow key sources of information to be prominently displayed throughout the facility.
- Preparation of system-level design recommendations and cost estimates for an extensive, citywide system to support interactive and on-demand video communications for training, emergency collaboration, and routine meetings between Mesa, AZ Fire Department personnel. CTC also integrated a pilot videoconferencing system to demonstrate certain capabilities of the system design.
- Development of a videoconferencing system for homeland security applications on behalf of Arlington County, VA—the site of the September 11, 2001 Pentagon attack. The system links numerous public safety and other government users and aims to ensure uninterrupted emergency communications in the event of a terrorist attack or natural disaster.

Instruction/Expertise

Mr. DeHaven led the CTC research team in preparing Web-based Intelligent Transportation System (ITS)-Communications courses on behalf of the University of Maryland Center for Advanced Transportation Technology. He has served as an online instructor for these courses for more than six years.

EDUCATION

Bachelor of Science, Electrical Engineering, in progress, The Johns Hopkins University

PUBLICATIONS/COURSES

- "What's the Fuss About Fiber? A Comparative Analysis of Fiber and Copper Physical Media," Journal of Municipal Telecommunications Policy, Spring 2009.
- "Deploying Public Safety Networks: Costs and Benefits – 4.9 GHz for Video Surveillance," presented at annual SEATOA Conference, April 2008.
- "Busting the Technology Myths," presented at NATOA Conference, October 2007.
- "WiFi and Beyond: Taming Technology for your Community," presented at the annual TATOA Conference, August 2007.
- "Looking Beyond Traditional I-Nets: NSCC Case Study," presented at the annual TATOA Conference, August 2007.
- "Magical Solutions for Public Safety Wireless," presented to the National Association of Telecommunications Officers and Advisers, September 2006.
- "VoIP and Enhanced 911 Services: A Primer on the Technology and its Limitations," Journal of Municipal Telecommunications Policy, Fall 2005.
- "IP Technologies: An Overview for Local Government," presented at the annual NATOA Conference, September 2005.
- "Homeland Security Applications Over the I-Net," NATOA Conference, 2002.

Charlie Hamm | GIS Specialist and Staff Engineer

Charlie Hamm works with a range of geographic design programs—including AutoCAD, ESRI ArcGIS, Google Earth, Microsoft Streets and Trips, and Quantum GIS—to enable large-scale network design and construction projects, as well as to illustrate geographic data for feasibility studies. He creates databases and maps to support network route planning, utility pole attachment, and permit application processes.

EXPERIENCE

Columbia Telecommunications Corporation, *GIS Specialist/Staff Engineer*, 2011 – present

Charlie researches, aggregates, and manipulates data to create maps essential to projects. His specific client engagements have included the following:

Prince George's County, Maryland

- Created GIS shapefiles to document the locations of cellular antennas within the county

Inter-County Broadband Network (ICBN)

Provided GIS map management and design for the ICBN, a sub-grantee of the State of Maryland's federally funded One Maryland Broadband Network (OMBN):

- Used Visio to generate splice matrices for the contractors connecting fibers in Prince George's, Montgomery, and Anne Arundel counties
- Created GIS maps based on data developed during the update to the project's Environmental Assessment
- Developed overview maps of the ICBN build for project managers
- For a related fiber-to-the-premises (FTTP) project in a portion of Anne Arundel County:
    - Entered field notes into GIS
    - Generated bills of materials (BOMs)
    - Applied for environmental, county, and state permits
    - Used Visio to generate splice matrices for contractors

Garrett County, Maryland

- Analyzed data on availability of broadband service to identify unserved areas
- Created shapefiles in ESRI ArcGIS for incorporation into the county's GIS database

Arlington County, Virginia

- Assist county and CTC engineers in creating system-level drawings of last-mile engineering for ConnectArlington, the county's municipal fiber network
- Oversee incorporation of countywide fiber optic design into county's GIS database

Carroll County, Maryland and Spotsylvania County, Virginia

- Analyzed residential cable service to determine compliance with the counties' franchise agreements and develop strategies for franchise renewal negotiations
- Converted Bentley data into GIS format for analysis of broadband service

National Capital Region Interoperability Program

- Create and update as-built documentation for the NCRnet fiber network in Visio
- Provide ongoing mapping support for expansion of NCRnet

- Acted as primary point of contact for the construction contractor that built a grant-funded Maryland Department of IT fiber link connecting two sites

Northern Illinois University (NIU)

- Geocoded survey results to generate GIS maps

U.S. Postal Service (USPS)

- Searched the National Broadband Map database to identify and analyze data related to broadband connectivity near postal facilities nationwide
- Manipulated CSV files for multiple states to create maps of broadband service availability based on the FCC's definition of underserved areas

Anne Arundel County, Maryland

- Performed OTDR and power meter testing for fiber acceptance

James Madison University, *Research Assistant,* 2010

- Created a GIS map of student enrollment for the campus

Virginia Department of Game and Inland Fisheries, *Extern*, 2009

- Measured and recorded fish data

EDUCATION

James Madison University

B.S., Geographic Science, 2011

- Dual concentration in Applied Geographic Information Science (AGIS) and Environmental Concentration, Sustainability and Development (ECSD)

ESRI Training Courses

- Learning ArcGIS Desktop, 2010
- Creating and Maintaining Metadata Using ArcGIS Desktop, 2010
- Cartographic Design Using ArcGIS 9, 2009

Software Skills

- AutoCAD, ESRI ArcGIS, Google Earth, GPS Pathfinder Office
- Microsoft Streets and Trips, Quantum GIS, Remote sensing software

Marc Schulhof | Senior Analyst and Technical Writer

Marc Schulhof has more than 20 years of experience in technical writing, financial journalism, and public and corporate communications. Marc's excellent editorial skills and his extensive experience with analyzing IT and business topics have enabled him to play an integral role in supporting a range of research and writing projects, including:

- Master plans (business and engineering)
- Needs assessments
- Feasibility studies
- Survey instruments
- Expert witness testimony
- Federal grant applications
- Requests for proposal
- Requests for information
- Cellular tower siting reports
- Letters, press releases, and website content

Prior to joining CTC, Marc was the worldwide editor-in-chief of CIO program websites at IBM, where he established editorial direction for 36 country-specific CIO websites and worked with local editors to update each site's mix of multimedia content. He also wrote and edited feature articles and white papers on information technology and business topics.

Marc's experience includes his role as a global editor at PricewaterhouseCoopers Consulting, where he wrote and edited reports on a variety of technology and business topics, and served as editor of the PwC-sponsored *BusinessWeek Online Handheld Edition* daily news summary for mobile device users. Earlier in his career, as an associate editor at *Kiplinger's Personal Finance Magazine,* he researched, analyzed, and wrote about a range of complex financial issues.

Marc has also written and edited articles on a variety of topics for numerous non-profit organizations and associations, including the National Coalition for Cancer Survivorship and the American Society of Clinical Oncology.

EDUCATION
Bachelor of Science, Journalism, Northwestern University
Master of Science, Journalism, Northwestern University

Eric Wirth | Senior Project Engineer

EXPERIENCE SUMMARY

Eric Wirth has more than nine years of communications engineering experience; he specializes in evaluating broadband (video, voice, and data) telecommunications networks, analyzing emerging broadband technologies, and designing broadband networks for institutional uses. In addition, Mr. Wirth is conducting extensive and ongoing research on applications for Internet Protocol (IP) technology, including video-over-IP (VoIP) for video transmission over wide area networks, video conferencing, and other communication applications for wide area networks.

Utility and Public Safety Fiber Optic Networking

Mr. Wirth's experience includes the design and implementation of a variety of fiber optic communications network. Some select examples of his work include:

- Design and pricing of fiber optic cable, electronics, and overall architecture of a survivable emergency communications system for Tennessee Valley Public Power Association (TVPPA) distributors. The design included MPLS and DWDM technology, and leveraged TVPPA and distributor fiber.
- Design and implementation of a fiber optic network for Norwich (Connecticut) Public Utilities. The project consisted of developing detailed fiber optic route design and cost estimates, network electronic design and cost estimates (including SCADA transportation), and a request for proposals (RFP) for Norwich's use in selecting a contractor to complete the installation. In addition to serving the utility's needs, the fiber optic network was designed to serve city, schools, and hospital users.
- Fiber optic network and electronics design, and RFP development, for the City of Dover, Delaware Electric Department. Mr. Wirth developed a fiber optic network design to provide additional redundancy and functionality for the existing city fiber optic network. In addition, he developed a network electronics design to leverage the new fiber optic communications links to increase the reliability of the city's network.
- Fiber optic network design and feasibility analysis for the City of Palo Alto, California. The City is examining several fiber optic construction projects to expand its existing fiber optic network to further meet the needs of the city and surrounding school districts, and to increase the footprint of its commercial fiber optic network. As a municipal electric, Palo Alto is exploring several options for fiber optic design.

Wireless Communications

Mr. Wirth has extensive experience working on numerous wireless networking projects, from analysis and feasibility to design and implementation. These networks range in scope from small hot spots to area-wide and regional networks. Some representative examples of his projects include:

- Designing and overseeing the implementation of a citywide broadband wireless network project that will provide integrated communications and interoperability among all local public safety entities in the City of Port Angeles, Washington. The high-capacity 4.9 GHz broadband wireless network provides public safety staff in the field with full and timely access to state, federal, and GIS databases, and will allow EMS responders to access medical databases and support on-site telemetry of patient status. A commercial "open access" multi-provider wireless access system was deployed as a public–private partnership with a local Internet service provider (ISP); it

provides citywide WiFi services in the 2.4 GHz band. The city and the local ISP partner have developed a subscription package that is attractive to a wide range of commercial, residential, and public sector users.

- Designing a cost-effective broadband wireless network for the City of Annapolis, Maryland. This network serves as a backbone to provide connectivity for a video surveillance system throughout downtown Annapolis. The network has the capacity to meet all current needs, provide 99.999 percent availability, and have substantial reserve capacity to support the addition of new video requirements, expanded IP-based voice and data services, and support backhaul for a potential mobile wireless solution.
- Acting as lead engineer for the design and implementation of a microwave network to enable communications between public health agencies in Maryland and the District of Columbia. The microwave project is designed to provide connectivity to area hospitals to ensure reliable communications and data sharing in the event of problems with the public communications infrastructure. In addition, the robust microwave connectivity allows for day-to-day data sharing, voice communications, and interoperable communications. This connectivity will provide the transport mechanism necessary for patient tracking and other information sharing platforms.

Public Safety Networking

Some representative examples of Mr. Wirth's projects include:

- Designed, implemented and tested a backhaul network for the Arlington County, Virginia public safety radio network. The backhaul network consists of SONET equipment over a county-owned fiber optic network that increases the reliability and availability of the public safety radio system.
- Lead engineer for the design and implementation of a 19-jurisdiction regional fiber optic public safety interconnection network in the National Capital Region (DC, MD, VA). NCRnet provides an interoperable, robust, and reliable fiber infrastructure to augment the communication capabilities of first responder communities in the NCR. These communities include local and regional law enforcement, fire, emergency management, transportation, and public health agencies.
- Performed radio frequency (RF) coverage analysis and prepared design recommendations for improving public safety radio coverage for Warren County, Pennsylvania. Included analysis of the county's existing public safety radio system and recommendations to improve coverage for both the county's public safety radio system and commercial cellular.
- Collaborated on the development of a master telecommunications plan for the Delaware Department of Transportation. The plan acts as a guide for the department to consolidate several disparate network environments into a unified communications network capable of supporting current and future transportation and public safety applications. Part of the plan involves developing a system-level design that incorporates fiber optics, microwave, and land-mobile radio. The plan requires coordination among a variety of state agencies to develop a network that meets the department's critical public safety requirements.

Video and Broadcast Communications Engineering

Mr. Wirth's experience includes the design and implementation of video, voice, and data networks. Some select examples of his work include:

- Designed and implemented a public, educational, and governmental (PEG) access and monitoring network for Montgomery County, Maryland. The network uses IP-based video encoders and the

County's state-of-the-art IT network to improve the quality and functionality of video transport throughout the county.

- Developed a design and integration solution for cablecast channels for Monterey County, California. Analyzed the existing audio-visual and broadcast systems and developed recommendations for future development. Designed an IP-based video server system capable of recording and airing live meetings and scheduling cable/broadcasts. Completed on-site integration, testing, and training on the video server system.
- Designed and implemented state-of-the-art videoconferencing and teleconferencing tools for the 19 jurisdictions in the National Capital Region Emergency Operations Centers (EOCs) and Emergency Communications Centers (ECCs). CTC developed the systems' designs and oversaw implementation to interconnect the EOCs and ECCs throughout the region, under a grant from the U.S. Department of Homeland Security Urban Areas Security Initiative (UASI).

EDUCATION

Bachelor of Science, Electrical Engineering, University of Virginia, School of Engineering and Applied Science, Charlottesville, Virginia, 2004.

PRIOR TO COMING TO CTC IN 2004

1998-2003, Technician, Schnabel Engineering, Inc., Baltimore, Maryland

PROFESSIONAL CONSULTING CONTRACT

This Agreement is made effective as of December 1, 2016 by and between Columbia Telecommunications Corporation d/b/a CTC Technology & Energy, a Maryland corporation ("CTC") of 10613 Concord Street, Kensington, Maryland 20895, and the City of Mt. Shasta, of 305 N. Mt. Shasta Boulevard, Mt. Shasta, California 96067; the City of Dunsmuir, of 5915 Dunsmuir Avenue, Dunsmuir, CA 96025; and the City of Weed, of 550 Main Street, Weed, CA 96094 ("CITIES").

IN CONSIDERATION of the terms and conditions herein set forth, and other good and valuable consideration, the parties agree as follows:

1. Relationship of Parties. It is understood by the parties that CTC is an independent contractor with respect to the CITIES, and not an employee, agent or servant of the CITIES and CTC will not hold itself out as an employee, agent or servant of the CITIES. The CITIES will not provide fringe benefits, including health insurance benefits, paid vacation, or any other employee benefit, for the benefit of CTC. CTC shall have no authority to bind the CITIES for the performance of any service or to otherwise obligate the CITIES in any manner. CTC's duties are specifically limited to those assigned hereunder. The CITIES does not reserve any direction or control with respect to the activities of CTC; the manner, means and times by and during which CTC provides services shall be determined by CTC within the guidelines of this Agreement.

   Further, the parties acknowledge that the independent contractor relationship created hereunder does not cause the CITIES to be liable for any employment or withholding taxes, it being understood that CTC is solely responsible for any and all federal, state or local income, withholding or other taxes due as a result of compensation paid to CTC hereunder.

2. Description of Services. CTC will provide services in per the Statement of Work attached hereto as Appendix A.

3. Performance of Services. CTC will work under its own direction and supervision. CTC shall perform all tasks and assignments listed under Description of Services hereunder to the best of its ability and to the satisfaction of the CITIES; however, CTC shall be responsible for its own conduct and the conduct of any employees, suppliers or agents hired by CTC, while engaged in the performance of this Agreement. CTC shall furnish all labor, materials, tools and equipment required for the performance of services hereunder, except as specifically described herein or in the Scope of Work attached as Appendix "A". CTC agrees that all materials and workmanship shall be in compliance with all applicable codes, industry standards, and the requirements of any governmental agencies having jurisdiction. CTC hereby acknowledges that it will abide by all safety regulations. All work performed by CTC will be in accordance with any warranties arising under applicable law.

4. Payment. The CITIES will pay CTC for services rendered at the following hourly rates per the Statement of Work (See Appendix A):

Labor Category	Rate
Director of Business Consulting / Engineering	$170
Principal Analyst / Engineer	$160
Senior Project Analyst / Engineer	$150
Senior Analyst / Engineer	$140
Staff Analyst / Engineer	$130
Communications / Engineer Aide	$ 75

CTC's billing rates are inclusive of routine costs, profit, and overhead. CTC will provide to the CITIES monthly bills for hours worked, inclusive of expenses incurred for travel.

Upon termination of this Agreement, payments under this section shall cease; provided, however, that CTC shall be entitled to payments for periods or partial periods that occurred prior to the date of termination and for which CTC has not yet been paid.

5. Costs and Materials. CTC agrees to obtain, at its cost, the necessary permits or licenses required by any governmental or other authorities in connection with this Agreement. CTC shall be fully responsible for the care and protection of all materials necessary for the performance of this Agreement, whether such materials are supplied by CTC or the CITIES.

6. Term/Termination. The term of the Agreement is one (1) year beginning on the date of execution of this Agreement. This Agreement may be terminated by either party at any time upon thirty (30) days written notice to the other party. The Final Report described in the attached Scope of Work (Tasks 1-8) shall be completed and delivered to the CITIES no later than April 1, 2017.

7. Disclosure. CTC is required to disclose any outside activities or interest, including ownership or participation in the development of prior inventions, that conflict or may conflict with the best interests of the CITIES.

8. Insurance. CTC hereby represents that it maintains, and agrees to furnish to the CITIES, upon request, certificates of insurance for the following forms of insurance with the following minimum coverage levels:

   a. Workers compensation insurance: in accordance with applicable law
   b. Motor vehicle liability insurance: $1,000,000
   c. Public liability insurance and property damage insurance: $2,000,000
   d. Professional liability insurance: $5,000,000 per occurrence/ $5,000,000 claims made

   All insurance is to be obtained from accredited insurance carriers reasonably acceptable to the CITIES. CTC acknowledges its obligation to obtain appropriate insurance coverage for its own benefit and the benefit of the CITIES.

9. Disputes. If any disputes arise out of this contract, CTC and the CITIES shall first

attempt to negotiate the dispute in accordance with the JAMS procedures for negotiation of commercial disputes. If negotiation fails, the parties shall attempt mediation in accordance with the JAMS procedures in advance of any arbitration. Any disputes not resolved by negotiation or mediation will be resolved by binding arbitration of a JAMS neutral arbitrator jointly-selected by the parties. Any dispute, claim or controversy arising out of or relating to this Agreement or the breach, termination, enforcement, interpretation or validity thereof, including the determination of the scope or applicability of this agreement to arbitrate, that is not resolved by negotiation or mediation shall be determined by arbitration in Sacramento, California before one arbitrator. The arbitration shall be administered by JAMS pursuant to its Comprehensive Arbitration Rules and Procedures and in accordance with the Expedited Procedures in those Rules. Judgment on the Award maybe entered in any court having jurisdiction. This clause shall not preclude parties from seeking provisional remedies in aid of arbitration from a court of appropriate jurisdiction. The cost for the services to obtain a resolution will be equally split between CTC and the CITIES.

10. Return of Records. Upon termination of this Agreement, CTC shall deliver all records, notes, data, memoranda, models, and equipment of any nature that are in CTC's possession or under CTC's control and that are the CITIES property. The work product of this contract, including but not limited to drafts as well as final reports, shall be the CITIES property.

11. Notices. All notices required or permitted under this Agreement shall be in writing and shall be deemed delivered when delivered in person or deposited in the United States mail, postage prepaid, addressed as follows:

If for CTC:

Joanne S. Hovis, President
Columbia Telecommunications Corporation
10613 Concord Street
Kensington, Maryland 20895

If for the CITIES:

City of Mt. Shasta
Jeffrey Collings, Mayor
305 N. Mt. Shasta Boulevard
Mt. Shasta, California 96067

City of Weed
Ken Palfini, Mayor
550 Main Street
Weed, CA 96094

City of Dunsmuir
Josh Spurlock, Mayor

5915 Dunsmuir Avenue
Dunsmuir, CA 96025

Such address may be changed from time to time by either party by providing written notice to the other in the manner set forth above.

12. Entire Agreement. This Agreement contains the entire agreement of the parties and there are no other promises or conditions in any other agreement whether oral or written. This Agreement supersedes any prior written or oral agreements between the parties.

13. Amendment. This Agreement may be modified or amended if the amendment is made in writing and is signed by all parties.

14. Severability. If any provision of this Agreement shall be held to be invalid or unenforceable for any reason by a court of competent jurisdiction or by appropriate County or other governmental authorities, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of this Agreement is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

15. Waiver of Contractual Right. The failure of any party to enforce any provision of this Agreement shall not be construed as a waiver or limitation of that party's right to subsequently enforce and compel strict compliance with every provision of this Agreement.

IN WITNESS WHEREOF, the parties have set their hands and seals as of the dates set forth below.

WITNESS/ATTEST:

Columbia Telecommunications Corporation

_____ By:_____
Joanne Hovis, President

Date:_____

City of Mt. Shasta

_____ By:_____
[Jeffrey Collings, Mayor]

Date:_____

City of Weed

_____ By:_____
[Ken Palfini, Mayor]

Date:_____

City of Dunsmuir

_____ By:_____
[Josh Spurlock, Mayor]

Date:_____

Appendix A: Scope of Work (Tasks 1-8)

City Council Agenda Item
New Business

Item No: 13.A.
Date: December 15, 2016
Subject: Consider and provide direction to staff regarding initiation of meet and confer process with employees' union for July 1, 2017 and beyond

The Operating Engineers Local Union No. 3 Representative for City employees has requested that "negotiations" begin. It is the thinking of employees that this can be completed before new City Manager is appointed and not be a burden to that person when they start work.

Interim City Manager is willing to take on this assignment and also initiate conversations with management employees, Finance Director and Fire Chief.

The existing Memorandum of Understanding with City employees covers the period July 1, 2013 to June 30, 2017.

Recommendation:

OPERATING ENGINEERS LOCAL UNION NO. 3

20308 ENGINEERS LANE, REDDING, CA 96002 • (530) 222-6093 • FAX (530) 222-6097

Jurisdiction: Northern California, Northern Nevada, Utah, Hawaii, and the Mid-Pacific Islands

November 30, 2016

City of Dunsmuir
Randy Johnsen, Interim City Manager
5915 Dunsmuir Avenue
Dunsmuir, CA 96025

Re: Request to open negotiations to meet and confer to establish a successor agreement on behalf of the City employees represented by Operating Engineers Local Union No. 3.

Mr. Johnsen,

As you are aware the Memorandum of Understanding between the City of Dunsmuir and Operating Engineers Local Union No. 3, expires on June 30, 2017. I have met with our members and am prepared to meet with the City to negotiate a successor agreement.

I am aware that the City is in a transitional period and that you are serving in the capacity of Interim City Manager while the City conducts recruitment for a permanent City Manager. However, I am also aware that you have served as the Interim City Manger for the City of Dunsmuir previously, understand the needs of the City, have a strong grasp of the City's current budget and years of experience working for other municipalities. Therefore, I request that the City enter into negotiations with you acting as the Chief Negotiator for the City.

Should the City agree to open negotiations, please provide me with a list of dates and times you are available to meet.

Sincerely,

Art W. Frolli, Business Representative

City Council Agenda Item
New Business

Item No: 13.B.
Date: December 15, 2016
Subject: Consider and introduce and pass first reading of Ordinance No. 2016- amending and updating parking regulations contained in the Zoning Ordinance

The Planning Commission held several meetings to deliberate on changes to parking regulations that will apply to new construction. Existing development is not affected.

The changes are extensive and shown in Attachment A to the draft Ordinance.

City Planner Arlene Dinges will present this item and explain the changes.

Recommendation: Move to read by number and title only.

Move to introduce and pass first reading of Ordinance No. 2016- An Ordinance of the City Council of the City of Dunsmuir Amending Sections 17.12.020. 17.12.030, 17.12.040, 17.12.050, 17.12.060, 17.12.070, 17.12.080, 17.12.090, and 17.12.100 of the Dunsmuir City Code and adding Section 17.28.145 to the Dunsmuir City Code to update parking requirements in the Zoning Ordinance.

Move to set January 15, 2016 regular meeting for public hearing and consideration of second reading and adoption of Ordinance No. 2016- .

ORDINANCE NO.

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF DUNSMUIR AMENDING SECTIONS 17.12.020, 17.12.030, 17.12.040, 17.12.050, 17.12.060, 17.12.070, 17.12.080, 17.12.090, and 17.12.100 OF THE DUNSMUIR CITY CODE AND ADDING SECTION 17.28.145 TO THE DUNSMUIR CITY CODE TO UPDATE PARKING REQUIREMENTS IN THE ZONING ORDINANCE

WHEREAS, amendments to Title 17 may be initiated by the Planning Commission on the adoption of a Resolution of Intent, per 17.24.020.C; and

WHEREAS, the City Planning Commission did approve such Resolution of Intent at its November 9, 2016 regular Planning Commission meeting after receiving public input at public hearing thereon; and

WHEREAS, the Planning Commission recommends the revisions found in the attachment to this document to revise parking requirements for new uses in the City, except those in the Historic District; and

WHEREAS, the Planning Commission found that this project enjoys a Class 3e (accessory structures) categorical exemption from CEQA per 14 CCR 15303.

NOW, THEREFORE, BE IT ORDAINED by the Dunsmuir City Council as follows:

1. that this item enjoys a Class 3e (accessory structures) categorical exemption from CEQA per 14 CCR 15303; and

2. that the information contained in Attachment A hereto is made a part of this Ordinance; and

3. that the City Council of the City of Dunsmuir hereby adopts Ordinance No. to amend certain text in Sections 17.12.020, 17.12.030, 17.12.040, 17.12.050, 17.12.060, 17.12.070, 17.12.080, 17.12.090, 17.12.100 of the Dunsmuir City Code and hereby adds Section 17.28.145 to the Dunsmuir City Code.

Introduced and first read at a regular meeting of the City Council of the City of Dunsmuir held on the 15th day of December, 2016 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

Second reading and adoption followed a public hearing hereon held at a regular meeting of the Dunsmuir City Council on the 5th day of January, 2017 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAINING:

_____
Josh Spurlock, Mayor

ATTEST:

_____
Julie Iskra, Deputy City Clerk

Attachment A for Ordinance No. 2016-____ (Parking Requirements)
All new text is shown as **Bold type.** All deleted text is shown as ~~struck through~~

- **17.12.020 - Single-family residential R-1 district.**

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
Single-family dwellings	No	30	6,500	5,500	65	55	40%
Accessory buildings, if constructed concurrently with, or subsequent to the main building or use	No	15	—	—	—	—	40% of the rear yard
Second single-family dwelling	No	30	—	—	—	—	40%

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
Employee housing - small	No	30	6,500	5,500	65	55	40%
Supportive housing	N0	30	6,500	5,500	65	55	40%
Transitional housing	No	30	6,500	5,500	65	55	40%
Group care homes - small	No	30	6,500	5,500	65	55	40%
Group care homes - large	Yes	To be determined on an individual basis					
Churches	Yes	45	10,000	10,000	60	60	60%
Public buildings and schools	Yes	35	10,000	10,000	60	60	60%
Parks and playgrounds	Yes	35	10,000	10,000	60	60	60%

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
Landscaped public or private parking lots, when adjacent to any "C" or "M" district	Yes	35	6,500	6,000	65	60	10
Crop and tree farming, home occupations	Yes	As specified in the use permit					
One sign, not over 4 square feet in area and pertaining only to the sale, lease or rental of the property on which the	No	5	—	—	—	—	—

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
sign is located							

- **Single-family residential R-1 district**

Uses	**Minimum** Front Yard Required **(Feet)**	**Minimum Side Yard Required (Feet)**		**Minimum Rear Yard Required (Feet)**		**Minimum Lot Area** Per Family **Unit**	**Minimum Off-Street Parking Space Required** The planning commission may prescribe the amount of parking for uses not listed herein
		Corner Lot	**Interior Lot**	**Corner Lot**	**Interior Lot**		
Single-family dwellings	20	10	5	20	20	5,500	One garage or carport per dwelling
Accessory building, if constructed concurrently with, or subsequent to the main building or use	60	20	5	1	1	—	—
Second single-family dwelling	20	10	5	5	5	5,000	One ~~garage or carport per dwelling unit~~ **additional parking space**

Employee housing – small	20	10	5	20	20	5,500	One garage or carport per dwelling
Supportive housing	20	10	5	20	20	5,500	One garage or carport per dwelling
Transitional housing	20	10	5	20	20	5,500	One garage or carport per dwelling
Group care homes – small	20	10	5	20	20	5,500	One garage or carport per dwelling
Group care homes-large	To be determined on an individual basis						
Churches	20	10	10	20	20	—	One space for each ~~10~~ **5** individual seats or equivalent
Public buildings and schools	20	10	10	20	20	—	One space ~~for each classroom and office~~ **per employee plus one space for**

							every 100 square feet of meeting area or reception area.
Parks and playgrounds	20	10	10	20	20	—	None, unless specified in the use permit
Landscaped public or private parking lots, when adjacent to any "C" or "M" district	—	—	—	—	—	—	—
Crop and tree farming, home occupations	As specified in the use permit						
One sign, not over 4 square feet in area and pertaining only to the sale, lease or rental of the property on which the sign is located	—	—	—	—	—	—	—

- *(Ord. 524 § 3 (part), 2007; prior code App. A § 4.01)*

- **17.12.030 - Duplex residential R-2 district.**

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
All uses permitted in the R-1 district, Section17.12.010	As specified in the R-1 district, Section 17.12.010						
Duplexes (single structures)	No	35	6,500	5,500	65	55	50%
Large group care homes	Yes	To be determined on an individual basis					

-

•

Uses	Minimum Front Yard Required (Feet)	Minimum Side Yard Required (Feet)		Minimum Rear Yard Required (Feet)		Minimum Lot Area Per Family Unit	Minimum Off-Street Parking Space Required The planning commission may prescribe the amount of parking for uses not listed herein
		Corner Lot	Interior Lot	Corner Lot	Interior Lot		
All uses permitted in the R-1 district, Section 17.12.010	As specified in the R-1 district, Section 17.12.010						
Duplexes (single structures)	20	10	5	20	20	2,750	One garage or carport per dwelling unit
Group care homes - large	To be determined on an individual basis						

•

• *(Prior code App. A § 4.02)*

- **17.12.040 - Multiple-family residential R-3 district.**

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
All uses permitted in the R-2 district, Section 17.12.030	As specified in the R-2 district, Section 17.12.030						
Multiple-family dwellings	No	35	6,500	5,500	65	55	75%
Dwelling groups	Yes	35	6,500	5,500	65	55	75%
Single-room occupancy residential unit[2] [2] See Section 17.16.110	Yes	35	6,500	5,500	65	55	75%
Roominghouses, boardinghouses and fraternities	Yes	35	6,500	5,500	65	55	75%

Large group care homes	Yes	To be determined on an individual basis					
One sign, not over 4 square feet in area attached to the main building and pertaining to the use therein	No	15	—	—	—	—	—

Uses	Minimum Front Yard Required (Feet)	Minimum Side Yard Required (Feet)		Minimum Rear Yard Required (Feet)		Minimum Lot Area Per Family Unit	Minimum Off-Street Parking Space Required The planning commission may prescribe the amount of parking for uses not listed herein
		Corner Lot	Interior Lot	Corner Lot	Interior Lot		
All uses permitted in the R-2 district, Section17.12.030	As specified in the R-2 district, Section 17.12.030						
Multiple-family dwellings	20	10	5	10	20	1000	One ~~garage~~ **covered** space per dwelling unit
Group care homes – large	Yes	To be determined on an individual basis					
Single-room occupancy residential unit[2] [2] See Section 17.16.110	20	10	5	10	20	1000	One parking space for every two units
Dwelling groups	20	10	5	10	20	1,000	One garage or carport per

							dwelling unit
Rooming houses, boardinghouses and fraternities	20	10	5	10	20	1,000	One space for each 2 guest rooms
One sign, not over 4 square feet in area attached to the main building and pertaining to the use therein	—	—	—	—	—	—	—

- *(Prior code App. A § 4.03)*

- **17.12.050 - Multiple-residential and professional R-4 district.**

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
All uses permitted in the R-3 district, Section 17.12.040	As specified in the R-3 district, Section 17.12.040						
Lodges, clubs and private schools	No	35	6,000	5,000	60	50	75%
Clinics, rest homes and hospitals	No	35	6,000	5,000	60	50	75%
Professional offices	No	35	6,000	5,000	60	50	75%
Mortuaries	Yes	35	6,000	5,000	60	50	75%

Hotels (No commercial **accessory** use)	Yes	35	6,000	5,000	60	50	75%
Motels (No commercial **accessory** use)	Yes	35	6,000	5,000	60	50	75%
Trailer parks	Yes	35	6,000	5,000	60	50	75%
Pharmacy	Yes	35	6,000	5,000	60	50	75%
Large group care homes	Yes	To be determined on an individual basis					
One sign, not over 20 square feet in area, pertaining to permitted uses	No	15	—	—	—	—	—
Other signs pertaining to permitted uses	Yes	15	As specified in the use permit				

- **Multiple-residential and professional R-4 district**

Uses	**Minimum Front Yard Required (Feet)**	**Minimum Side Yard Required (Feet)**		**Minimum Rear Yard Required (Feet)**		**Minimum Lot Area Per Family Unit**	**Minimum Off-Street Parking Space Required** The planning commission may prescribe the amount of parking for uses not listed herein
		Corner Lot	**Interior Lot**	**Corner Lot**	**Interior Lot**		
All uses permitted in the R-3 district, Section 17.12.040	As specified in the R-3 district, Section 17.12.040						
Lodges, clubs ~~and private schools~~	15	10	5	15	15	—	~~One space for each 10 individual seats equivalent~~ **One space per employee plus one space for every 100 square feet of meeting or reception area**
Private School - Elementary & Jr. High	15	10	5	15	15	—	**One space per employee plus space for drop off and turn around and bus loading and unloading**

Private School – High School	15	10	5	15	15	—	**One space per five students plus one space per employee plus space for drop off and turn around and bus loading and unloading**
Private College or trade school							**One space per employee/teacher plus one per student at full enrollment**
Private Day Care – large							**One space per employee plus 2 spaces per 5 children**
Clinics, rest homes and hospitals	15	10	5	15	15	—	One space for each 300 square feet of gross floor area
Professional offices	15	10	5	15	15	—	One space for each 300 square feet of gross floor area
Mortuaries	15	10	5	15	15	—	One space for each 300 square feet of gross floor area
Hotels (no **accessory**	15	10	5	15	15	—	One space for **every** ~~each 4~~

commercial use)							guest rooms **plus 3 additional spaces for staff and loading**
Motels (no **accessory** commercial use)	15	10	5	15	15	—	One space for each unit **plus 3 additional spaces for staff and loading**
Trailer parks	15	10	5	15	15	—	One space for each unit
Pharmacy	15	10	5	15	15	—	One space for each 300 square feet of gross floor area
Large group care homes	To be determined on an individual basis						
One sign, not over 20 square feet in area, pertaining to permitted uses	—	—	—	—	—	—	—
Other signs pertaining to permitted uses	—	—	—	—	—	—	—

-

- *(Prior code App. A § 4.04)*

- **17.12.060 - Neighborhood commercial C-1 district.**

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
All uses permitted in the R-4 district, Section 17.12.050	As specified in the R-4 district, Section 17.12.050						
The following shops and stores: apparel, bakery (retail only), banks, barber, beauty, book, cleaning agencies, confectionery, department, drug, florist, food, gift, hardware, jewelry, millinery, news stands, office buildings, parking lots (approved by city engineer),	No	35	5,000 square feet for each main building		50	50	100% subject to all yard and parking requirements

personal service establishments , photographers, show repair, variety							
Restaurants	No	35	5,000	5,000	50	50	
Drive-in restaurants	Yes	35	5,000	5,000	50	50	
Launderettes, liquor store (off sale only)	Yes	35	5,000	5,000	50	50	
Theaters	Yes	35	5,000	5,000	50	50	
Service stations	Yes	35	9,000	9,000	90	90	
Group homes	Yes	To be determined on an individual basis					
Signs pertaining to any permitted use and including outdoor advertising structures	Yes	35	See Section 17.16.020(F)				

- **Neighborhood commercial C-1 district**

Uses	**Minimum** Front Yard **Required (Feet)**	**Minimum Side Yard Required (Feet)**		**Minimum Rear Yard Required (Feet)**		**Minimum Lot Area Per Family Unit**	**Minimum Off-Street Parking Space Required** The planning commission may prescribe the amount of parking for uses not listed herein
		Corner Lot	**Interior Lot**	**Corner Lot**	**Interior Lot**		
All uses permitted in the R-4 district, Section17.12.050	As specified in the R-4 district, Section 17.12.050						
The following shops and stores: apparel, bakery (retail only), banks, barber, beauty, book, cleaning agencies, confectionery, department, drug, florist, food, gift, hardware, jewelry, millinery, news stands, office buildings, parking lots (approved by	10 feet, except where the front yard is partially in an R district, in which case the front yard shall be the same as that yard required	5 feet, except that said side yard shall be one-half the yard required or existing on any abuttin	None, except where the side of a lot abuts an R district, in which case the side yard shall be 5 feet	None, except where the rear yard abuts on an R district, in which case the rear yard shall be 10 feet		—	One parking space for each 200 square feet or gross floor area One loading space for each 1,000 square feet of gross floor area

city engineer), personal service establishments, photographers, shoe repair, variety	in said R district	g key lot				
Restaurants					—	One parking space for ~~each 200 square feet of gross floor area~~ **every four seats or portion thereof**
Drive-in restaurants					—	One parking space for ~~each 4 individual seats or equivalent~~ **every four seats or portion thereof in addition to exterior service stall**
Launderettes, liquor store (off sale only)					—	One parking space for each 200 square feet

						of gross floor area
Theaters					—	One parking space for each ~~10~~ 5 individual seats or equivalent
Service stations					—	One parking space for each 1,000 square feet of lot area
Large group care homes	To be determined on an individual basis					
Signs pertaining to any permitted use and including outdoor advertising structures	See Section 17.16.020(F)					

-
- *(Prior code App. A § 4.05)*

- **17.12.070 - Central commercial C-2 district.**

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot	Maximum Allowable Lot Coverage by Buildings or Structures
The following stores and services, but not limited to: apparel, appliance, bakery, bank, beauty, billiards, blueprinter, book, bowling alley, caterer, clinic, , confectionery, creamery, department, drug, florist, food, food locker, furniture, gift, hardware, hospital, hotel, jewelry,	No	70	1,600	1,600	20	20	100%

liquor, millinery, mortuary, motel, new auto sales and service, news stands, nursery, office building, parking lot, pet, print shop, radio and television, rest home, restaurant, shoe, sign, tailor, taxi stand, upholstery, variety							
Accessory building or structures, if constructed concurrently with or subsequent to the main building or use	No	15	—	—	—	—	—
Living quarters included in any commercial building or use when on	No	70	1,600	1,600	20	20	100%

the upper floors.							
Animal hospital, amusement or recreational enterprises, auto laundry, billiards, book, bowling alley, cleaning and dyeing establishment, clinic, cocktail lounges, creamery, cycle shop, drive-in establishments, when of a type permitted in the C-2 district, feed and farm implements, food locker, hospital, hotel, laundry, launderettes, liquor, mortuary, motel, new auto sales and service, news stands, outdoor	Yes	70	1,600	1,600	20	20	100%

sales establishments, parking lot, pet, print shop, public garages, rest home, restaurant, secondhand sales, sign, tattoo parlor, taxi stand, theater, upholstery, used car sales, variety and other uses of similar nature							
Service stations	Yes	35	As specified in the C-1 district, Section 17.12.060				
Churches, schools, parks, playgrounds, public buildings, as well as those single family structures in the historic district	Yes	As specified in the R district, Sections 17.12.020, 17.12.030, 17.12.040					
Single family structures	No	As specified in the R district, Sections 17.12.020, 17.12.030, 17.12.040.					

not in the Historic District							
Residential uses, second floor and above only	No	As specified in the R district, Sections 17.12.020, 17.12.030, 17.12.040					
Employee housing – small, second floor and above only	No	30	6,500	5,500	65	55	40
Supportive housing, second floor and above only	No	30	6,500	5,500	65	55	40
Transitional housing, second floor and above only	No	30	6,500	5,500	65	55	40
Signs pertaining to any permitted use and including outdoor advertising structures	Yes	See Section 17.16.020(F)					

Group care homes – second floor and above only	No	30	6,500	5,500	65	55	40%
Emergency Shelter[1] [1] See Section 17.16.120	No	35	6,600	5,500	65	55	75%

- *(Prior code App. A § 4.06)*
- **Central commercial C-2 district**

Uses	**Minimum Front Yard Required (Feet)**	**Minimum Side Yard Required (Feet)**		**Minimum Rear Yard Required (Feet)**		**Minimum Lot Area Per Family Unit**	**Minimum Off-Street Parking Space Required**
		Corner Lot	**Interior Lot**	**Corner Lot**	**Interior Lot**		The planning commission may prescribe the amount of parking for uses not listed herein
The following stores and services, but not limited to: apparel,	No requirement, except where the front yard is partially in an R	No requirement, except that where there is reversed frontage,	No requirement, except where the side yard is adjacent to a lot in	10	10	—	None

appliance, bakery, bank, beauty, billiards, blueprinter, book, bowling alley, caterer, clinic, confectionery, creamery, department, drug, florist, food, food locker, furniture, gift, hardware, hospital, hotel, jewelry, liquor, millinery, mortuary, motel, new auto sales and service, news stands, nursery, office building, parking lot, pet, print, radio and television, rest home restaurant, shoe, sign, tailor, taxi stand,	district, in which case the front yard shall be at least one-half the yard required in said R district	the side yard shall be fifty percent of the yard required or existing on the abutting key lot, whichever is less	an R district, in which case the side yard shall be 5 feet				

upholstery, variety							
Accessory building or structures, if constructed concurrently with or subsequent to the main building or use				10	10	—	—

-

- **Central commercial C-2 district**

Uses	**Minimum Front Yard Required (Feet)**	**Minimum Side Yard Required (Feet)**		**Minimum Rear Yard Required (Feet)**		**Minimum Lot Area Per Family Unit**	**~~Minimum Off-Street Parking Space Required~~**
		Corner Lot	**Interior Lot**	**Corner Lot**	**Interior Lot**		~~The planning commission may prescribe the amount of parking for uses not listed herein~~
Emergency shelters, Supportive housing, and	No requirement, except where the	No requirement, except that where	No requirement, except where the	10	10	500	~~One parking space per~~

Transitional housing. Apartments and Multiple-family living quarters included on the upper floors in any commercial building or use.	front yard is partially in an R district, in which case the front yard shall be at least one-half the yard required in said R district	there is reversed frontage, the side yard shall be fifty percent of the yard required or existing on the abutting key lot, whichever is less	side yard is adjacent to a lot in an R district, in which case the side yard shall be 5 feet				~~dwelling unit~~
Animal hospital, amusement or recreational enterprises, auto laundry, cycle shop, cleaning and dyeing establishment, cocktail lounges, creamery, drive-in establishments, when of a type permitted in the C-2 districts, feed and farm implements, laundry, launderettes, theater, outdoor				10	10	—	~~None~~

sales establishments, public garages, secondhand sales, used car sales, and other uses of similar nature							
Service stations	As specified in the C-1 district, Section 17.12.060						
Churches, schools, parks, playgrounds, public buildings and residential uses	As specified in the R districts, Sections 17.12.020, 17.12.030, 17.12.040						
Signs pertaining to any permitted use and including outdoor advertising structures	See Section 17.16.020(F)						

-
- **Central commercial C-2 district parking**
- **All uses that are not listed or that require a Conditional use Permit in the C-2 zone will have minimum parking requirement prescribed by the Planning Commission.**

Other permitted uses in the C-2 zone will adhere to the minimum count set in the table below.

USE	Minimum Off-Street Parking Space Required
Employee housing, small	1 garage or carport per dwelling
Supportive housing and transitional housing	1 garage or carport per dwelling
Residential quarters included in any commercial building or use	1 garage or carport per dwelling
Group Homes	1 garage or carport per dwelling
Emergency Shelters	Refer to 17.12.120
Theaters	1 space per 5 seats
Public buildings	1 space per employee plus 1 space for every 100 sq. ft. of meeting or reception area.
Schools	Elementary & Jr. High: 1 space per employee plus space for drop off and turn-around and bus loading and unloading. High School: Same as above plus 1 per five students. College or trade school: 1 per employee/teacher plus 1 per student at full enrollment. Day Care: 1 per employee plus 2 per 5 children.
Lodges, clubs and private schools	Lodges and clubs to be parked at the same ratio as public buildings Private schools to be parked at the same ratio as public schools (see above)
Clinics, Pharmacies, Professional offices and mortuaries	1 space for every 300 square feet of floor area
Medical uses	1 space for every 300 square feet of floor area
Hotels in the R-4 zone, with no accessory commercial	1 per guestroom plus 3, plus spaces for accessory retail per code.
Motels and trailer parks in the R-4 zone, with no accessory commercial	1 per guestroom plus 3, plus spaces for accessory retail per code.
Retail and laundry and liquor stores	1 space per 200 square feet of floor area plus 1 loading space for each 1000 square feet of floor area
Repair shops (small items)	1 space per 200 square feet of floor area plus 1 loading space for each 1000 square feet of floor area
Barber shops & beauty parlors	And spas: 1 per customer plus 1 per employee
Restaurants	1 space per every 4 seats or portion thereof
Drive-in restaurants	1 space per every 4 seats plus 1 space per stall
Service stations	1 space per 1000 square feet of lot area.

Animal Hospital, amusement, cocktail, laundry, theater, second hand sales and other per C-2 zone	**Use restaurant, office and retail requirements shown above**

- **17.12.080 - Commercial services C-M district.**

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	Use Permit Required	Maximum Allowable Height (Feet)	Minimum Building Site Required (Square Feet) Corner Lot	Minimum Building Site Required (Square Feet) Interior Lot e Feet)	Minimum Lot Width Required (Feet) Corner Lot	Minimum Lot Width Required (Feet) Interior Lot
Highway vehicle and tire sales, repair and services	No	50	7,500	7,500	55	100%
Light equipment repair services	No	50	7,500	7,500	55	100%
Home improvement sales and services which are not primarily retail sales and include attendant fabrication and storage	No	50	7,500	7,500	55	100%
Similar uses which do not involve heavy retail traffic	No	50	7,500	7,500	55	100%

Uncovered storage for allowable uses on the rear half of the lot if screened by minimum 6-foot solid fencing	No	50	7,500	7,500	55	100%
Warehouses and mini-storage	Yes	50	7,500	7,500	55	100%
Bottling works, ice plants, food lockers	Yes	50	7,500	7,500	55	100%
Assembly of small ceramic, leather, pottery, electronic, metal or wood items	Yes	50	7,500	7,500	55	100%
Assembly or fabrication of other small items that do not involve the heavy transport or refining of basic raw materials, noxious emissions or noise levels that would not be allowed in commercial districts	Yes	50	7,500	7,500	55	100%

Living quarters for watchmen or owner-operator only	Yes	50	7,500	7,500	55	100%

- **Commercial services C-M district**

Uses	Minimum Lot Size (Square Feet) Required	Minimum Front Yard Required (Feet)	Minimum Side Yard Required (Feet)	Minimum Rear Yard Required (Feet)	Parking Requirements
Highway vehicle and tire sales, repair and services	5,500	0	5*	10*	One improved parking space for every ~~three~~ employees, or a minimum of one parking space for every 1,000 square feet of gross floor area
Light equipment repair services	5,500	0	5*	10*	
Home improvement sales and services which are not primarily retail sales and include attendant fabrication and storage	5,500	0	5*	10*	
Similar uses which do not involve heavy retail traffic	5,500	0	5*	10*	
Uncovered storage for allowable uses on the rear half of the lot if screened by minimum 6-foot solid fencing	5,500	0	5*	10*	

Warehouses and mini-storage	5,500	0	5*	10*	
Bottling works, ice plants, food lockers	5,500	0	5*	10*	
Assembly of small ceramic, leather, pottery, electronic, metal or wood items	5,500	0	5*	10*	
Assembly or fabrication of other small items that do not involve the heavy transport or refining of basic raw materials, noxious emissions or noise levels that would not be allowed in commercial districts	5,500	0	5*	10*	
Living quarters for watchmen or owner-operator only	—	0	5*	10*	

- * Minimum 10-foot setback from adjacent residential or commercial zones with screen required.
- *(Ord. 487 § 2, 1994: prior code App. A § 4.06A)*

17.12.090 - Light industrial L-M district.

All uses allowed in the C-M district	No	50	7,500	7,500	100	75%
Manufacturing or assembly, not involving refining, rendering or processing of raw materials, noxious chemicals or odors, and is fully contained within a structure	No	50	7,500	7,500	100	75%
Manufacturing or assembly, not involving refining, rendering or processing of raw materials, noxious chemicals or odors, that involves any hazardous material if hazard can be mitigated	Yes	50	7,500	7,500	100	75%

Uses	**Minimum Lot Size (Square feet)**	**Minimum Front Yard Required (Feet)**	**Minimum Side Yard required (Feet)**	**Minimum Rear Yard Required (Feet)**	**Parking requirements**
All uses allowed in the C-M district	10,000	25	10*	10*	One improved parking space for every ~~three~~ employees, or a minimum of one parking space for every ~~2,000~~ **1,000** square feet of gross floor area
Manufacturing or assembly, not involving refining, rendering or processing of raw materials, noxious chemicals or odors, and is fully contained within a structure	10,000	25	10*	10*	
Manufacturing or assembly, not involving refining, rendering or processing of raw materials, noxious chemicals or odors, that involves any hazardous material if	10,000	25	10*	10*	

hazard can be mitigated					

-
- * Minimum 20-foot setback from adjacent residential or commercial zones with 6-foot-high solid screening required.
- *(Ord. 487 § 3, 1994: prior code App. A § 4.06B)*
- **17.12.100 - Industrial M district.**

Uses: None but the following uses, or uses which in the opinion of the planning commission are similar will be allowed	**Use permit required**	**Maximum Allowable Height (Feet)**	**Minimum Building Site Required (Square feet)**		**Minimum Lot Width Required (Feet)**		**Maimum Allowable Lot Coverage by Buildings or Structures**
			Corner Lot	**Interior Lot**	**Corner Lot**	**Interior Lot**	
Any use permitted in the C-2 district, except residential, churches, playgrounds	No	70	5,000	4,000	50	40	100%
Wholesale stores and storage, secondhand sales within a building	No	70	5,000	4,000	50	40	100%

Light and heavy industrial and manufacturing uses, when in the opinion of the planning commission, may not be objectionable by reason of noise, smoke, odor, dust, noxious gases, glare, heat, fire hazard, industrial waste or other nuisance factor, including but not limited to: clothing, electronics, leather products, novelties, service establishments and toys	No	70	5,000	4,000	50	40	100%
The following uses, when conducted within a building or a solid board or masonry fence at least 6 feet high: bottling works, blacksmith, building material and	No	70	5,000	4,000	50	40	100%

contractors yards, commercial laboratories, feed and fuel yards, lumberyards, machine shops, planing mills, printing and lithographing, tire shops, dairy products, trucking, tanning operations							
Outdoor sales establishments	Yes	70	5,000	4,000	50	40	100%
Service stations	No	As specified in the C-1 district, Section 17.12.060					
Industrial or manufacturing uses that, when in the opinion of the planning commission may be objectionable by reason of offensive odor, dust, noise, bright light, vibration, storage or handling or explosives or dangerous materials, and includes but	Yes	70	6,000	6,000	50	50	100%

not limited to the following: auto wrecking, bituminous paving plants and manufacturing of bituminous paving products; commercial excavation of building or construction materials; concrete batching plants; distillation of bones; drilling for and removal of oil, gas or other hydrocarbon substance; dumping, disposal, incineration or reduction of garbage, sewer, offal, dead animals or refuse; fat rendering; hog raising; junkyards; manufacturing or storage of acid, cement, explosives, fireworks, fertilizers, gas, glue, gypsum, inflammable fluids, lime or							

plaster of paris; refining or storage of petroleum or its products; salvage or war surplus yards; smelting of iron, tin, zinc or other ores; stockyards, slaughter of animals							
Retail establishments; accessory residence to industrial use only	Yes	35	6,000	6,000	50	50	100%
Signs pertaining to any permitted use and including outdoor advertising structures	No	See Section 17.16.020(F)					

•

- **Industrial M district**

Uses	Minimum Front Yard Required (Feet)	Minimum Side Yard Required	Mini mum Rear Yard Required (Feet)	Minimum Lot Area Per Family Unit	Minimum Off-Street Parking Required. The planning commission may prescribe the amount of parking for uses not listed herein
Any use permitted in the C-2 district, except residential, churches, playgrounds	25	A rear yard of 10 feet and at least one side yard of 10 feet		—	~~One parking space for each 3 employees, but in no case less than one space for each 2,000 square feet of gross floor and ground area used for sales, storage, warehousing, manufacturing or related uses~~ ~~One loading space for each 10,000 square feet of gross floor area~~ **One space for every emplo**
Wholesale stores and storage, secondhand sales within a building	25			—	
Light and heavy industrial and manufacturing uses, when in the opinion of the planning commission, may not be objectionable by reason of noise, smoke, odor, dust, noxious gases, glare, heat, fire hazard, industrial waste or other nuisance factor, including, but not limited to: clothing, electronics, leather products, novelties,	25			—	

Uses	Minimum Front Yard Required (Feet)	Minimum Side Yard Required	Mini mum Rear Yard Required (Feet)	Minimum Lot Area Per Family Unit	Minimum Off-Street Parking Required. The planning commission may prescribe the amount of parking for uses not listed herein
service establishments and toys					
The following uses, when conducted within a building or a solid board or masonry fence at least 6 feet high: bottling works, blacksmith, building material and contractors yards, commercial laboratories, feed and fuel yards, lumberyards, machine shops, planing mills, printing and lithographing, tire shops, dairy products, trucking, tanning operations	25			—	
Outdoor sales establishments	25			—	
Service stations	As specified in the C-1 district, Section 17.12.060				

- **Industrial M district**

Uses	Minimum Front Yare Required (Feet)	Minimum Side and Rear Yard Requirements (Feet)	Minimum Lot Area Per Family Unit	Minimum Off-Street Parking Required The planning commission may prescribe the amount of parking for uses not listed herein
Industrial or manufacturing uses that, when in the opinion of the planning commission, may be objectionable by reason of offensive odor, dust, noise, bright light, vibration, storage or handling of explosives or dangerous materials and includes but not limited to the following: auto wrecking, bituminous paving plants and manufacturing of bituminous paving products; commercial excavation of building or construction materials; concrete batching plants; distillation of bones, drilling for and removal of oil, gas or other hydrocarbon substance; dumping, disposal, incineration	25	A rear yard of 10 feet and at least one side yard of 10 feet	—	~~One parking space for each 3 employees, but in no case less than one parking space for each 2,000 square feet of the total ground and building area used for sales, storage, warehousing, manufacturing or related uses~~ **One Space for every employee on the largest shift** One loading space for each 10,000 square feet of the total ground and building area

or reduction of garbage, sewer, offal, dead animals or refuse; fat rendering; hog raising; junkyards; manufacturing or storage of acid, cement, explosives, fireworks, fertilizers, gas, glue, gypsum, inflammable fluids, lime or plaster of paris; refining or storage of petroleum or its products; salvage or war surplus yards; smelting of iron, tin, zinc, or other ores; stockyards, slaughter of animals							
Retail establishments; accessory residence to industrial use only	25	10	10	10	10	1,500	One space for each 300 square feet of gross floor area One space per dwelling unit
Signs pertaining to any permitted use and including outdoor advertising structures	See Section 17.16.020(F)						

17.28.140 - Historic district parking regulations.

A.

Purpose. It is found that the protection, enhancement, perpetuation and use of businesses within the Dunsmuir historic commercial district will be assured in part through encouraging a walkable core, and by preserving the existing structures to the extent possible. It is also found that much of the existing downtown commercial core businesses have no on-site parking provided.

B.

Definitions:

"Dunsmuir historic commercial district" means a composite of roughly four blocks comprising the downtown core business district on Sacramento Avenue and Dunsmuir Avenue, Pine and Cedar Streets (see Figure 17.28).

C.

The uses established or permitted to be established in existing buildings in the Dunsmuir historic commercial district are exempt from parking the requirements otherwise listed in Sections 17.12.020, 17.12.030, 17.12.040, 17.12.050, 17.12.060, 17.12.070, 17.12.080, 17.12.090 and 17.12.100 of the Dunsmuir Municipal Code.

RESOLUTION NO. PC-2016-3

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF DUNSMUIR STATING ITS INTENTION TO REVIEW AT A PUBLIC HEARING CERTAIN PROPOSED CHANGES TO THE ZONING ORDINANCE AND TO FORWARD ITS FINDINGS AND RECOMMENDATIONS TO THE CITY COUNCIL OF THE CITY OF DUNSMUIR REGARDING THOSE CHANGES TO THE ZONING ORDINACE TO UPDATE PARKING REQUIREMENTS

WHEREAS, amendments to Title 17 of the Dunsmuir City Code may be initiated and recommended by the Planning Commission by the adoption of a Resolution of Intent, per 17.24.020.C; and

WHEREAS, the City of Dunsmuir Planning Consultant has recommended revisions to the Zoning Ordinance text to revise parking requirements for new uses in the City, except those in the Historical District; and

WHEREAS, the proposed amendments would affect Sections 17.12.020, 17.12.030, 17.12.040, 17.12.050, 17.12.060, 17.12.070, 17.12.080, 17.12.090 and 17.12.100 of the Dunsmuir City Code and would add Section 17.28.145, to said Code; and

WHEREAS, the project enjoys a Class 3e (accessory structures) categorical exemption from CEQA per 14 CCR 15303; and

WHEREAS, a public hearing was duly noticed and held at the November 9, 2016 regular Planning Commission meeting to take public input on the proposed changes, after which the Planning Commission considered staff recommendations, public input and deliberated before accepting and approving recommending changes to parking requirements to the City Council.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission directs that changes included in Attachment A hereto and hereby made a part of this Resolution No. PC 2016-3 be forwarded to the City Council for its consideration and action.

* * * * *

IT IS HEREBY CERTIFIED that the foregoing resolution was duly introduced and adopted by the Planning Commission this 9th day of November, 2016 by the following vote:

AYES: Martin, Newman, Conway, Harley, Lamb

NOES: None

ABSENT: Powers, Cross

ABSTAIN: None

Barbara Cross

Barbara Cross, Chairperson

ATTEST:

Julie Iskra

Julie Iskra, Deputy City Clerk

G: Planning/Resolutions/Intent to amend Zoning Ord parking requirements

City Council Agenda Item
New Business

Item No: 13.C.
Date: December 15, 2016
Subject: Consider and approve extension of videography services contract with Siskiyou Media Council

The Siskiyou Media Council has been providing videography services to record City Council meetings for a couple years. This contract will continue that relationship for January 2017 through June 2017.

The charge for each Council meeting recorded is increased to $275 per meeting. This cost is based on an average of $55 per hour for past meetings recorded, includes set up and take down time, use/rental of equipment, preparation of DVD for permanent record, and sending edited video file to webpage. Alternative recording arrangements have been considered by the Audio Visual committee and are not available at this time.

Recommendation: Move to authorize Mayor to execute Video Production Contract dated 12/06/2016 with Siskiyou Media Council.

Video Production Contract
The City of Dunsmuir
Public Broadcasting of City Council Meetings

Date: 12/06/2016

The Siskiyou Media Council on behalf of the City's public access PEG channel, MCTV15, respectively requests that this contract be approved by the City of Dunsmuir for videography services provider by SMC/MCTV15 that will begin on January 01, 2017 and will extend through June 30, 2017.

Background

SMC has been contracted to provide the City of Dunsmuir with videography services since April 2015, and is currently working with the communication committee to develop a permanent broadcasting facility for the filming and transmission of city council meetings.

What SMC offers to the City of Dunsmuir

MCTV15, the PEG (Public/Education/Government) channel operated by the Siskiyou Media Council, proposes to continue the filming and posting of the edited footage to the city's web site through June 2017. For this service, SMC seeks a fee of $275.00 per city council meeting. This will include the rental of all equipment, a pre-meeting setup and checkout of the equipment, filming the meeting, and producing, within two business days, an archival DVD and an edited video file to an internet destination of the city's choosing. The cost per meeting is based on a $55 per hour rate. The estimated hours per meeting are based on the average duration of City Council meetings, setup, takedown, editing and producing time of 5 hours and will apply to any additional work that the City of Dunsmuir requests during this time period. For example, work that SMC is requested to do replacing the AV and PA equipment in the City Council chambers will be at a $55 per hour rate. The following are the City Council Meetings that are currently within the scope of this agreement:

1/5/17	4/6/17
1/19/17	4/20/17
2/2/17	5/4/17
2/16/17	5/18/17
3/2/17	6/1/17
3/16/17	6/15/17

This agreement can be cancelled, without cause, by either party (The Siskiyou Media Council or the City of Dunsmuir) with 30 days' notice.

City Of Dunsmuir Approving Signature Date

SMC Approving Signature Date

Title

Title