

**A REGULAR MEETING & ORGANIZATIONAL MEETING**

Of The

**TRAVERSE CITY LIGHT AND POWER BOARD**

Will Be Held On

**TUESDAY, April 8, 2014**

At

**5:15 p.m.**

In The

**COMMISSION CHAMBERS**  
(2<sup>nd</sup> floor, Governmental Center)  
400 Boardman Avenue

Traverse City Light and Power will provide necessary reasonable auxiliary aids and services, such as signers for the hearing impaired and audio tapes of printed materials being considered at the meeting, to individuals with disabilities at the meeting/hearing upon notice to Traverse City Light and Power. Individuals with disabilities requiring auxiliary aids or services should contact the Light and Power Department by writing or calling the following.

Stephanie Tvardek  
Administrative Assistant  
1131 Hastings Street  
Traverse City, MI 49686  
(231) 932-4543

Traverse City Light and Power  
1131 Hastings Street  
Traverse City, MI 49686  
(231) 922-4940

Posting Date: 4-4-14  
4:00 p.m.

## AGENDA

### **Pledge of Allegiance**

#### **1. Roll Call**

Organizational Meeting (p. 3)

#### **2. Consent Calendar**

*The purpose of the consent calendar is to expedite business by grouping non-controversial items together to be dealt with by one Board motion without discussion. Any member of the Board, staff or the public may ask that any item on the consent calendar be removed therefrom and placed elsewhere on the agenda for full discussion. Such requests will be automatically respected. If an item is not removed from the consent calendar, the action noted in parentheses on the agenda is approved by a single Board action adopting the consent calendar.*

None.

#### **3. Unfinished Business**

None.

#### **4. New Business**

- a. Consideration of approving minutes of the Regular Meeting of March 25, 2014. (p. 4)
- b. Consideration of authorizing a Joint WiFi Services Agreement. (Arends) (p. 7)
- c. Consideration of adopting a Resolution Declaring the Coal Dock Property Surplus and Conveying to the City of Traverse City. (Arends/Doren) (p. 32)
- d. Consideration of Pole Inspection/Foreign Attachment Audit. (Arends/Wilson) (p. 39)

#### **5. Appointments**

None.

#### **6. Reports and Communications**

- a. From Legal Counsel.
- b. From Staff.
  1. Major Storm Action Plan presentation. (Arends/Olney) (p. 41)
- c. From Board.

#### **7. Public Comment**

/st



**TRAVERSE CITY**  
**LIGHT & POWER**

---

**To:** Light and Power Board  
**From:** Tim Arends, Executive Director  
**Date:** March 31, 2014  
**Subject:** L&P Board Organizational Meeting

---

A handwritten signature or initials 'TA' enclosed in a hand-drawn circle, positioned to the right of the 'From:' field in the header.

As required by City Charter Section 177(f), the board meeting of April 8, 2014 will be the annual organizational meeting in which a chairperson and vice-chairperson are elected, and a secretary is appointed by the Board. The Charter language is as follows:

“An election of officers of the Board shall be held annually at the first regular meeting following the appointment of a new Board member after the end of a regular term of office. No member shall serve as chairman for more than two (2) consecutive terms.”

All board members are eligible for nomination as board chairperson with the exception of Pat McGuire who has served the maximum allowed two consecutive terms. All Board Members are eligible to serve as vice-chairperson. The following procedure would be appropriate for the organizational portion of the meeting.

- Tim Arends, as Secretary to the Board, shall initially preside over the meeting.
  - Call meeting to order – Pledge of Allegiance
  - Roll Call
  - Open the floor to nominations for chairperson (nominations need support), call for any further nominations for chairperson.
  - Close nominations
  - Board discussion (nominations will be voted on in order received)
  - Public comment (specific to nominations for Board Chairperson)
  - Voice Vote – Once 4 votes are received by any one nominee that nominee becomes the new chairperson.
  - Secretary turns the meeting over to the new chairperson.
- The newly elected Chairperson follows the same process described above in electing a vice-chairperson of the Board.
- The Chairperson should then appoint a Secretary to the Board with approval of a Board majority. This has historically been the Executive Director.
- Next, a Human Resources Committee should be formed consisting of two or three board members. City Charter Section 177(h) allows for ad hoc subcommittees, however, there can be no standing committees. Therefore, it is appropriate to have this committee’s term expire at the end of 12 months.
- Proceed to the Consent Calendar portion of the Agenda.

**TRAVERSE CITY  
LIGHT AND POWER BOARD**

Minutes of Regular Meeting  
Held at 5:15 p.m., Commission Chambers, Governmental Center  
Tuesday, March 25, 2014

**Board Members -**

Present: Barbara Budros, Jim Carruthers, Jan Geht, Jeff Palisin, Bob Spence, John Taylor, Patrick McGuire

**Ex Officio Member -**

Present: Jered Ottenwess, City Manager

**Others:** Tim Arends, W. Peter Doren, Scott Menhart, Tom Olney, Stephanie Tvardek, Jessica Wheaton, Blake Wilson

The meeting was called to order at 5:15 p.m. by Chairman McGuire.

**Item 2 on the Agenda being Consent Calendar**

None.

**Item 3 on the Agenda being Unfinished Business**

None.

**Item 4 on the Agenda being New Business**

4(a). Consideration of approving minutes of the Study Session of February 18 and Regular Meeting of February 25, 2014.

Moved by Carruthers, seconded by Budros, that the Board approves the minutes of the Study Session of February 18 and Regular Meeting of February 25, 2014.

CARRIED unanimously.

4(b). Consideration of a Social Media Policy.

The following individuals addressed the Board:

Jessica Wheaton, Marketing and Communications Coordinator  
Tim Arends, Executive Director

Budros proposed the first word of sections 4k, 4l and 4m of the Policy be changed to "Content". And further, that the following section proposed by Chairman McGuire be added to the Policy:

**7. Reporting**

Periodically, but no less than annually, the Executive Director will make a report to the Board identifying the social media utilized by TCL&P since the last such report, summarizing data supporting usage and effectiveness, and a statement certifying compliance with the SOCIAL MEDIA POLICY.

Moved by Budros, seconded by Taylor, that the Board adopts the Social Media Policy as amended.

CARRIED unanimously.

**4(c). Consideration of MPPA Energy Services Agreement.**

The following individuals addressed the Board:

Tim Arends, Executive Director  
Bob Dyer, RTD Consulting

Moved by Spence, seconded by Geht, that the Board authorizes the Chairman and Secretary to execute the Energy Services Agreement with MPPA, and further names the Executive Director as the member authorized representative relative to the Agreement; subject to approval as to substance by the Executive Director and as to form by General Counsel.

CARRIED unanimously.

**Item 5 on the Agenda being Appointments**

None.

**Item 6 on the Agenda being Reports and Communications**

A. From Legal Counsel.

None.

B. From Staff.

1. Tim Arends spoke regarding the recently DDA approved WiFi Project.

The following individuals addressed the Board:

Jim Selby, President, Aspen Wireless Technologies, Inc.  
W. Peter Doren, General Counsel

2. Mark Beauchamp, Utility Financial Solutions, and Bob Dyer, RTD Consulting, presented the Cost of Service Study and Energy Supply Presentation #5.

The following individuals addressed the Board:

Tim Arends, Executive Director

7:00 p.m. W. Peter Doren departed the meeting.

3. Tim Arends spoke regarding the recent APPA webinar on transmission and the upcoming webinar on distribution.

C. From Board.

1. Jeff Palisin spoke regarding the benefits of the APPA transmission webinar.

2. Chairman McGuire congratulated Jan Geht on his reappointment to the board and announced the next Regular Meeting will be an organizational meeting.

**Item 7 on the Agenda being Public Comment**

Tim Maylone, General Manager, Cherry Capital Connection, non-ratepayer

There being no objection, Chairman McGuire declared the meeting adjourned at 7:34 p.m.

/st

---


Tim Arends, Secretary  
LIGHT AND POWER BOARD

DRAFT



**TRAVERSE CITY  
LIGHT & POWER**

---

**To:** Light and Power Board  
**From:** Tim Arends, Executive Director   
**Date:** April 4, 2014  
**Subject:** TCL&P & DDA Joint Wi-Fi Services Agreement

---

Attached for your consideration is a Joint Wi-Fi Services Agreement that would allow TCL&P to construct a complimentary Wi-Fi System in the DDA District, as outlined at the last TCL&P board meeting.

The Agreement has been modified to include specific language related to issues raised by the Board. However, the DDA Director has been unavailable to review those modifications. If this Agreement is approved by the Board, and the DDA and TCL&P negotiate any further changes to the Agreement, legal counsel shall determine if those changes are substantive to require approval of the Board. If so, it will be re-presented at a future meeting for your consideration.

The DDA is expected to consider this Agreement at its April 21<sup>st</sup> meeting.

Staff recommends approval of the Agreement as presented. If the Board agrees with staff's recommendation the following motion would be appropriate:

**MOVED BY \_\_\_\_\_, SECONDED BY \_\_\_\_\_,**

**THAT THE BOARD AUTHORIZES THE CHAIRMAN AND SECRETARY TO ENTER INTO A JOINT WI-FI SERVICES AGREEMENT WITH THE DDA, SUBJECT TO APPROVAL AS TO SUBSTANCE BY THE EXECUTIVE DIRECTOR AND AS TO FORM BY GENERAL COUNSEL.**

JOINT WI-FI SERVICES AGREEMENT

THIS JOINT WI-FI SERVICES AGREEMENT (the "Agreement") is entered into as of \_\_\_\_\_, 2014 (the "Effective Date"), by and between the TRAVERSE CITY LIGHT and POWER DEPARTMENT, a Michigan municipal electric utility, of 1131 Hastings Street, Traverse City, Michigan 49686 ("TCL&P") and the TRAVERSE CITY DOWNTOWN DEVELOPMENT AUTHORITY, a Michigan authority, of 303 East State Street, Suite C, PO Box 42, Traverse City, Michigan, 49684 (the "DDA").

RECITALS

WHEREAS, TCL&P has existing fiber optic cable within the streets and utility easements throughout Traverse City (as defined below) and owns the right to utility services and poles within the boundaries of Traverse City as a public utility; and

WHEREAS, The DDA desires to provide complimentary Wi-Fi Internet Services to the public within its jurisdiction (as defined below); and

WHEREAS, The DDA desires to have a secure municipal network on which it could provide electronic parking services and other services; and

WHEREAS, TCL&P desires to be the provider of Wi-Fi internet services, by designing, purchasing, installing and maintaining the Wi-Fi Internet System (the "System") as it is defined herein; and

WHEREAS, TCL&P desires to fund the design, purchase and installation of the System and the DDA desires to reimburse the cost and repay TCL&P for the amount established for the purchase, installation and maintenance of the system; to include jointly approved major software/hardware upgrades, as necessary;

NOW THEREFORE, the parties agree as follows:

1. DEFINITIONS

The following terms shall have the meanings set forth below when used in this Agreement. All Section references refer to Sections of this Agreement unless otherwise stated.

- 1.1 "*Annual Reimbursement Fee*" means the annual fee the DDA will pay to TCL&P during the term of this Agreement in accordance to the schedule set forth in Section 4.1.
- 1.2 "*DDA Jurisdiction*" means the area located as defined in Exhibit A.
- 1.3 "*Wi-Fi Internet Services*" means the limited complimentary internet services provided by the DDA to the public within the boundaries of the DDA's jurisdiction, which will provide internet services to personal receiving devices such as laptop computers, desktop computers, tablets, netbooks and other Wi-Fi receiving devices and provide a secure municipal network on which electronic parking services and other services may be administered.
- 1.4 "*Wi-Fi Internet System*" means the equipment and facilities described in Exhibit A attached hereto and incorporated here by reference.



## 2. PROVISION OF WI-FI INTERNET SERVICES

2.1 *Design, Purchase and Install.* TCL&P will be responsible for designing, purchasing, and installation of the Wi-Fi Internet System. TCL&P will assume all initial costs and responsibility for the system and continue to own and operate the system for an undefined term which shall not be less than the term of this Agreement.

2.2 *Internet System Maintenance.* TCL&P will maintain the Wi-Fi Internet System which will include scheduled maintenance, replacement of parts and performing system upgrades as needed.

2.3 *Pricing.* The service will be provided on a limited basis, as determined by the DDA, to the public within the jurisdiction of the DDA, at no cost to the Wi-Fi internet user.

2.4 *Cost.* The DDA will pay to TCL&P the costs as outlined in Exhibit B on an annual basis, by the end of each fiscal year. Actual operating expenses shall be reimbursed, any excess budget over actual shall be applied to the outstanding balance of capital costs. Upon full satisfaction of capital costs, the annual payment shall be adjusted to reflect actual operating expenses. However, the DDA shall not be required to annually reimburse more than identified in Exhibit B, plus DDA approved enhancements, through the term of the Agreement unless agreed to by both parties.

2.5 *Wi-Fi Internet System.* The Wi-Fi Internet System will provide bandwidth as defined in Exhibit A to operate effectively as designed by TCL&P to provide Wi-Fi Internet users with limited access to the internet at no cost to the users of the System. Bandwidth may be increased at the request of the DDA with the DDA to pay any additional costs incurred by TCL&P as an increase in operating expenses defined in Exhibit B.

2.6 *Quality of Technology.* TCL&P agrees to use reasonable efforts during the Term to keep the Wi-Fi Internet System updated and compatible with the systems and components. Should additional costs be necessary to upgrade or enhance the system, TCL&P will recommend such upgrades or enhancements to the DDA and shall bear the initial costs of those upgrades or enhancements with the approval of the DDA. The DDA will reimburse TCL&P as an addition to capital costs.

2.7 *Control.* TCL&P shall have total authority to control all operational aspects of the Wi-Fi System and Services. TCL&P may allow the DDA to work directly with TCL&P's contractor on approved requests.

2.8 *Maintenance.* TCL&P shall provide Wi-Fi System maintenance and upgrades if needed. The cost of all upgrades shall be added to the Total Reimbursement due from the DDA in accordance with Section 2.6.

2.9 *Filtering Requirements.* TCL&P and the DDA shall have installed content filtering devices using best public practices to prevent illegal or inappropriate uses of the System by employees or the Public. In addition, TCL&P and the DDA shall cooperate with law enforcement agencies regarding individual user information or blocking requests, as required by subpoena.

3.0 *Future Users of System.* In the event other city departments, including TCL&P, make use of the Wi-Fi System for its operations, the operational costs of the System shall be

allocated to those departments on the basis of total bandwidth use, upon approval by its governing body.

### 3. MARKETING AND PROMOTION

3.1 *DDA Obligations.* The DDA, at its discretion, agrees to solely market, promote and facilitate the advertising of the limited complimentary Wi-Fi Internet System to the public within the DDA Jurisdiction, using the TCL&P logo.

3.2 *Additional Obligations.* The DDA and TCL&P will, from time to time, use reasonable efforts to cooperate in joint marketing efforts on such terms and conditions as are mutually agreed. Each party will assign a project manager to act as the primary liaison with respect to the relationship provided for hereunder, and all discussions between the parties with respect to the respective performance of obligations hereunder will be conducted by these project managers or their designees.

### 4. FEES

4.1 *Annual Reimbursement Fee.* The DDA shall pay TCL&P the Annual Reimbursement Fee as outlined in Exhibit B, and in accordance with the provisions as outlined in Section 2.4. The fee is based on each unit's fiscal year that starts July 1 and ends June 30. The first Annual Reimbursement Fee shall be due on or before June 30, 2015. This fee shall be paid until there is Total Reimbursement of capital costs and accrued operational expenses.

4.2 *Total Reimbursement.* The Total Reimbursement due from the DDA shall be the total cost of the Wi-Fi System as depicted in Exhibit B and subject to the terms in Section 2.4.

4.3 .

4.4 *O&M Reimbursement.* Maintenance and operating expenses shall be paid by TCL&P and annually reimbursed by the DDA in accordance with the budget in Exhibit B and in accordance with the provisions as outlined in Section 2.4.

### 5. TERM AND TERMINATION

5.1 *Term.* The term of this Agreement shall be from July 1, 2014, until the Total Reimbursement is paid to TCL&P. Either party may terminate, with approval of the other party, this Agreement by providing written notice at least ninety (90) days prior to the termination date stated in such notice; however, Total Reimbursement for the System capital costs and any unreimbursed operating expenses will still be the responsibility of DDA if it terminates the Agreement.

5.2

### 6. DEFAULT

6.1 The DDA's failure to pay the Annual Reimbursement Fee in full when due, or to perform any of the obligations hereunder, shall constitute a default. If a default occurs, TCL&P may pursue all remedies for breach of contract.

### 7. DISPUTE

7.1 *Dispute Resolution.* If either party has a dispute with another regarding the meaning, operation, or enforcement of any provision of this Agreement, the disputing parties agree to meet and confer to negotiate a resolution of the dispute. They further agree as follows:

- (a) *Mediation.* If they are unable to resolve the dispute themselves and before formally instituting any other dispute mechanism, they shall utilize the services of a mutually acceptable neutral mediator, who meets the qualifications of MCR 2.411, to bring them together in at least one mediation session.
- (b) *Venue.* All meetings, hearings and actions to resolve the dispute shall be in Grand Traverse County.
- (c) *Notice.* Written notice of a dispute shall be given to the other party not later than 90 days after the occurrence giving rise to the dispute becomes known or should have become known. Negotiations and mediation shall occur within 60 days after such notice.

## 8. REPRESENTATIONS AND WARRANTIES

8.1 Each party represents and warrants to the other that:

- (a) it has full right, power and authority to enter into this Agreement and to perform its entire obligations hereunder;
- (b) its execution, delivery and performance of this Agreement have been duly and properly authorized by all necessary actions and this Agreement constitutes its valid and binding obligation, enforceable against it in accordance with its terms; and
- (c) its execution, delivery and performance of this Agreement will not, with or without the giving of notice or passage of time, or both, conflict with, or result in a default or loss of rights under, any provision of its certificate of incorporation or any other material agreement or understanding to which it is a party or by which it or any of its material properties may be bound.

8.2 *TCL&P's Representations and Warranties.* TCL&P specifically represents and agrees that its officers, employees, agents and contractors have and shall possess the experience, knowledge, and competence necessary to qualify them individually for the particular duties they perform hereunder. TCL&P specifically represents and warrants that it has obtained the necessary permits and approvals from the State of Michigan and any other applicable governing body and has complied with the requirements of applicable State, Federal and local law, requirement, ordinance or regulation such that it is authorized to perform its entire obligations hereunder. Should TCL&P fail to comply with the representations and warranties described in this section, the DDA may, at its option, terminate this Agreement and shall have no further obligations hereunder.

8.3 *Disclaimer.* THE WARRANTIES PROVIDED BY THE PARTIES HEREIN ARE THE ONLY WARRANTIES PROVIDED BY THE PARTIES WITH RESPECT TO THE SUBJECT MATTER OF THIS AGREEMENT. SUCH WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES BY THE PARTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SUBJECT MATTER OF THIS AGREEMENT.

## 9. INDEMNIFICATION

9.1 Each party (the "Indemnifying Party") will indemnify, defend and hold harmless the other party and its officers, directors, agents, employees, successors and permitted assigns (hereinafter collectively the "Indemnified Party") from and against any and all losses, claims, suits, proceedings, liabilities, expenses (including reasonable attorneys' fees and expenses), causes of action, damages and costs (collectively "Claims") arising out of or in connection with the breach, potential breach or inaccuracy of, or failure to comply with, any of the representations and warranties contained in Section 8 on the part of the Indemnifying Party.

9.2 Any Indemnified Party entitled to indemnification under this Section will give prompt notice to the indemnifying Party of any Claim with respect to which it seeks indemnification, but the failure to so notify the Indemnifying Party shall not relieve the Indemnifying Party of any liability except to the extent that it is actually prejudiced by such delay. The Indemnifying Party shall assume, at its sole cost and expense, the defense of such Claim with counsel reasonably satisfactory to the Indemnified Party. The Indemnifying Party will not be subject to any liability for any settlement made without its consent. The Indemnifying Party shall not, without consent of the Indemnified Party, effect any settlement or discharge or consent to the entry of any judgment, unless such settlement or judgment includes as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a general release from all liability in respect of such claim or litigation.

## 10. GENERAL PROVISIONS

10.1 *Independent Agencies.* The relationship of TCL&P and the DDA established by this Agreement is that of independent agencies, and nothing contained in this Agreement will be construed to (i) give either party the power to direct and control the day-to-day activities of the other, (ii) constitute the parties as partners, a joint venture, co-owners or otherwise as participants in a joint undertaking, or (iii) allow either party to create or assume any obligation on behalf of the other for any purpose whatsoever. All financial and other obligations associated with a party's business are the sole responsibility of that party.

10.2 *Notices.* Any notice which either party may or is required to give hereunder may be served personally or sent by first-class mail, postage prepaid, to the other party at their address below, or at such other place as may be designed in writing by the parties from time to time:

If to TCL&P:

Executive Director  
Traverse City Light and Power  
1131 Hastings St.  
Traverse City, MI 49686

If to the DDA:

Executive Director  
Downtown Development Authority  
303 E State St., Suite C  
Traverse City, MI 49684

10.3 *Non-Assignable.* This Agreement may not be assigned or transferred, nor may any right or obligation hereunder be assigned or delegated, to a third party by either party without the prior written consent of the other party hereto.

10.4 *Waiver.* Failure by either party to enforce any term of this Agreement shall not be deemed a waiver of the enforcement of that or any other term, nor shall any acceptance of a partial payment of reimbursement fee be deemed a waiver of TCL&P's right to the full amount thereof.

10.5 *Headings.* The headings to the sections and subsections of this Agreement are included merely for convenience of reference and will not affect the meaning of the language included therein.

10.6 *Severability.* In the event that any part of this Agreement shall be held invalid, the remainder thereof shall remain in full force and effect.

10.7 *Legal Effect.* This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective administrators, successors and assigns.

10.8 *Non-Discrimination.* The parties agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight, handicapped status, marital status, genetic makeup, or sexual orientation. Breach of this covenant may be regarded as a material breach of this Agreement.

10.9 *Amendments.* The parties agree to permit modifications of this Agreement from time to time, but such modifications shall be in writing and signed by both parties.

10.10 *Third Party Beneficiaries.* This Agreement confers no rights or remedies on any third party, other than the parties to this Agreement and their respective successors and permitted assigns.

10.11 *Compliance with Regulations.* Both parties shall comply with all applicable statutes, rules and regulations of all federal, state and local governments and agencies having jurisdiction, and bears the risk of any such authorities or changes thereto.

10.12 *Interpretation.* This Agreement shall be governed by the laws of the State of Michigan, both as to interpretation and performance. This Agreement was drafted at the joint direction of the parties. The pronouns and relative words used herein are written in the neuter and singular. However, if more than one person or entity joins in this Agreement on behalf of either party, or if a person of masculine or feminine gender joins in this Agreement on behalf of either party, such words shall be interpreted to be in the plural, masculine or feminine as the sense requires. In the event that any term, clause or provision of this Agreement conflicts with any term, clause, or provision contained in any attachments to this Agreement, this Agreement's terms shall prevail.

10.13 *Venue.* Any and all suits for any and every breach of this Agreement may be instituted and maintained in any court of competent jurisdiction in the County of Grand Traverse, State of Michigan.

10.14 *Entire Agreement.* This Agreement, together with all the items incorporated herein by reference, constitutes the entire Agreement of the parties and there are no valid promises, conditions or understandings which are not contained herein.

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the day and year first above written.

TRAVERSE CITY LIGHT AND POWER  
DEPARTMENT

TRAVERSE CITY DOWNTOWN  
DEVELOPMENT AUTHORITY

By:

\_\_\_\_\_  
, Chairman

Date: \_\_\_\_\_

By:

\_\_\_\_\_  
Stephen Constantin, Chairperson

Date: \_\_\_\_\_

By:

\_\_\_\_\_  
Timothy J. Arends, Secretary

Date: \_\_\_\_\_

By:

\_\_\_\_\_  
Ross Biederman, Secretary

Date: \_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
W. Peter Doren, General Counsel

Approved as to Form:

\_\_\_\_\_  
Lauren Tribble-Laucht, DDA Counsel

Approved as to Substance:

\_\_\_\_\_  
Rob Bacigalupi, DDA Executive Director

## EXHIBIT A Wi-Fi Internet Service

### **Objective/Scope**

TCL&P will design, deploy, and maintain a Complimentary Wi-Fi System for use in the DDA TIF districts defined in Exhibit A.

The Wi-Fi System will be built upon the IEEE 802.11 family of standards and further defined as: 802.11a, 802.11b, 802.11g, and 802.11n. It will communicate in compliance with the Federal Communications Commissions (FCC) ISM bands for unlicensed communications that are limited to the 900MHz, 2.4, 3.65, and 5GHz frequency bands.

Mixed wireless (mesh) and backhaul services will be used to aggregate wireless traffic back to an Internet Point of Presence (POP).

The system will provide up to three (3) separate secure virtual local area networks (VLANS) for Municipal use.

### **Bandwidth**

The system will provide a minimum of 30 Mbps of aggregated bandwidth for use. The amount of bandwidth may be increased depending on market pricing and funding from the DDA.

### **Ad Delivery Platform**

The system will incorporate an ad delivery platform on the publicly broadcasted SSID. This platform will be maintained by TCL&P, while the advertising operations (selling, adding, editing, deleting, etc.) will be maintained by the DDA. TCL&P will not be responsible for calls or inquiries in regards to advertising unless there are outages associated with the platform.

### **Level of Service**

The Wi-Fi System will be designed for outdoor use only. It should be noted that some building penetration may occur, but this is not the intent of this System or responsibility of TCL&P.

TCL&P and the DDA agree that there may be interference "noise" present in the unlicensed communications bands defined above and have engineered solutions to mitigate this issue. However, TCL&P will not be held responsible for service outages or interruptions from this "noise."

As stated, this system is a complimentary Wi-Fi System. As such, TCL&P will be responsible for the overall health of the System and not individual support calls.

EXHIBIT A

# TC DDA Wi-Fi Proposal for TCLP



By Jim Selby  
(408) 412-WiFi  
jim@aspenwireless.net



TRAVERSE CITY  
LIGHT & POWER  
Investing Our Energy in You



Aspen Wireless Technologies, Inc.



# TC DDA Wi-Fi Design Summary

- DDA TIFF district coverage designed for 20dB link budget margin, 3rd AP coverage in high density areas. Planned for future capacity
- 66 Nodes total of which 20 have Fiber connectivity. 27,500 simultaneous users, 3.2Gbps of potential capacity injection
- Aspen Wireless to provide a TURNKEY Wi-Fi SOLUTION using Ruckus Wireless and our WaVE-NOC with a 120 month operations, monitoring and maintenance agreement.

# Node Radios

## ZoneFlex 7762

Best-in-class 2x2 MIMO  
2.5x1, 600 Mbps



- Well suited for both indoor and outdoor environments
- Best coverage and capacity at 200%
- Ideal for public, transit, or industrial

## ZoneFlex 7762-N

Best-in-class 2x2 MIMO  
2.5x1, 600 Mbps



- Well suited for both indoor and outdoor environments
- Best coverage and capacity at 200%
- Ideal for public, transit, or industrial

## ZoneFlex 7762-S

Best-in-class 2x2 MIMO  
2.5x1, 600 Mbps



- Well suited for both indoor and outdoor environments
- Best coverage and capacity at 200%
- Ideal for public and transit

## ZoneFlex 7762-E

Best-in-class 2x2 MIMO  
2.5x1, 600 Mbps



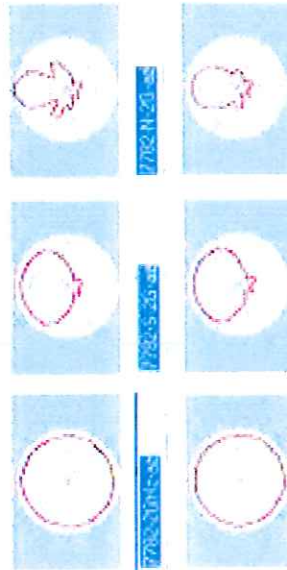
- Well suited for both indoor and outdoor environments
- Best coverage and capacity at 200%
- Ideal for public and transit

Excellent dual band 5GHz/2.4GHz support  
Multiple antenna technology and advanced RF management  
Up to 600 Mbps throughput  
Chip based network programming increasing signal gain up to 4dB when used with supported clients  
Advanced interference avoidance optimized for high-density environments  
Standard 802.3af/at output for surveillance cameras or small cell solutions  
PlayStation 4/5, Xbox  
Integrated QoS for location services and network gaming  
Multi-point roaming capability  
Small footprint, and mounting form factor

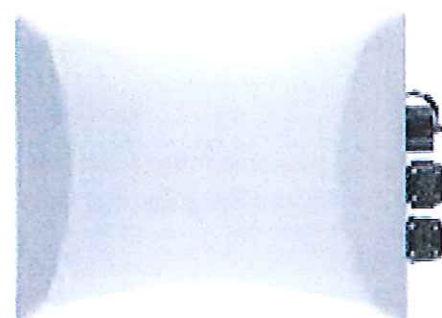
- 2 to 4 times extended range and coverage
- Multiple IP addresses
- 600 Mbps throughput (4x4 MIMO)
- 22 BSSIDs with unique QoS and security policies
- Advanced QoS packet classification and scheduling for latency-sensitive traffic
- Continuous Bandwidth Allocation
- Dynamic power management for reduced cell loads
- IEEE 802.3af/a PoE, 802.3at supporting PoE++ and Auto PoE
- Smart Mesh Networking
- IPv6 and Dynamic DNS
- Advanced control balancing
- Standby and remote access support
- Configurable and user accounts

ZoneFlex 7762 Series Node Radios

We will use a combination of these to achieve desired coverage pattern



Aspen Wireless Technologies, Inc.



# Physical & Performance Specifications

## PHYSICAL CHARACTERISTICS

|                       |  |
|-----------------------|--|
| <b>POWER</b>          | <p>AC Input (100-250 VAC 50/60 Hz)</p> <ul style="list-style-type: none"> <li>• Idle: 5W</li> <li>• Typical: 13W</li> <li>• Peak: 18W (PoE output off)</li> <li>• Peak: 50W (PoE output 25W)</li> </ul> <p>PoE Input</p> <ul style="list-style-type: none"> <li>• Idle: 6W</li> <li>• Typical: 8W</li> <li>• Peak: 802.3ab/4 (PoE output off)</li> <li>• Peak: 44W (PoE output 25W)</li> </ul>                       |
| <b>PHYSICAL SIZE</b>  | <ul style="list-style-type: none"> <li>• 23.9 cm (L), 19.5 cm (W), 11.8 cm (H)</li> <li>• 2.4 Kg</li> </ul>  |
| <b>ETHERNET PORTS</b> | <p>PoE Input</p> <ul style="list-style-type: none"> <li>• 10/100/1000Base-T 802.3, 802.3ab, 802.3ata/PoE PD Input up to 40W with high power PoE injector</li> <li>• Jumbo frame support (2000 byte MTU)</li> </ul> <p>PoE Output:</p> <ul style="list-style-type: none"> <li>• 10/100/1000Base-T 802.3, 802.3u, 802.3ab, 802.3ata/PoE PSE Output up to 25W</li> <li>• Jumbo frame support (2000 byte MTU)</li> </ul> |

## RF (7782, 7782-S, 7782-N)

|   |   |
|---|---|
| <b>ANTENNA</b>                          | <ul style="list-style-type: none"> <li>• 7782: 2000+ patterns</li> <li>• 7782-S: 8+ patterns</li> <li>• 7782-N: 1 pattern</li> </ul>  |
| <b>MAXIMUM EIRP (Varies by country)</b> | <ul style="list-style-type: none"> <li>• 7782: 34 dBm (2.4GHz); 32 dBm (5GHz)</li> <li>• 7782-S: 39 dBm (both bands)</li> <li>• 7782-N: 36 dBm (2.4GHz); 42 dBm (5GHz)</li> </ul> |
| <b>PHYSICAL ANTENNA GAIN</b>            | <ul style="list-style-type: none"> <li>• 7782: 3 dBi (both bands)</li> <li>• 7782-S: 6 dBi (2.4GHz); 8 dBi (5GHz)</li> <li>• 7782-N: 9 dBi (2.4GHz); 15 dBi (5GHz)</li> </ul>     |
| <b>BEAMFLEX* SINR TX GAIN</b>           | <ul style="list-style-type: none"> <li>• Up to 6 dB</li> </ul>  |
| <b>BEAMFLEX* SINR RX GAIN</b>           | <ul style="list-style-type: none"> <li>• Up to 4 dB</li> </ul>  |
| <b>INTERFERENCE MITIGATION</b>          | <ul style="list-style-type: none"> <li>• 15 dB</li> </ul>   |
| <b>MINIMUM RX SENSITIVITY</b>           | <ul style="list-style-type: none"> <li>• -101 dBm (2.4GHz); -96 dBm (5GHz)</li> </ul>   |

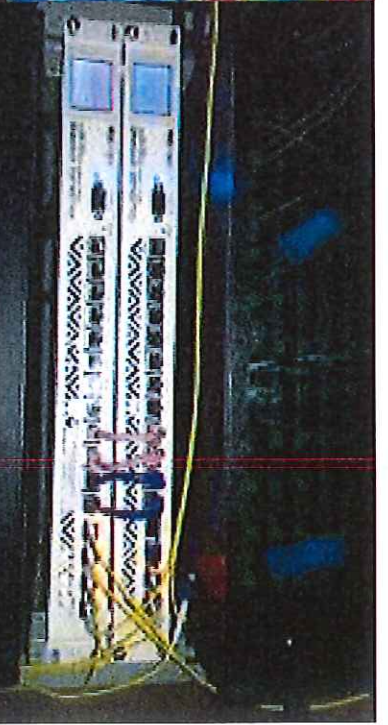
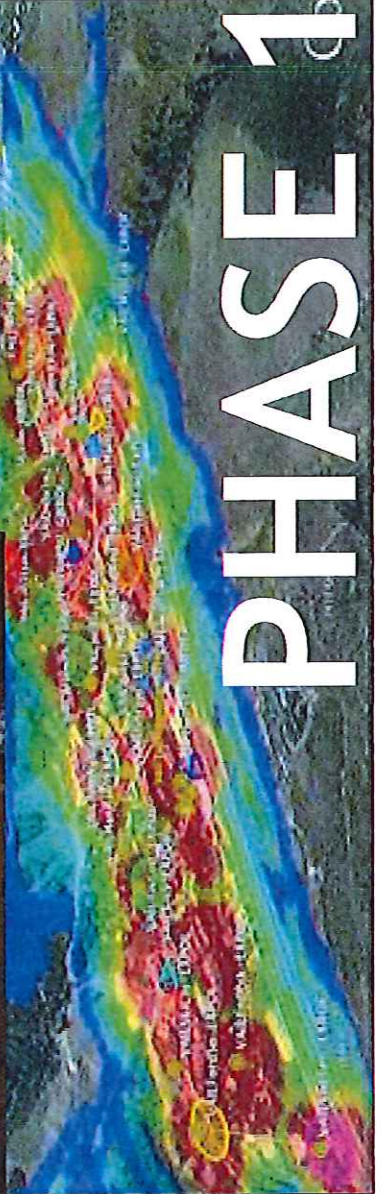
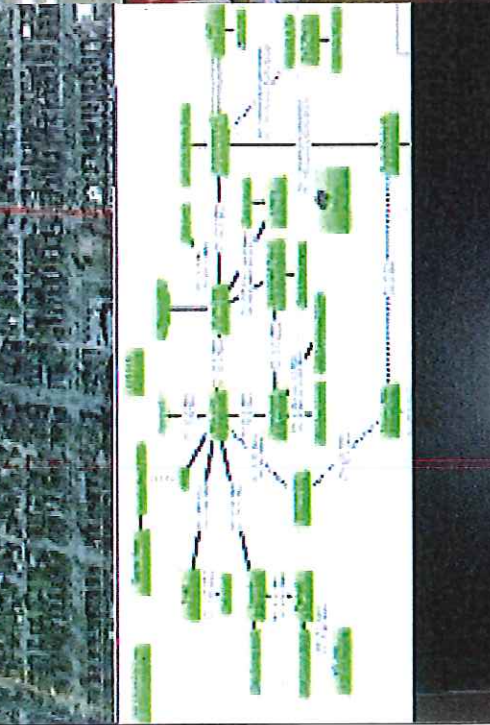
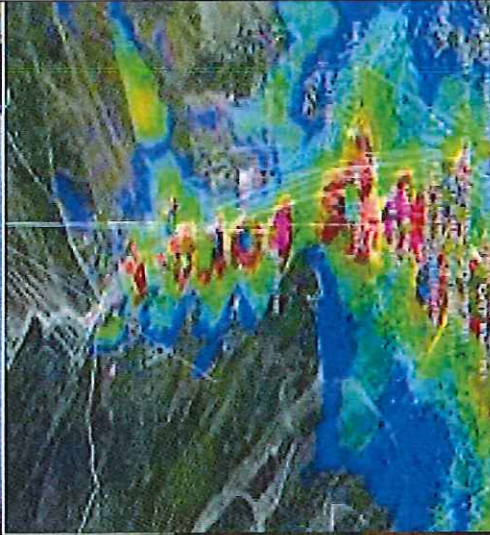
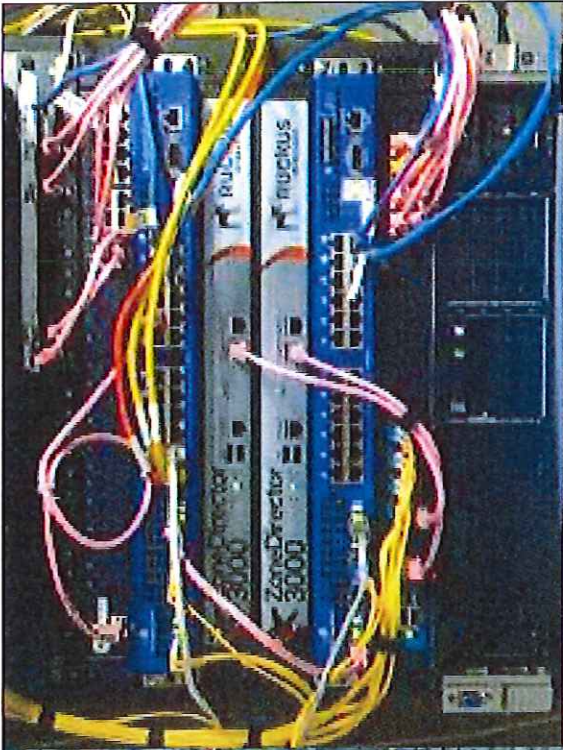
\*BeamFlex gains are statistical system level effects translated to enhanced SINR based on observations over time in real-world conditions with multiple APs and many clients



Aspen Wireless Technologies, Inc.

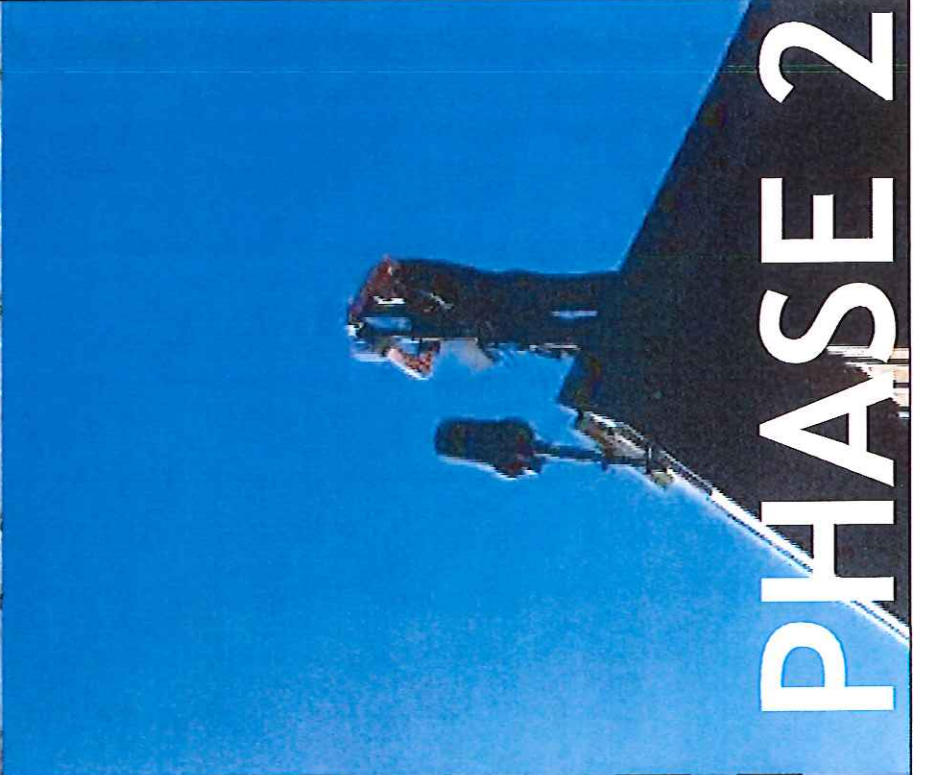
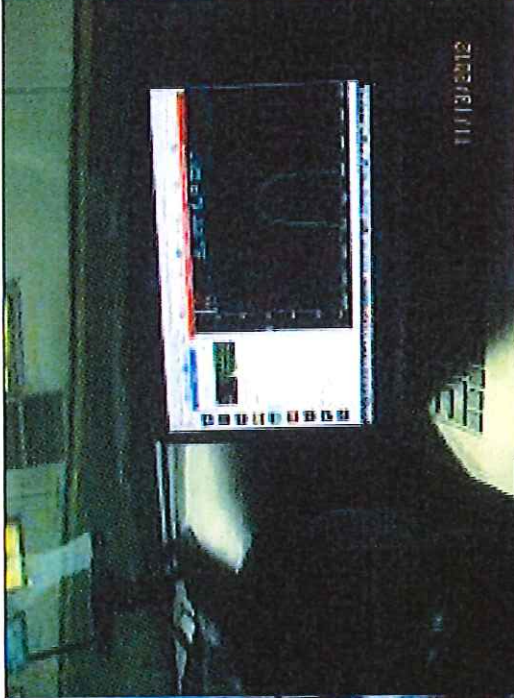
# Phased Approach

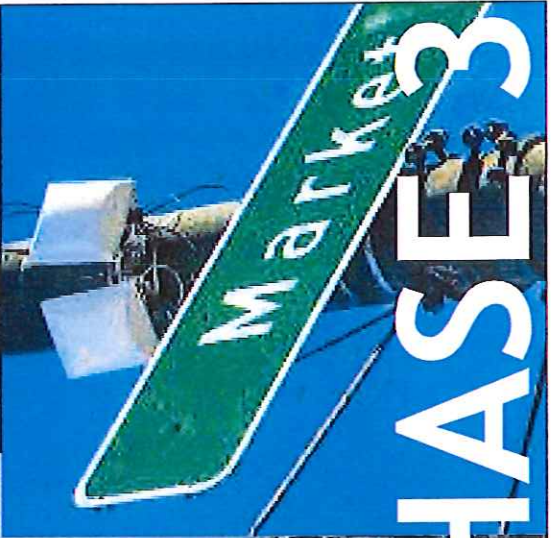
- Phase I - Set up Staging, IP Core, Controllers Network Management Servers and Internet.
- Phase II - Focus on fiber backbone and the Root Wi-Fi Sites. Complete approvals and permitting with TC. 20 Nodes
- Phase III - Standardize on Power and mounting Mesh Wi-Fi sites mainly on TCLP poles. 46 Nodes



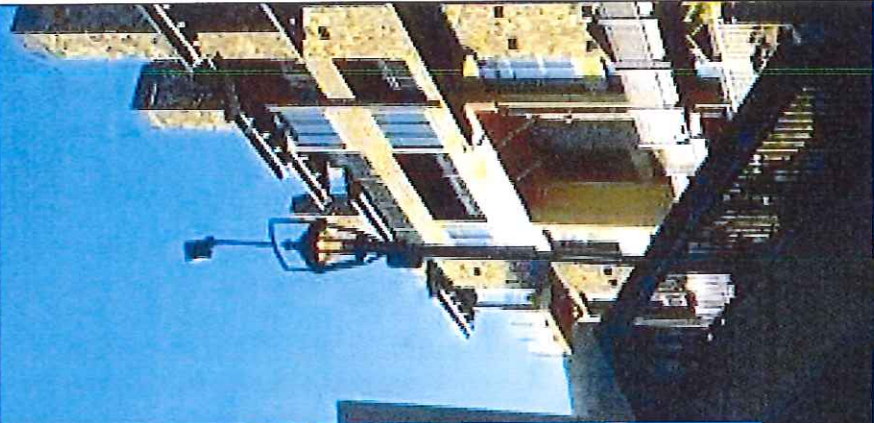
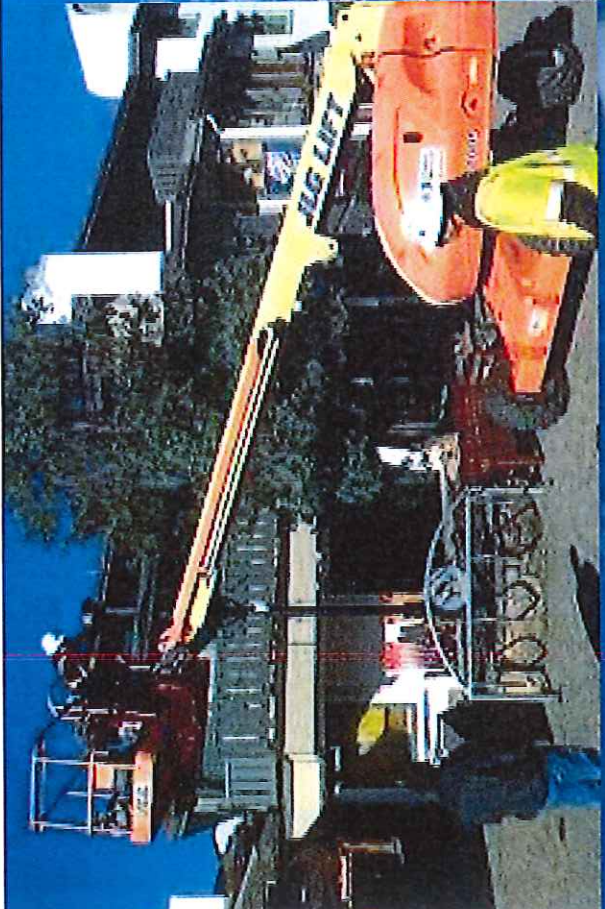
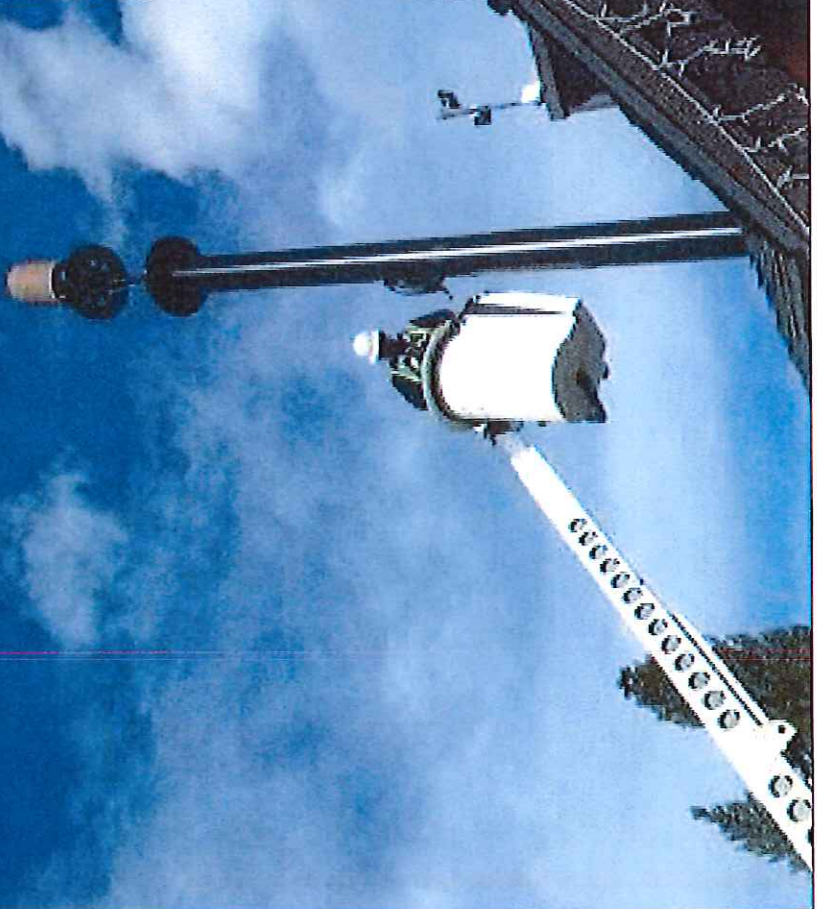
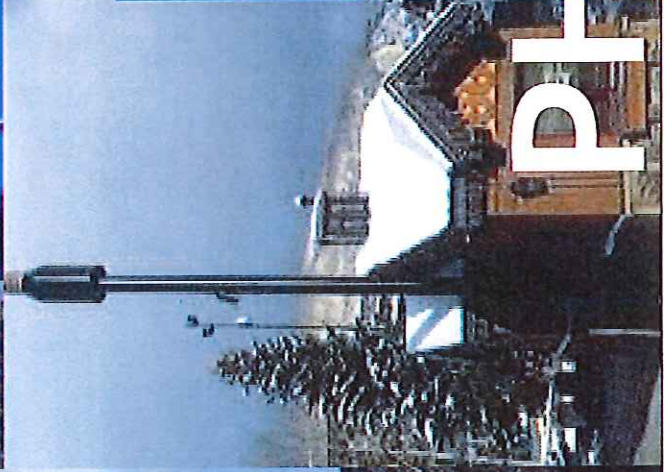
# PHASE 1

# PHASE 2





# PHASE 3



# Fiber and Power Considerations in our Turnkey Design

We have 8 root sites in the design with Fiber IP connectivity. Need consistency throughout the build.

All Wi-Fi and hub equipment specified fits in standard 19" Rack mount

Need to look thru form factor streetlight mounting to accommodate node power supplies? 120v or PoE?

Quoted with 12 Fibers, pigtail, panel and turnkey and access to their own IP core for TCLP applications

Same design at every site simplifies aesthetics approval, operational costs and integration time

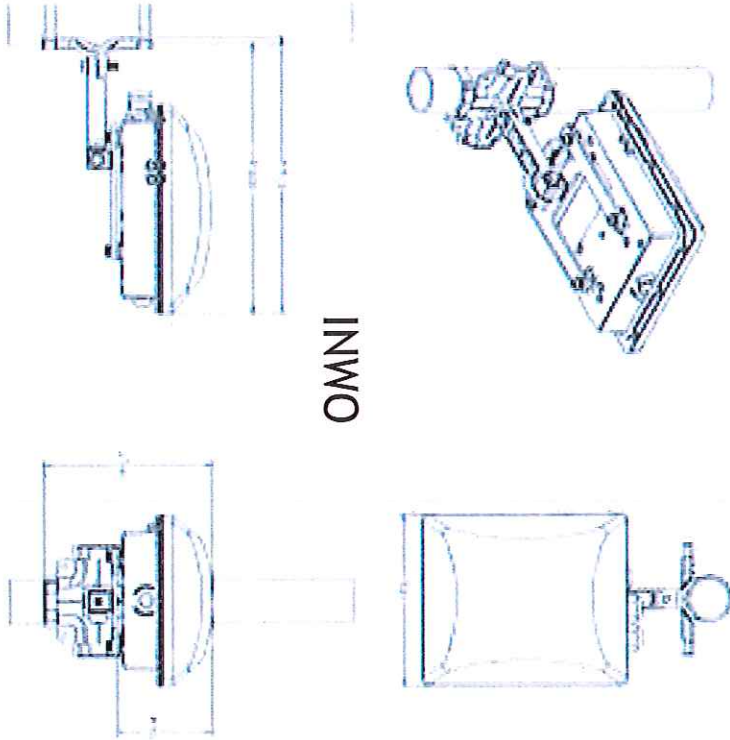


Aspen Wireless Technologies, Inc.



# Node Dimensions and attachment detail

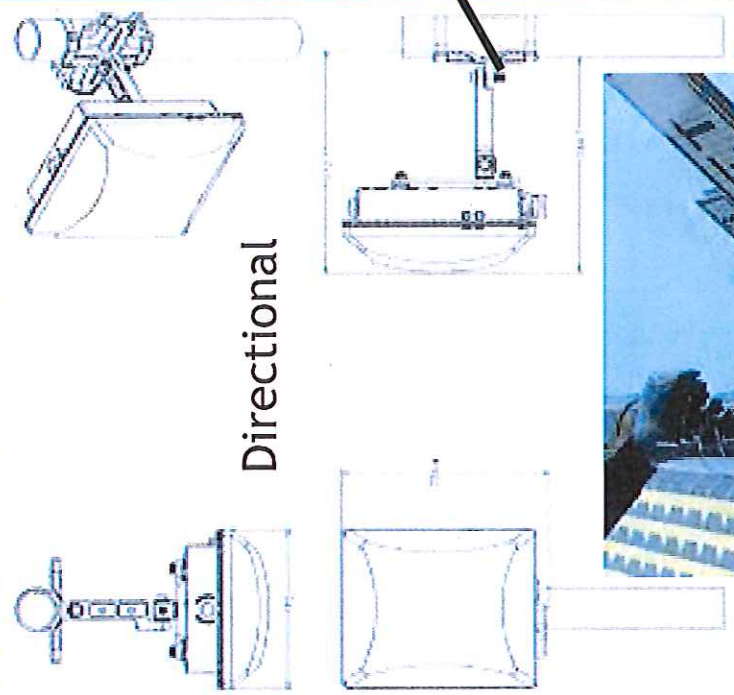
Figure 43. Dome mount maximum dimensions



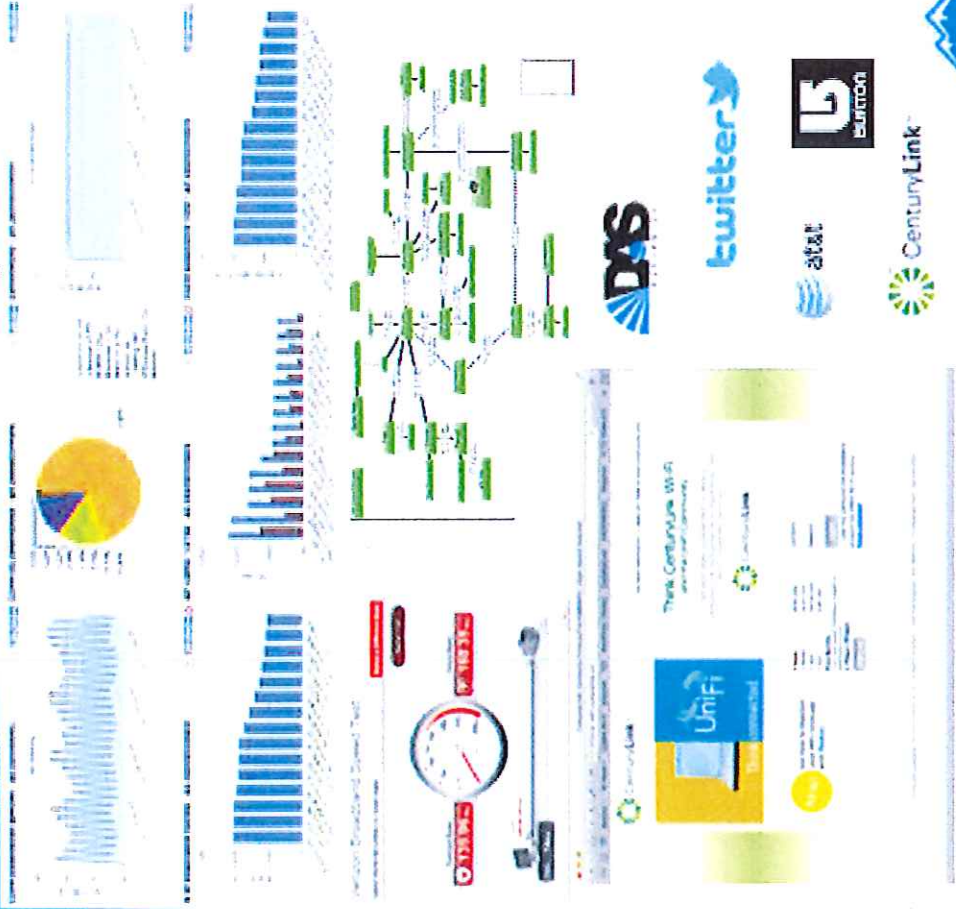
OMNI

Directional

Figure 42. Sector mounting maximum dimensions



# Aspen Wireless will Manage and Operate with WaVE-NOC



- since 2006 our Wireless and Virtual Network Operations Center (WaVE-NOC) is PROVEN DAILY in large deployments.
- Wi-Fi centric expertise with tiered support. Our techs have real-time visibility to deploy, control, monitor and upgrade components or users.
- As the network technology evolves, ASPEN WIRELESS will place measures to enhance the network and make system changes for better support and increasing operational margin, which is included in the monthly recurring rate.
- \$800/month includes 10 year warranty on hardware, software and all maintenance for a carefree experience.

Satisfied Customers using WaVE-NOC:



Aspen Wireless Technologies, Inc.

# Node Locations and Details

| Node   | Location             | Latitude    | Longitude | Altitude | Power       | Radio       | Network     | Mounts    | Enclosure   | TOTALS       |
|--|----------------------|-------------|-----------|----------|-------------|-------------|-------------|-----------|-------------|--------------|
| Mesh-01  | weatbay              | 44.7671729  |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-02  | Northbrew            | 44.76398039 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-03  | Northball            | 44.76538383 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-04  | opensepace           | 44.7657775  |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-05  | warehouse/del        | 44.7667287  |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-06  | fishbrain            | 44.76494194 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-07  | ishamburg            | 44.76410876 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-08  | thriver              | 44.76252987 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-09  | unionstreet/bridge   | 44.76532862 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-10  | recordologic         | 44.76411714 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-11  | mainwest eMesh       | 44.76663558 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-12  | mainwest             | 44.76665302 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-13  | welcometr            | 44.76581869 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-14  | state/union          | 44.76281175 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-15  | oldtowne eMesh       | 44.76003875 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-16  | clubike              | 44.76103391 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-17  | oldtowne             | 44.76002143 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-18  | oldtowne south       | 44.75866    |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-19  | union&8th            | 44.75924632 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-20  | unionstreet          | 44.76342695 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-21  | panola               | 44.76411904 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-22  | ATTCO                | 44.7639357  |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-23  | cherryopolly         | 44.76353505 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-24  | cherryopolly         | 44.76412935 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-25  | farmersmarket        | 44.76546145 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-26  | FarmersMarket eMesh  | 44.76546374 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-27  | muslards             | 44.76296678 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-28  | Cross Bridge         | 44.76442993 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-29  | firefly              | 44.76100894 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-30  | midtown              | 44.76017936 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-31  | mainstreet           | 44.76639148 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-32  | backcountry          | 44.76415841 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-33  | chasealley           | 44.76346465 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-34  | stategrill           | 44.7628505  |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-35  | statetheatre         | 44.76402278 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-36  | Chase Park           | 44.76403888 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-37  | palaisse amie        | 44.75949415 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-38  | sestate&park         | 44.76295223 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-39  | Front&Park           | 44.76406436 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-40  | Front&east eMesh     | 44.75960892 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-41  | Front&east           | 44.75965977 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-42  | Front&east           | 44.76415273 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-43  | Front&boardman       | 44.76415273 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-44  | Boardman             | 44.76415273 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-45  | Boardman             | 44.76412935 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| Mesh-46  | Boardman             | 44.76412935 |           |          | \$ 620.00   | \$ 2,700.00 |             | \$        | \$ 150.00   | \$ 3,470.00  |
| ROOT-01  | Cabint #6            | 44.7639439  |           |          | \$ 5,600.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 3,500.00 | \$ 18,250.00 |
| ROOT-02  | Cabint #6            | 44.7639439  |           |          | \$ 5,600.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 3,500.00 | \$ 18,250.00 |
| ROOT-03  | Hall St Sub South    | 44.76494678 |           |          | \$ 2,750.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 1,500.00 | \$ 11,950.00 |
| ROOT-04  | Hall St Sub North    | 44.7650921  |           |          | \$ 350.00   | \$ 2,700.00 | \$ 350.00   | \$ 400.00 | \$ -        | \$ 3,800.00  |
| ROOT-05  | Opera Hall SW        | 44.76369887 |           |          | \$ 1,750.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 1,750.00 | \$ 11,100.00 |
| ROOT-06  | Opera Hall NW        | 44.76401309 |           |          | \$ 400.00   | \$ 2,700.00 | \$ 350.00   | \$ 400.00 | \$ -        | \$ 4,250.00  |
| ROOT-07  | Opera Hall SE        | 44.76369683 |           |          | \$ 400.00   | \$ 2,700.00 | \$ 350.00   | \$ 400.00 | \$ -        | \$ 3,900.00  |
| ROOT-08  | Old Town Parking     | 44.75959067 |           |          | \$ 2,750.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 1,750.00 | \$ 12,100.00 |
| ROOT-09  | Zoo 2                | 44.76508975 |           |          | \$ 1,250.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 600.00   | \$ 7,350.00  |
| ROOT-10  | Zoo 1                | 44.76512494 |           |          | \$ 400.00   | \$ 2,700.00 | \$ 350.00   | \$ 400.00 | \$ -        | \$ 3,850.00  |
| ROOT-11  | Old Towne Parking NE | 44.76013104 |           |          | \$ 1,200.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 600.00   | \$ 5,450.00  |
| ROOT-12  | FIM                  | 44.76396351 |           |          | \$ 2,500.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 800.00   | \$ 12,550.00 |
| ROOT-13  | FIM South            | 44.76344499 |           |          | \$ 400.00   | \$ 2,700.00 | \$ 350.00   | \$ 400.00 | \$ -        | \$ 3,850.00  |
| ROOT-14  | FIM West             | 44.76397396 |           |          | \$ 400.00   | \$ 2,700.00 | \$ 350.00   | \$ 400.00 | \$ -        | \$ 3,850.00  |
| ROOT-15  | Parking #1 NorthWest | 44.76397396 |           |          | \$ 2,000.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 400.00 | \$ 1,750.00 | \$ 10,550.00 |
| ROOT-16  | Parking #1 South     | 44.76302369 |           |          | \$ 2,000.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 450.00 | \$ 600.00   | \$ 5,300.00  |
| ROOT-17  | Parking #1 North     | 44.76374545 |           |          | \$ 400.00   | \$ 2,700.00 | \$ 350.00   | \$ 400.00 | \$ 600.00   | \$ 4,500.00  |
| ROOT-18  | Parking #1 SouthEast | 44.76301638 |           |          | \$ 400.00   | \$ 2,700.00 | \$ 350.00   | \$ 450.00 | \$ 600.00   | \$ 3,900.00  |
| ROOT-19  | 400Boardman          | 44.76050819 |           |          | \$ 2,900.00 | \$ 2,700.00 | \$ 2,400.00 | \$ 450.00 | \$ 1,750.00 | \$ 14,650.00 |
| ROOT-20  | HASTING CORE         | 44.76050819 |           |          | \$ 1,750.00 | \$ 3,000.00 | \$ 4,800.00 | \$ 800.00 | \$ 2,000.00 | \$ 14,450.00 |
| <b>NODE COSTS \$ 22,550.00 \$ 56,020.00 \$ 178,500.00 \$ 8,800.00 \$ 24,100.00 \$ 318,220.00</b> |                      |             |           |          |             |             |             |           |             |              |



Aspen Wireless Technologies, Inc.



# TCLP DDA WI-FI Turnkey Proposal

| Capital Expenditures   |     |                             |           |      |                   |
|--|-----|-----------------------------|-----------|------|-------------------|
|  | QTY | Type                        | Cost      | U/M  | Total             |
| Node Testing, Turn up, NMS integration TCLP Alarms, turn over to WaVE-NOC      |     |                             |           |      |                   |
| Project Management, Systems Admin, Programming Controller and DDA integration  |     |                             |           |      |                   |
| Node testing and optimization  | 3   | wks                         | \$ 2,500  | week | \$ 7,500.00       |
| MetroE gigabit Backhaul Link   | 1   | links                       | \$ 4,800  | ea   | \$ 4,800.00       |
| IPCORE/HSRP/NMS  | 3   | IPCore                      | \$ 2,000  | ea   | \$ 6,000.00       |
| Rack/patch/Mounting Equipment  | 8   | POP sites                   | \$ 400    | ea   | \$ 3,200.00       |
| Headend Controller   | 2   | servers                     | \$ 6,000  | ea   | \$ 12,000.00      |
| Outdoor Cat6   | 5   | 1000' box                   | \$280.00  | ea   | \$ 1,400.00       |
| Battery Back-up & Power controller   | 8   | hardware                    | \$ 1,200  | ea   | \$ 9,600.00       |
| ZoneDirector 3000 supporting up to 100 ZoneFlex Access Points                  | 1   | hardware                    | \$ 14,000 | ea   | \$ 14,000.00      |
| Partner WatchDog Support for ZoneDirector 3000, 100 AP License Upgrade, 5 Year | 1   | software                    | \$ 5,000  | 5yr  | \$ 5,000.00       |
|  |     | Headend Costs               |           |      | \$ 63,500         |
|  |     | Node Costs                  |           |      | \$ 318,220        |
|  |     | <b>Capital Expenditures</b> |           |      | <b>\$ 381,720</b> |

| Operating Expenses                   |     |                                |             |     |                     |
|--------------------------------------|-----|--------------------------------|-------------|-----|---------------------|
|                                      | QTY | Type                           | Cost        | U/M | Total               |
| Aspen Supervision and Maint.         | 10  | Years                          | \$ 2,400.00 | /yr | \$ 24,000.00        |
| Aspen Contracted Maint and Materials | 10  | Years                          | \$ 7,200.00 | /yr | \$ 72,000.00        |
|                                      |     | <b>10 yr Operating Expense</b> |             |     | <b>\$ 96,000.00</b> |



# Major Savings Achieved with Turnkey Solution

|   | Original Proposal         | Turnkey Proposal     |
|---|---------------------------|----------------------|
| Capital Expenses                            | \$ 526,760.00             | \$ 381,720.00        |
| Operating Expenses                          | \$ 154,000.00             | \$ 96,000.00         |
| TOTAL over 10 yrs                           | \$ 680,760.00             | \$ 477,720.00        |
|   |                           |                      |
|   | 10 yr cost savings        | \$ 203,040.00        |
|   | Lost interest reduced 28% | \$ 7,494.64          |
|   |                           |                      |
| <b>Total Savings with New Turnkey Quote</b> |                           | <b>\$ 210,534.64</b> |

Also allows TCLP Staff not to be distracted from their core business.



TRAVERSE CITY  
LIGHT & POWER  
Innovating Our Energy in the



Aspen Wireless Technologies, Inc.

Please contact for procurement and  
contracting

[Jim@aspennwireless.net](mailto:Jim@aspennwireless.net)  
(970) 948-9998



Aspen Wireless Technologies, Inc.



EXHIBIT B

| Traverse City Light and Power               |  | FYE 6/30/2014 | FYE 6/30/2015   | FYE 6/30/2016   | FYE 6/30/2017   | FYE 6/30/2018   | FYE 6/30/2019   | FYE 6/30/2020   | FYE 6/30/2021  | FYE 6/30/2022  | FYE 6/30/2023  | FYE 6/30/2024  |
|---|--|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|
| WiFi Project Business Plan                  |  | \$ -          | \$ (465,720.00) | \$ (229,424.58) | \$ (198,827.00) | \$ (167,428.92) | \$ (135,291.94) | \$ (102,416.69) | \$ (69,056.28) | \$ (46,333.38) | \$ (31,375.61) | \$ (15,722.65) |
| Beginning Cash Flow                         |  |               |                 |                 |                 |                 |                 |                 |                |                |                |                |
| Operating Revenue                           |  |               |                 |                 |                 |                 |                 |                 |                |                |                |                |
| Fiber tariff fee                            |  | 39,600.00     | 39,600.00       | 39,600.00       | 39,600.00       | 39,600.00       | 39,600.00       | 44,550.00       | 44,550.00      | 44,550.00      | 44,550.00      | 44,550.00      |
| Pole attachment fee                         |  | 525.00        | 538.13          | 551.58          | 565.37          | 579.50          | 593.99          | 608.84          | 624.06         | 639.66         | 655.65         | 655.65         |
| Subtotal Operating Revenue                  |  | 40,125.00     | 40,138.13       | 40,151.58       | 40,165.37       | 40,179.50       | 40,193.99       | 45,158.84       | 45,174.06      | 45,189.66      | 45,205.65      | 45,205.65      |
| Operating Expenses                          |  |               |                 |                 |                 |                 |                 |                 |                |                |                |                |
| TCL&P Supervision and Maintenance           |  | 7,500.00      | 5,000.00        | 5,000.00        | 5,000.00        | 5,000.00        | 5,000.00        | 5,000.00        | 5,000.00       | 5,000.00       | 5,000.00       | 5,000.00       |
| Aspen Supervision and Maintenance           |  | 2,400.00      | 2,400.00        | 2,400.00        | 2,400.00        | 2,400.00        | 2,400.00        | 2,400.00        | 2,400.00       | 2,400.00       | 2,400.00       | 2,400.00       |
| Aspen Contracted Maintenance and Materials  |  | 7,200.00      | 7,200.00        | 7,200.00        | 7,200.00        | 7,200.00        | 7,200.00        | 7,200.00        | 7,200.00       | 7,200.00       | 7,200.00       | 7,200.00       |
| Internet Access Connection (Meritt Network) |  | 12,650.00     | 11,100.00       | 11,100.00       | 11,100.00       | 11,100.00       | 11,100.00       | 11,100.00       | 11,100.00      | 11,100.00      | 11,100.00      | 11,100.00      |
| City Fee                                    |  | 2,006.25      | 2,006.91        | 2,007.58        | 2,008.27        | 2,008.98        | 2,009.68        | 2,257.20        | 2,257.94       | 2,258.70       | 2,259.48       | 2,260.28       |
| Insurance                                   |  | 1,000.00      | 1,000.00        | 1,000.00        | 1,000.00        | 1,000.00        | 1,000.00        | 1,000.00        | 1,000.00       | 1,000.00       | 1,000.00       | 1,000.00       |
| Lost interest earnings                      |  | 5,948.33      | 5,205.51        | 4,454.59        | 3,704.01        | 2,953.77        | 2,088.83        | 1,464.26        | 760.06         | 67.24          | 509.98         | 522.72         |
| Inflation cost                              |  | -             | 490.00          | 439.75          | 450.74          | 462.01          | 473.56          | 485.40          | 497.54         | 509.98         | 522.72         | 522.72         |
| Subtotal Operating Expenses                 |  | 38,704.58     | 34,402.42       | 33,601.92       | 32,863.02       | 32,124.76       | 31,639.59       | 30,907.60       | 30,216.30      | 29,536.70      | 29,483.00      | 29,483.00      |
| Operating Income                            |  | -             | 1,420.43        | 5,735.71        | 6,549.66        | 7,302.35        | 8,054.74        | 13,504.40       | 14,251.24      | 14,957.76      | 15,652.96      | 15,722.65      |
| Nonoperating Revenue                        |  |               |                 |                 |                 |                 |                 |                 |                |                |                |                |
| TIF 2 Contribution                          |  | 210,000.00    | -               | -               | -               | -               | -               | -               | -              | -              | -              | -              |
| TIF 97 Annual Contribution                  |  | 24,875.00     | 24,861.87       | 24,848.42       | 24,834.63       | 24,820.50       | 19,856.01       | 8,471.66        | -              | -              | -              | -              |
| Total nonoperating revenue                  |  | 234,875.00    | 24,861.87       | 24,848.42       | 24,834.63       | 24,820.50       | 19,856.01       | 8,471.66        | -              | -              | -              | -              |
| Capital costs                               |  |               |                 |                 |                 |                 |                 |                 |                |                |                |                |
| Capital expenditures                        |  | 381,720.00    | -               | -               | -               | -               | -               | -               | -              | -              | -              | -              |
| TCL&P installation costs                    |  | 20,000.00     | -               | -               | -               | -               | -               | -               | -              | -              | -              | -              |
| CIP incurred to date                        |  | 64,000.00     | -               | -               | -               | -               | -               | -               | -              | -              | -              | -              |
| Subtotal Capital Expenditures               |  | 465,720.00    | -               | -               | -               | -               | -               | -               | -              | -              | -              | -              |
| Net cash provided (used) for WiFi project   |  | (465,720.00)  | 234,875.00      | 24,861.87       | 24,848.42       | 24,834.63       | 24,820.50       | 19,856.01       | 8,471.66       | -              | -              | -              |
| Ending Cash Flow                            |  | (465,720.00)  | (229,424.58)    | (198,827.00)    | (167,428.92)    | (135,291.94)    | (102,416.69)    | (69,056.28)     | (46,333.38)    | (31,375.61)    | (15,722.65)    | (0.00)         |
| Total Amount Due from DDA                   |  | -             | 275,000.00      | 65,000.00       | 65,000.00       | 65,000.00       | 65,000.00       | 65,000.00       | 53,630.50      | 45,174.06      | 45,189.66      | 45,205.65      |

Notes:  
 1) Fiber contracts tend to be on a five year basis with inflation costs built in for the next five years, assuming 2.5 percent for each year equates to a 12.5 percent increase.  
 2) Fiber connection revenues is based on six connections and full redundancy tariff.  
 3) Pole attachment fee is based on 50 poles at \$10.50 each with a 2.5 percent increase each year.  
 4) Inflation costs does not include City fee or Aspen costs.  
 5) Inflation based on 2.5% year and lost earnings based on 2.0% a year.  
 6) If DDA TIF 2 does not renew, terminated, or amended to reduce its annual revenue to below the annual reimbursement fee is due and payable (capital portion.)  
 7) After the 10 years the fiber agreement or pole rental fees continue until the WiFi system is no longer utilizing those assets.  
 8) As stated in the proposal there is a ten year warranty on hardware, software and maintenance.



TRAVERSE CITY  
LIGHT & POWER

---

**To:** Light & Power Board  
**From:** W. Peter Doren, General Counsel  
**Date:** April 3, 2014  
**Subject:** Disposal of Coal Dock

---

Timothy Arends, Executive Director, has asked me to write the Memo to you explaining the process for turning over the Coal Dock property to the City of Traverse City. This process would consist of several documents which are:

1. Resolution Certifying Coal Dock to be Surplus for Operation of Traverse City Light and Power Department;
2. Quit Claim Deed to the City;
3. Assignment of Bottomlands Easement;
4. Assignment of Leases and Licenses that there are on the property such as the License with the Maritime Heritage Alliance and Traverse Tall Ship Company.

The Resolution and Quit Claim Deed are attached for your information. Should you adopt the Resolution, we will prepare the necessary Assignments.

To make this transfer, you need to decide that the Coal Dock property is surplus and not needed for the operation of the Traverse City Light and Power Department. This surplus status has to be confirmed by the City Commission and the City further has to accept the Deed and Assignments.

If you make these determinations, the following motion would be appropriate:

MOVED BY \_\_\_\_\_, SECONDED BY \_\_\_\_\_  
TO ADOPT THE TRAVERSE CITY LIGHT AND POWER DEPARTMENT  
RESOLUTION CERTIFYING COAL DOCK TO BE SURPLUS FOR  
OPERATION OF THE TRAVERSE CITY LIGHT AND POWER  
DEPARTMENT AND TO FURTHER AUTHORIZE THE EXECUTIVE  
DIRECTOR TO SIGN ALL NECESSARY DOCUMENTS.

c via email:

Tim Arends  
Lauren Tribble-Laucht, Esq.



TRAVERSE CITY LIGHT AND POWER DEPARTMENT  
RESOLUTION  
CERTIFYING COAL DOCK TO BE SURPLUS FOR  
OPERATION OF THE TRAVERSE CITY LIGHT AND POWER DEPARTMENT

WHEREAS, the Traverse City Light and Power Department owns the Coal Dock and adjacent property in Elmwood Township, Leelanau County, described in Attachment A; and

WHEREAS, the Coal Dock is no longer necessary or advantageous for the operation of the Traverse City Light and Power Department;

NOW, THEREFORE, BE IT RESOLVED that the Coal Dock described in Attachment A, incorporated here by reference, is certified as not necessary for the operation of the Light and Power Department; and

BE IT FURTHER RESOLVED that the Executive Director is authorized to execute a Quit Claim Deed to the City of Traverse City for the Coal Dock and an assignment to the City of all related leases, licenses and bottomlands easements, conditioned upon the surplus status of this property being confirmed by the Traverse City Commission pursuant to City Charter Section 179(b), and further conditioned upon acceptance by the City of the deed and assignments.

I hereby certify that the above Resolution was adopted on \_\_\_\_\_, 2014, at the regular TCL&P Board meeting held in the Commission Chambers, Governmental Center, 400 Boardman Avenue, Traverse City, Michigan.

\_\_\_\_\_  
Timothy J. Arends  
Secretary  
Traverse City Light & Power Board

## ATTACHMENT A

The following described premises situated in the Township of Elmwood, County of Leelanau, State of Michigan:

Parcel 1 That part of Sec. 33, T 28 N, R 11 W, described as follows: Commencing at the N  $\frac{1}{4}$  post of said Sec. 33; th. E along the N Sec. line of Sec. 33, 1443.10 ft.; th. S  $4^{\circ}$ -24' E 1173.37 ft.; th. S  $89^{\circ}$ -41' E, 73.64 ft. to the POB; th. S  $89^{\circ}$ -50' E, 120.17 ft.; th. S  $88^{\circ}$ -59' E, 413.13 ft.; th. S  $1^{\circ}$ -14' W, 233.35 ft.; th. N  $89^{\circ}$ -28' W, 204.53 ft.; th. N  $6^{\circ}$ -16' W, 179.94 ft.; th. N  $51^{\circ}$ -22' W, 31.12 ft.; th. N  $88^{\circ}$ -22' W, 108 ft.; th. S  $58^{\circ}$ -21' W 36.48 ft.; th. S  $3^{\circ}$ -50' W 27 ft.; th. S  $75^{\circ}$ -24' W, 127.73 ft.; th. N  $85^{\circ}$ -48' W 19.3 ft.; th. N  $2^{\circ}$ -10' E 100 ft. to the POB, together with full riparian right and also including those riparian rights owned by Franklin C. Sears which are attached and appurtenant to his ownership of the shore front property South of the above described land as described in 5 certain deeds recorded in the office of the Register of Deeds for the County of Leelanau in Liber 67D, p 14; Liber 75D, p 45; Liber 82D, p 324; Liber 96, p 41; and Liber 67, p 78, but only insofar as such riparian rights may be necessary for the use, operation, maintenance, and replacement of the dock above described, and for the enlargement of said dock by extending it in a Southerly direction not in excess of 50 feet, nor in excess of the present width of said dock on its Southerly boundary.

Parcel 2 All that part of the parcel described in L 115, p 370, of the Leelanau County Register of Deeds office, lying W of State Highway M-22 and described as a part of Gov't Lot 1 of Sec. 33, T 28 N, R 11 W, more fully described as follows: Commencing on Grand Traverse Bay 403.5 ft. S of the E and W centerline of Gov't Lot 1 of Sec. 33; th. W to a street surveyed by Tuller in 1901; th. S 200 ft.; th. E to a point 300 ft. W of the centerline of State Highway M-22; th. N 60 ft.; th. E 300 ft. to said centerline; th. N 40 ft.; th. E to the shore of Grand Traverse Bay; th. N'ly along the shore of Grand Traverse Bay 100 ft. more or less to the Place of beginning covering entire Lots 13 and 14 of an unrecorded plat and the N 40 ft. of Lot 12 of an unrecorded plat lying W of the centerline of State Highway M-22, excepting parcel conveyed to John Akers and wife as recorded in L 70, p 597; and excepting parcel conveyed to State of Michigan, State Highway Commissioner Charles Ziegler, Nov. 30, 1949, described as commencing on Grand Traverse Bay 403.5 ft. S of E and W centerline of Lot 1; Sec. 33; th. W to a street surveyed by Tuller in 1901; th. S 200 ft.; th. E to a point 300 ft. W of the centerline of State Highway M-22; th. N 60 ft.; th. E 300 ft. to said centerline; th. N 40 ft.; th. E to shore of Grand Traverse Bay; th. N'ly along shore of Grand Traverse Bay 100 ft. more or less to the Place of beginning which lies E'ly of a line 43

ft. W'ly of and measured at Right angles and parallel to the centerline of M-22.

Parcel 3

That part of Gov't. Lots 1 and 2, Sec. 33, T 28 N, R 11 W, more fully described as: Commencing at the North ¼ corner of said Sec. 33; th. East 1443.10 feet along the North line of said Sec. 33; th. South 4° 24' East, 1173.37 feet; th. South 89° 41' East, 73.64 feet; th. South 2° 10' West, 100.00 feet to the point of beginning; th. South 85° 48' East, 19.13 feet; th. North 75° 24' East, 127.73 feet; th. South 3° 50' West, 232.08 feet, along the face of a revetment for Grand Traverse Bay; th. North 89° 47' West, 134.61 feet to the Easterly right-of-way of State Highway M-22; th. North 2° 10' East, 200.37 feet, along said right-of-way to the point of beginning; together with all land between the side-lines of the above described property extended Easterly to the waters edge.

## QUIT CLAIM DEED

The Grantor, **Traverse City Light and Power Department**, a Michigan municipal electric utility, of 1131 Hastings Street, Traverse City, MI 49686, hereby conveys and quit claims to the Grantee, the **City of Traverse City**, a Michigan municipal corporation, of 400 Boardman Avenue, Traverse City, MI 49684, the following described premises situated in the Township of Elmwood, County of Leelanau, State of Michigan, to-wit:

Parcel 1            That part of Sec. 33, T 28 N, R 11 W, described as follows: Commencing at the N ¼ post of said Sec. 33; th. E along the N Sec. line of Sec. 33, 1443.10 ft.; th. S 4°-24' E 1173.37 ft.; th. S 89°-41' E, 73.64 ft. to the POB; th. S 89°-50' E, 120.17 ft.; th. S 88°-59' E, 413.13 ft.; th. S 1°-14' W, 233.35 ft.; th. N 89°-28' W, 204.53 ft.; th. N 6°-16' W, 179.94 ft.; th. N 51°-22' W, 31.12 ft.; th. N 88°-22' W, 108 ft.; th. S 58°-21' W 36.48 ft.; th. S 3°-50' W 27 ft.; th. S 75°-24' W, 127.73 ft.; th. N 85°-48' W 19.3 ft.; th. N 2°-10' E 100 ft. to the POB, together with full riparian right and also including those riparian rights owned by Franklin C. Sears which are attached and appurtenant to his ownership of the shore front property South of the above described land as described in 5 certain deeds recorded in the office of the Register of Deeds for the County of Leelanau in Liber 67D, p 14; Liber 75D, p 45; Liber 82D, p 324; Liber 96, p 41; and Liber 67, p 78, but only insofar as such riparian rights may be necessary for the use, operation, maintenance, and replacement of the dock above described, and for the enlargement of said dock by extending it in a Southerly direction not in excess of 50 feet, nor in excess of the present width of said dock on its Southerly boundary.

Parcel 2            All that part of the parcel described in L 115, p 370, of the Leelanau County Register of Deeds office, lying W of State Highway M-22 and described as a part of Gov't Lot 1 of Sec. 33, T 28 N, R 11 W, more fully described as follows: Commencing on Grand Traverse Bay 403.5 ft. S of the E and W centerline of Gov't Lot 1 of Sec. 33; th. W to a street surveyed by Tuller in 1901; th. S 200 ft.; th. E to a point 300 ft. W of the centerline of State Highway M-22; th. N 60 ft.; th. E 300 ft. to said centerline; th. N 40 ft.; th. E to the shore of Grand Traverse Bay; th. N'ly along the shore of Grand Traverse Bay 100 ft. more or less to the Place of

beginning covering entire Lots 13 and 14 of an unrecorded plat and the N 40 ft. of Lot 12 of an unrecorded plat lying W of the centerline of State Highway M-22, excepting parcel conveyed to John Akers and wife as recorded in L 70, p 597; and excepting parcel conveyed to State of Michigan, State Highway Commissioner Charles Ziegler, Nov. 30, 1949, described as commencing on Grand Traverse Bay 403.5 ft. S of E and W centerline of Lot 1; Sec. 33; th. W to a street surveyed by Tuller in 1901; th. S 200 ft.; th. E to a point 300 ft. W of the centerline of State Highway M-22; th. N 60 ft.; th. E 300 ft. to said centerline; th. N 40 ft.; th. E to shore of Grand Traverse Bay; th. N'ly along shore of Grand Traverse Bay 100 ft. more or less to the Place of beginning which lies E'ly of a line 43 ft. W'ly of and measured at Right angles and parallel to the centerline of M-22.

Parcel 3 That part of Gov't. Lots 1 and 2, Sec. 33, T 28 N, R 11 W, more fully described as: Commencing at the North ¼ corner of said Sec. 33; th. East 1443.10 feet along the North line of said Sec. 33; th. South 4° 24' East, 1173.37 feet; th. South 89° 41' East, 73.64 feet; th. South 2° 10' West, 100.00 feet to the point of beginning; th. South 85° 48' East, 19.13 feet; th. North 75° 24' East, 127.73 feet; th. South 3° 50' West, 232.08 feet, along the face of a revetment for Grand Traverse Bay; th. North 89° 47' West, 134.61 feet to the Easterly right-of-way of State Highway M-22; th. North 2° 10' East, 200.37 feet, along said right-of-way to the point of beginning; together with all land between the side-lines of the above described property extended Easterly to the waters edge.

This conveyance is for the sum of ONE DOLLAR (\$1.00).

This property may be located within the vicinity of farmland or farm operations. Generally accepted agricultural and management practices which may generate noise, dust, odors, and other associated conditions may be used and are protected by the Michigan Right to Farm Act.

The Grantor grants to the Grantee the right to make all division(s) under Section 108 of the Land Division Act, Act No. 288 of the Public Acts of 1967.

Dated: \_\_\_\_\_, 2014

\_\_\_\_\_  
Traverse City Light and Power Department  
By: Timothy Arends  
Its: Executive Director

STATE OF MICHIGAN )  
 ):ss.  
COUNTY OF GRAND TRAVERSE)

On the \_\_\_\_\_ day of \_\_\_\_\_, 2014, personally appeared before me Timothy Arends, Executive Director, Traverse City Light and Power Department, signor of the within instrument, who duly acknowledged to me that he executed the same.

\_\_\_\_\_  
, Notary Public  
County, Michigan  
My commission expires:  
Acting in the County of Grand Traverse

This instrument is exempt from transfer taxes pursuant to MCL 207.526(h)(i) and MCL 207.505(h)(i).

The above legal description was furnished by the Grantor, and drafter has not examined and makes no representations respecting title or description.

Prepared by and  
Send Recorded Document to:

Send Subsequent Tax Bills To:

W. Peter Doren (P23637)  
Sondee, Racine & Doren, PLC  
310 W. Front Street, Suite 300  
Traverse City, MI 49684  
(231) 947-0400

Grantee

Tax Parcel #

Recording fee: \$

Transfer Tax: \$0



**TRAVERSE CITY  
LIGHT & POWER**

**To:** Light & Power Board  
**From:** Blake Wilson System Engineer *BW*  
**Date:** April 2, 2014  
**Subject:** Bids for 2014 Pole Inspections

Bids have been obtained for 2014 Pole Inspection Program on TCL&P's utility system. Bid requests were sent out to two companies. Bid pricing were to include inspection of TCLP's wood poles (visual, sound and bore), data collection (verify and collect new electric facilities), perform a foreign attachment and Streetlight audit (verify and collect new contacts) and install ownership tags on poles.

| <b>Bid 1 – American Energy Services, Inc.</b>        | <b>Cost Per Unit</b> | <b>Estimated Units</b> | <b>Totals</b>      |
|--|----------------------|------------------------|--------------------|
| 1. Visual Inspection (top of all & those <10yrs)     | \$2.50               | 7000                   | \$17,500.00        |
| 2. Sound Testing (those >10yrs)                      | \$3.50               | 5950                   | \$20,825.00        |
| 3. Bore Test (those that fail above sound test)      | \$1.00               | 1400                   | \$1,400.00         |
| 4. Prepare Information for GIS                       | \$0                  | 7000                   | \$0.00             |
| 5. GPS Pole Locations (3 to 10 M accuracy)           | \$0.50               | 7000                   | \$3,500.00         |
| 6. Collect missing data (Equipment, conductor, pole) | \$0.75               | 7000                   | \$5,250.00         |
| 7. Foreign attachment audit (type, owner)            | \$0.40               | 7000                   | \$2,800.00         |
| 8. Install Customer-Supplied Ownership Tag           | \$1.00               | 1000                   | \$1,000.00         |
| 9. Streetlight Audit (streetlight on pole yes or no) | \$0.25               | 7000                   | \$1,750.00         |
| <b>Estimated Total Cost + 25%</b>                    |                      |                        | <b>\$67,531.25</b> |

| <b>Bid 2 – Osmose Utilities Services, Inc.</b>       | <b>Cost Per Unit</b> | <b>Estimated Units</b> | <b>Totals</b>      |
|--|----------------------|------------------------|--------------------|
| 1. Visual Inspection (top of all & those <10yrs)     | \$3.60               | 7000                   | \$25,200.00        |
| 2. Sound Testing (those >10yrs)                      | \$2.63               | 5950                   | \$15,648.50        |
| 3. Bore Test (those that fail above sound test)      | \$1.77               | 1400                   | \$2,478.00         |
| 4. Prepare Information for GIS                       | \$0.54               | 7000                   | \$3,780.00         |
| 5. GPS Pole Locations (3 to 10 M accuracy)           | \$1.45               | 7000                   | \$10,150.00        |
| 6. Collect missing data (Equipment, conductor, pole) | \$0.48               | 7000                   | \$3,360.00         |
| 7. Foreign attachment audit (type, owner)            | \$1.24               | 7000                   | \$8,680.00         |
| 8. Install Customer-Supplied Ownership Tag           | \$1.88               | 1000                   | \$1,880.00         |
| 9. Streetlight Audit (streetlight on pole yes or no) | \$0.27               | 7000                   | \$1,890.00         |
| <b>Estimated Total Cost + 25%</b>                    |                      |                        | <b>\$91,333.13</b> |

The numbers listed above are based on inspecting 7000 poles, some of the values needed to be estimated because actual values won't be known until the job is complete. An extra 25% has been added to the estimated cost in the event that the actual numbers are in excess of the estimate.

Staff recommends selecting American Energy Services, Inc. as they are the low bidder for the defined work scope.

If the Board concurs, the following motion is recommended:

**MOVED BY \_\_\_\_\_, SECONDED BY \_\_\_\_\_,  
THAT THE BOARD AUTHORIZE A SERVICE ORDER FOR POLE INSPECTION  
SERVICES WITH AMERICAN ENERGY SERVICES, INC.**





**TRAVERSE CITY**  
**LIGHT & POWER**

---

**To:** Tim Arends  
**From:** Tom Olney *to*  
**Date:** April 2, 2014  
**Subject:** New TCL&P Storm Restoration Manual

---

As a result of our Strategic Planning for 2014, Staff formulated the goal to "Create and implement a formal TCL&P Storm Restoration Plan" by March 31, 2014. The new TCL&P Storm Restoration Manual, which was completed on February 20, 2014, accomplished this goal.

This Plan will be a document that is reviewed after each event to address issues that were not anticipated, or to improve efficiency with the ultimate goal of increasing public and employee safety, as well as causing restoration of services in a more expedient manner.

# TRAVERSE CITY LIGHT & POWER

Emergency Storm Action Plan Presentation 2014

## INTRODUCTION

### □ Purpose

The purpose of this Storm Restoration Manual is to provide a written document of procedures to be followed in restoration of service as a result of storm damages in the Traverse City Light & Power (TCL&P) service area. Although every attempt has been made to be as thorough as possible, it must be recognized that no storm can be run on procedures alone. Good judgment must be exercised to tailor the restoration efforts to the particular storm in progress.



## INTRODUCTION

### □ **Top Priority**

The safety of the public as well as TCL&P's workforce is of the utmost importance. Responding to down wires will be a top priority in TCL&P's storm restoration plan. During storm restoration operations, the exposure to hazardous situations is even greater than normal, and therefore it is extremely important that all safety rules and procedures be followed by TCL&P employees.

Whenever possible, a 16 hour work period with an 8 hour rest period will be enforced for **all employees**.



## INTRODUCTION

### □ **Objectives for Service Restoration**

When multiple no-light calls come in on more than one circuit, additional local TCL&P crews will be called in with the goal of service restoration to all customers within 24 hours. If conditions suggest that all customers cannot be restored within 24 hours, mutual aid crews will be called in to supplement TCL&P local crews. The local media will be kept up-to-date on customer restoration estimates.

### □ **Annual Review**

An annual review of TCL&P storm restoration procedures will be made to all employees by January 31<sup>st</sup> of each year.



## STORM RESTORATION MANUAL CONTENTS

- Method of Restoration
- Assignments and Responsibilities
- Contact Information
- Tree Crew Dispatch Guide
- Material Suppliers
- Life Support Customer List
- Logistics
- Welcome Packet (out-of-town crews)



## METHOD OF RESTORATION

- Provides a guideline for TCL&P staff and employees to follow in restoring power as safely and efficiently as possible.



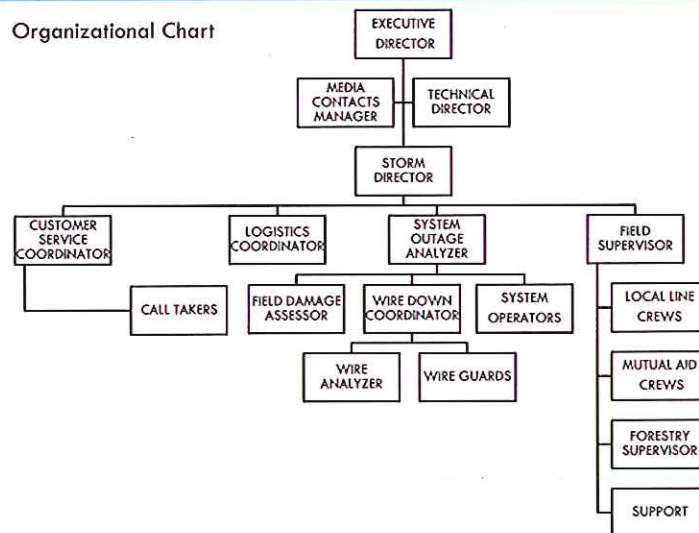
## ASSIGNMENTS & RESPONSIBILITIES

- All administrative staff are assigned essential job duties in the event of a major storm outage. TCL&P will take an “All Hands on Deck” approach.
- Some Job Assignments include:
  - Call Takers – will help alleviate the influx of incoming calls to the Dispatch Operators, allowing them to focus on coordinating restoration efforts with the field crews.
  - Wire Guards/Analyzers – will help keep the public safe from down wires until the appropriate crew(s) can make the area safe.



## ASSIGNMENTS & RESPONSIBILITIES

Organizational Chart



## CONTACT INFORMATION

- TCL&P Employees
  - ▣ Includes volunteers from the Treasure's Office
- Cherryland Electric Cooperative
- Mutual Aid
- Contract Crews



## TREE CREW DISPATCH GUIDE

- During a major storm outage, TCL&P's contract tree crew will be called in to assist the line crews in the field.
- In the event additional tree crews are needed, contact information for those crews can be found in this section.



## MATERIAL SUPPLIERS

- If extra materials, above TCL&P's normal supply (i.e. connectors, conductors, transformers, etc.), are needed for storm restoration, a list of approved vendors are listed in this section.



## LOGISTICS

- The Logistics Coordinator is responsible for making arrangements to provide meals for all personnel involved with storm restoration as well as securing hotel rooms for out-of-town crew members.
- This section contains helpful documents to assist with those tasks:
  - Hotel Information for those hotels who have confirmed parking available for large trucks
  - Caterer and Restaurant Information
  - Hotel Tracking Sheet and Hotel Maps
  - Wire Down Kit Contents



## WELCOME PACKET

- Welcome Meeting Checklist
  - ▣ Safety Rules & Expectations
  - ▣ Work Practices
    - Storm Restoration Process
    - Switching/Energizing Circuits/Tagging
    - Work Hours
  - ▣ Emergency Numbers
    - TCL&P Phone List
    - Bird Dog Assignments
    - Logistics



QUESTIONS OR COMMENTS?