



**IMU Board of Trustees of the  
Electric, Water and Communications Utilities  
January 11, 2016  
City Hall Council Chambers  
5:30 p.m.**

**Agenda**

1. Call to Order
2. Roll Call
3. Public Comments
4. Consent Agenda
  - A. Claims Lists for December 21, 2015 and January 4, 2016
  - B. Minutes from the December 14, 2015 Board of Trustees Meeting
  - C. November 2015 Treasurer Report
5. Electric Utility Action Items
  - A. Electric Superintendent Recommendation
  - B. Consider Member Resolutions for Municipal Energy Agency of Nebraska and Nebraska Municipal Energy Agency Appointments
6. Electric Utility Informational Items
7. Water Utility Informational Items
8. Communications Utility Action Items
  - A. Possible Motion for Choosing a Consultant for the Fiber To The Home Feasibility Study
9. Communications Utility Informational Items
10. Other Business
11. Adjourn

**Meeting Date:** 01/11/2016

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**Information**

**Subject**

Claims Lists for December 21, 2015 and January 4, 2016

**Information**

The claims lists that were previously distributed for December 21, 2015 and January 4, 2016 are attached for formal approval.

**Financial Impact**

N/A

**Staff Recommendation**

Simple motion is in order.

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**Attachments**

[APPROVAL OF CLAIMS 12-21-15](#)

[APPROVAL OF CLAIMS 01-04-16](#)

Vendor Name	GL Account Number	Description	Invoice Date	Net Invoice Amount
<b>WATER OPERATING FUND</b>				
AFFORDABLE DRAIN SERVICE	600-8120-63410	HYDRO-JET 3" CAST FROM 2 CLEANOUTS	12/04/2015	650.00
AUTOMATIC SYSTEMS CO.	600-8120-63410	RE-SET TIMER FOR LIME RUN	12/08/2015	907.50
CR SERVICES	600-8160-65072	CAR AND TRUCK WASH	12/14/2015	20.00
DES MOINES WATER WORKS	600-8150-63453	PINPOINT LEAK 105 W 1ST	12/10/2015	498.50
GRAYMONT WESTERN LIME IN	600-8110-65010	HIGH CALCIUM QUICKLIME	12/04/2015	4,043.37
HACH COMPANY	600-8110-65012	LAB SUPPLIES	12/07/2015	873.09
HD SUPPLY WATERWORKS	600-8150-65072	MATERIALS	11/20/2015	74.95
HD SUPPLY WATERWORKS	600-8150-65072	MATERIALS	11/20/2015	60.94
HD SUPPLY WATERWORKS	600-8150-65072	MATERIALS	11/20/2015	1,957.00
IOWA ASSOC OF MUN UTILITIE	600-8110-62300	NOV. SAFETY TRAINING - WATER	11/30/2015	131.76
ITRON INC.	600-8170-64990	QUARTERLY SUPPORT (01/1/16 - 3/31/16)	12/12/2015	558.94
MERCY MEDICAL CENTER	600-8180-61440	HEALTH SCREEN	11/24/2015	325.00
METHODIST OCCUPATIONAL H	600-8180-64121	SUBSTANCE TESTING - WATER DEPT	11/15/2015	106.00
MUNICIPAL ENERGY AGENCY	600-8110-63710	PURCHASED POWER - NOV (WELL KWH & T	12/08/2015	361.02
PLUMB SUPPLY	600-8120-63410	4" SEWER LINE REPAIR	12/11/2015	683.38
QUALITY PLUMBING	600-8150-63453	606 E CLINTON	12/01/2015	92.28
STATE HYGENIC LABORATORY	600-8110-64990	BACTEE SAMPLES	12/01/2015	187.50
VERIZON WIRELESS	600-8110-63730	WIRELESS FOR LAPTOP	11/26/2015	40.01
WARREN COUNTY ENGINEER	600-8160-65050	FUEL DISTRIBUTION	12/02/2015	654.38
WASTE MANAGEMENT OF IOW	600-8120-64090	TRASH - DEC 2015	12/01/2015	78.66
WELLS FARGO CCER	600-8120-65070	THEISENS #21 mouse poison	11/16/2015	15.99
WELLS FARGO CCER	600-8150-65072	CIRCLE B CASHWAY OF INDIA 8, 16 foot 2	11/16/2015	45.10
WELLS FARGO CCER	600-8120-65070	MCCOY TRUE VALUE muratic acid, light bul	11/13/2015	51.37
WELLS FARGO CCER	600-8160-65072	THEISENS #21 brake fluid	11/16/2015	6.49
WELLS FARGO CCER	600-8150-65072	CIRCLE B CASHWAY OF INDIA concrete su	11/25/2015	79.73
WELLS FARGO CCER	600-8120-65070	THEISENS #21 measuring tape, toolbox, saw	11/16/2015	47.97
WELLS FARGO CCER	600-8150-65072	THEISENS #21 couplings	11/16/2015	23.90
WELLS FARGO CCER	600-8120-65070	MCCOY TRUE VALUE wd 40, vac breaker, g	11/16/2015	39.02
WELLS FARGO CCER	600-8150-65072	HY VEE GAS 5271 gas for pump	11/20/2015	2.18

Total WATER OPERATING FUND:

12,616.03

**IMU ADMINISTRATION FUND**

AHLERS & COONEY P.C.	620-8090-64110	PERSONNEL	11/25/2015	137.50
AHLERS & COONEY P.C.	620-8090-64110	HANKS - NEGOTIATIONS	11/25/2015	1,072.50
AMERICAN BUSINESS PHONES	620-8090-65070	CONFERENCE ROOM PHONE	12/02/2015	87.92
DES MOINES REGISTER MEDIA	620-8090-64140	EMPLOYMENT AD	11/29/2015	900.00
IOWA ASSOC OF MUN UTILITIE	620-8090-62300	NOV. SAFETY TRAINING - IMU ADMIN	11/30/2015	49.08
IOWA ASSOC OF MUN UTILITIE	620-8092-64990	SAFETY CONSULTATION - NOVEMBER	11/30/2015	540.00
IOWA ONE CALL	620-8090-63730	EL-LOCATING NOTIFICATION/207 TICKETS	12/08/2015	186.30
IOWA ONE CALL	620-8090-63730	WA-LOCATING NOTIFICATION/217 TICKETS	12/08/2015	195.30
KLOOTWYK, MICHELLE	620-8090-63730	MOBILE DEVICE ALLOWANCE	12/01/2015	25.00
KLOOTWYK, MICHELLE	620-8080-61440	CHELLE AND JOHN GYM MEMBERSHIP - DE	12/01/2015	25.00
LONGER, CHRIS	620-8090-63730	MOBILE DEVICE ALLOWANCE	12/01/2015	50.00
MAHASKA COMMUNICATION G	620-8090-63730	INTERNET CHARGES	12/01/2015	7.60
MAHASKA COMMUNICATION G	620-8090-63730	TELEPHONE	12/01/2015	93.92
MAHASKA COMMUNICATION G	620-8090-63730	TELEPHONE	12/01/2015	197.85
MAHASKA COMMUNICATION G	620-8090-63730	INTERNET	12/01/2015	21.99
MERCY MEDICAL CENTER	620-8080-61440	HEALTH SCREEN	11/24/2015	390.00
METCALF, MIKE	620-8090-63730	MOBILE DEVICE ALLOWANCE	12/01/2015	75.00
PETTY CASH-GEN MGR UTIL	620-8090-65080	CERTIFIED MAILING AND STAMPS 11/18/15	12/15/2015	55.74
PETTY CASH-GEN MGR UTIL	620-8090-65080	CERTIFIED MAILING AND STAMPS 10/16/15	12/15/2015	69.22
PETTY CASH-GEN MGR UTIL	620-8090-65080	CERTIFIED MAILINGS 10/27/15	12/15/2015	20.22
PETTY CASH-GEN MGR UTIL	620-8090-65070	NAME PLATE - STANGEL 12/14/15	12/15/2015	10.50
PETTY CASH-GEN MGR UTIL	620-8090-65080	CERTIFIED MAILINGS 12/08/15	12/15/2015	13.48
PETTY CASH-GEN MGR UTIL	620-8090-65080	CERTIFIED MAILING 11/02/15	12/15/2015	6.74
PETTY CASH-GEN MGR UTIL	620-8090-65070	PLATE HOLDER - STANGEL 12/14/15	12/15/2015	10.00

Vendor Name	GL Account Number	Description	Invoice Date	Net Invoice Amount
PETTY CASH-GEN MGR UTIL	620-8090-65080	POSTAGE DUE - THE ENERGY CENTER	12/15/2015	.44
RECORD-HERALD & INDIANOL	620-8090-64020	BT MIN-11	11/04/2015	103.04
RECORD-HERALD & INDIANOL	620-8090-64020	RES NO 162	11/04/2015	256.84
RECORD-HERALD & INDIANOL	620-8090-64020	BT MIN-10	11/04/2015	162.85
RECORD-HERALD & INDIANOL	620-8090-64020	BT MIN-11	11/04/2015	23.29
VERIZON WIRELESS	620-8090-63730	WIRELESS FOR SPARE LAPTOP	11/26/2015	20.00
VERIZON WIRELESS	620-8090-63730	WIRELESS FOR SERVICE CREW LAPTOPS	11/26/2015	240.06
WELLS FARGO CCER	620-8091-62300	HY VEE 1271 General Manager Interviews	11/12/2015	29.97
WELLS FARGO CCER	620-8090-65990	QUALITY INN SUITES Travel for MEAN mee	11/20/2015	165.08-
WELLS FARGO CCER	620-8090-65070	MCCOY TRUE VALUE Supplies for Office	11/27/2015	18.50
WELLS FARGO CCER	620-8090-67240	DROPBOX WJX22KPJXWLT Dropbox subsc	11/10/2015	99.00
WELLS FARGO CCER	620-8091-62300	HY VEE 1271 General Manager Interviews	11/11/2015	36.00
WELLS FARGO CCER	620-8090-65990	QUALITY INN SUITES Travel for MEAN mee	11/06/2015	165.08
WELLS FARGO CCER	620-8091-62300	JIMMY JOHNS # 1091 General Manager Inte	11/13/2015	77.00
Total IMU ADMINISTRATION FUND:				5,307.85
<b>ELECTRIC OPERATING FUND</b>				
CINTAS FIRST AID & SAFETY	630-8250-65072	1ST AID SUPPLIES	09/25/2015	142.35
IOWA ASSOC OF MUN UTILITIE	630-8240-62300	NOV. SAFETY TRAINING - ELECTRIC	11/30/2015	329.40
ITRON INC.	630-8270-64990	QUARTERLY SUPPORT (01/1/16 - 3/31/16)	12/12/2015	558.94
MC MASTER-CARR SUPPLY CO	630-8220-65072	EMERGENCY LIGHT BATTERY	12/02/2015	18.56
MERCY MEDICAL CENTER	630-8280-61440	HEALTH SCREEN	11/24/2015	455.00
MUNICIPAL ENERGY AGENCY	630-8230-63991	PURCHASED POWER - NOV (NET ELECTRIC	12/08/2015	693,597.68
MUNICIPAL ENERGY AGENCY	630-8200-45629	20% 69KV 30.9 CREDIT/ADMIN FEE - NOV	12/08/2015	7,741.73-
MUNICIPAL ENERGY AGENCY	630-8230-63992	TRANSMISSION/ADJUSTMENT - NOV	12/08/2015	17,542.07
MUNICIPAL ENERGY AGENCY	630-8230-63990	LANDFILL GAS ATTRIBUTES - NOV	12/08/2015	13,260.00
MUNICIPAL ENERGY AGENCY	630-8230-63991	IND TRANS SYSTEM OPERATOR CHARGE	12/07/2015	5,141.54
PARKER SIGN & GRAPHICS	630-8260-65072	RTA - DIGITAL FOR FLEET	11/22/2015	116.00
PETTY CASH-GEN MGR UTIL	630-8220-64090	SOAP FOR BATHROOM 10/27/15	12/15/2015	4.76
QUALITY PEST CONTROL	630-8220-63100	GENERAL PEST CONTROLL	12/04/2015	75.91
SCHREIER, ERIC	630-8240-61810	CLOTHING ALLOWANCE	12/14/2015	275.00
SKARSHAUG TESTING LABORA	630-8270-61810	PPE FOR METER READERS	12/05/2014	296.78
SKARSHAUG TESTING LABORA	630-8260-65072	HOIST FOR UNIT 28	12/04/2015	661.23
SKARSHAUG TESTING LABORA	630-8240-65500	MATERIALS FOR NEW LINEMAN HIRE	12/07/2015	575.94
WARREN COUNTY ENGINEER	630-8260-65050	FUEL DISTRIBUTION	12/02/2015	1,187.10
WELLS FARGO CCER	630-8225-63410	ELECT. ENGINEERING EQUIP fan motor for	11/10/2015	898.46
WELLS FARGO CCER	630-8260-65072	NAPA PARTS 0000514 Windshield washer fl	11/19/2015	15.20
WELLS FARGO CCER	630-8260-65072	NAPA PARTS 0000514 Air filter and oil filter f	11/19/2015	29.88
WELLS FARGO CCER	630-8225-63410	MCCOY TRUE VALUE Turbine #7 Maintena	11/19/2015	3.67
WELLS FARGO CCER	630-8260-63320	MCCOY TRUE VALUE E-Rings for Unit 29 R	11/12/2015	.43
WELLS FARGO CCER	630-8225-63410	ELECT ENG & EQUIP CO Turbine #7 Maint	11/17/2015	77.05
WELLS FARGO CCER	630-8260-65072	ALTEC CORPORATE 2 Misc. parts for Unit 2	11/25/2015	123.83
WELLS FARGO CCER	630-8225-63410	THEISENS #21 Turbine 7 parts- Fan repair	11/19/2015	15.42
WELLS FARGO CCER	630-8250-65072	MCCOY TRUE VALUE materials for pickard	11/12/2015	57.20
WELLS FARGO CCER	630-8260-65072	DOWNEY TIRES Batteries for Unit 29.	11/23/2015	265.00
WELLS FARGO CCER	630-8225-63410	THEISENS #21 electrical connectors for turbi	11/11/2015	4.43
WELLS FARGO CCER	630-8250-65072	MCCOY TRUE VALUE bolts	11/19/2015	3.81
WELLS FARGO CCER	630-8260-63320	VANDER HAAGS INC DES MOIN Skid Load	11/12/2015	246.88
WELLS FARGO CCER	630-8225-63410	MCCOY TRUE VALUE Turbine 7 parts - Fan	11/19/2015	4.17
WELLS FARGO CCER	630-8220-65072	HYTORC WIND LLC Plant Tool Maintenance	11/25/2015	175.43
WELLS FARGO CCER	630-8260-65072	OREILLY AUTO 00003376 grease for vehicl	11/12/2015	42.29
WIEGERT DISPOSAL CO.	630-8220-64090	WASTE PICKUP - NOV 2015	12/01/2015	110.00
Total ELECTRIC OPERATING FUND:				728,569.68
<b>FIBER/COMMUNICATIONS FUND</b>				
IOWA ONE CALL	640-8550-64990	FIBER - LOCATING NOTIFICATION/164 TICK	12/08/2015	147.60

Vendor Name	GL Account Number	Description	Invoice Date	Net Invoice Amount
MAHASKA COMMUNICATION G	640-8550-63464	FIBER MAINTENANCE & REPAIR	12/01/2015	332.40
Total FIBER/COMMUNICATIONS FUND:				480.00
<b>WATER CAPITAL PROJECTS FUND</b>				
ACME CONTRACTING LLC	700-8100-67406	2015 IOWA AVE WATER MAIN, PRINTING SE	12/08/2015	103,259.17
HD SUPPLY WATERWORKS	700-8100-67906	MATERIALS	12/09/2015	805.21
HD SUPPLY WATERWORKS	700-8100-67906	TOP/SCREW INSERT VALVE BOX EXT	12/03/2015	201.72
HD SUPPLY WATERWORKS	700-8100-67406	CREDIT N C ST PROJECT	12/08/2015	535.47-
K.M. KING INC	700-8100-67406	EMERGENCY REPAIR C ST (4" WATER MAIN	12/14/2015	57,750.00
NORWALK READY-MIXED CON	700-8100-67406	NORTH 'C' & GIRARD	11/24/2015	989.75
VESSCO INC	700-8100-67402	CO2 MACHINE UPGRADE	12/04/2015	18,858.00
Total WATER CAPITAL PROJECTS FUND:				181,328.38
<b>ELECTRIC CAPITAL PROJECTS FUND</b>				
BALDWIN POLE & PILING	730-8200-67906	CLASS 2/40' FT WOOD POLES	11/23/2015	4,303.60
CR SERVICES	730-8200-67906	RED MARKING PAINT	12/08/2015	257.99
ELECTRICAL ENG & EQUIP	730-8200-67906	2" PVC COUPLINGS & 4" PVC 45 SWEEPS	12/03/2015	53.78
ELECTRICAL ENG & EQUIP	730-8200-67906	PVC GLUE	12/09/2015	50.40
FLETCHER-REINHARDT CO.	730-8200-67906	100 AMP FUSE	12/01/2015	87.98
KRIZ-DAVIS COMPANY	730-8200-67906	WRS352 COMPRESSION STIRRUP	12/04/2015	152.78
MAHASKA COMMUNICATION G	730-8200-67603	FIBER SERVICE DROPS	12/01/2015	7,920.00
MUNICIPAL ENERGY AGENCY	730-8200-45629	80% 69KV 30.9 CREDIT/ADMIN FEE - NOV	12/08/2015	30,966.92-
WATTS ELECTRIC CO	730-8200-67903	2013 HWY 92 DISTRIBUTION RELOCATION P	11/30/2015	20,639.06
WELLS FARGO CCER	730-8200-67604	THEISENS #21 Electric outlet material for out	11/27/2015	12.76
WESCO	730-8200-67906	GLOVE DUST	11/17/2015	176.81
WESCO	730-8200-67906	100 AMP CUTOUTS	11/30/2015	1,388.43
WESCO	730-8200-67906	3KV RISER ARREST	12/08/2015	363.90
Total ELECTRIC CAPITAL PROJECTS FUND:				4,440.57
Grand Totals:				932,742.51

Board of Trustees: \_\_\_\_\_  
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Vendor Name	GL Account Number	Description	Invoice Date	Net Invoice Amount
<b>WATER OPERATING FUND</b>				
CASUAL RAGS	600-8110-64990	YEAR OF SERV SHIRTS	12/22/2015	43.98
CITY OF INDIANOLA - UTILITY	600-8110-63710	UTILITIES	12/31/2015	10,501.52
DUST PROS JANITORIAL	600-8120-64090	MONTHLY CLEANING (DEC) - WATER DEPT.	12/22/2015	180.00
HACH COMPANY	600-8110-65012	AA ULTRA PH REFILLABLE PROBE, W CABL	12/08/2015	406.00
SPENCER MUNICIPAL HOSPITA	600-8110-62300	AED FIRST AID CARDS - WATER	12/10/2015	37.08
U.S. CELLULAR	600-8110-63730	CELL PHONE - 4	12/12/2015	170.04
Total WATER OPERATING FUND:				11,338.62
<b>IMU ADMINISTRATION FUND</b>				
BRICK GENTRY P.C.	620-8090-64110	20067.00	11/25/2015	765.00
CASUAL RAGS	620-8090-65990	YEAR OF SERV SHIRTS	12/22/2015	60.00
IND CHAMBER OF COMMERCE	620-8090-62100	2016 ANNUAL MEMBERSHIP DUES	12/15/2015	550.00
INFOMAX OFFICE SYSTEMS IN	620-8090-64990	LEASE - JANUARY	12/23/2015	215.68
INFOMAX OFFICE SYSTEMS IN	620-8090-64990	SAVIN - IMAGING UNIT CONTRACT	12/16/2015	58.68
INFOMAX OFFICE SYSTEMS IN	620-8090-64990	OVERAGES CHARGES (164)	12/16/2015	11.70
INTEGRIVault	620-8090-64990	OFFSITE BACKUP - NOVEMBER	12/01/2015	250.00
IOWA ASSOC OF MUN UTILITIE	620-8090-64900	GM RECRUITMENT SERVICES, STANGEL	12/21/2015	17,250.00
LEADER, THE	620-8090-64020	2015 HOLIDAY AD	12/09/2015	49.00
NOLASOFT DEVELOPMENT	620-8090-64990	2016 1ST QTR WEBSITE HOSTING	12/17/2015	120.00
SHULL, DOUG	620-8090-64990	TREASURER CONTRACT	12/23/2015	83.34
STANGEL, ROBERT	620-8090-63730	MOBILE DEVICE ALLOWANCE	12/24/2015	24.19
Total IMU ADMINISTRATION FUND:				19,437.59
<b>ELECTRIC OPERATING FUND</b>				
CHAPMAN METERING	630-8250-64200	SINGLE PHASE FIELD TEST - 1106 W CLINT	12/17/2015	50.62
CINTAS FIRST AID & SAFETY	630-8250-65072	1ST AID SUPPLIES	12/11/2015	181.48
CITY OF INDIANOLA	630-8250-63453	24" DURWALL PLASTIC PIPE FOR COUNTRY	12/14/2015	1,330.40
CITY OF INDIANOLA	630-8250-65072	CRUSHED CONCRETE AT EAST IOWA	12/17/2015	196.00
CITY OF INDIANOLA - REBATE	630-8290-67306	COMMERCIAL LIGHTING	12/03/2015	160.00
CITY OF INDIANOLA - REBATE	630-8290-67306	COMMERCIAL LIGHTING	10/01/2015	784.00
CITY OF INDIANOLA - UTILITY	630-8210-63710	11/03/2015 - 12/02/2015 (17-17102.01)	12/31/2015	1,927.87
DUST PROS JANITORIAL	630-8220-64090	MONTHLY CLEANING (DEC.) - ADMIN & ELE	12/22/2015	1,929.20
DUST PROS JANITORIAL	630-8220-64090	JANITORIAL SUPPLIES - IMU ADMIN	12/22/2015	48.26
DUST PROS JANITORIAL	630-8220-64090	CLEANING SUPPLIES - LINE SHOP	12/22/2015	80.96
EXTINGUISHER COMPANY, TH	630-8260-63320	RECHARGE EXTINGUISHER FOR PICKUP	12/03/2015	21.20
MC COY HARDWARE INC	630-8250-65072	UNPAID BALANCE ON PREVIOUSLY PAID IN	04/22/2015	3.72
MC MASTER-CARR SUPPLY CO	630-8250-65072	STANDARD BOLLARD COVER FOR LINE SH	12/11/2015	229.12
MID AMERICAN ENERGY CO.	630-8210-63710	80950-24015 PLANT GAS 11/17/15 - 12/17/15	12/18/2015	55.00
MID AMERICAN ENERGY CO.	630-8240-63710	52180-25018 LINE SHOP GAS (483 THERMS)	12/17/2015	266.60
MID AMERICAN ENERGY CO.	630-8210-63710	52390-25019 BOILER GAS (1599 THERMS)	12/17/2015	796.10
MID AMERICAN ENERGY CO.	630-8210-63710	07991-36014 WEST SUB (O KWH)	12/15/2015	10.00
MIDWEST ALARM SERVICES	630-8225-63410	HYDRO TESTING AT TURBINES	12/10/2015	10,651.88
O'REILLY AUTO PARTS	630-8220-65072	GEAR PULLER	10/30/2015	19.07
SKARSHAUG TESTING LABORA	630-8240-65500	PRIMARY GLOVE FOR NEW LINEMAN	12/14/2015	85.70
SPENCER MUNICIPAL HOSPITA	630-8240-62300	AED FIRST AID CARDS - ELECTRIC	12/10/2015	74.22
U.S. CELLULAR	630-8240-63730	CELL PHONE - 11	12/12/2015	473.49
WESCO	630-8220-65072	REPAIR KITS FOR PLANT	12/09/2015	167.03
WESCO	630-8240-65500	FR JEANS AND WORK SHIRTS FOR SCHREI	12/14/2015	647.26
WESCO	630-8260-65072	DRILL BITS FOR UNITS 28, 29 & 6	12/14/2015	450.64
WESCO	630-8250-65072	FOR HOMMER'S FLUKE METER	12/18/2015	24.19
WESCO	630-8240-65500	FR HOODED SWEATSHIRT FOR SCHREIER	12/22/2015	119.78
Total ELECTRIC OPERATING FUND:				20,783.79

Vendor Name	GL Account Number	Description	Invoice Date	Net Invoice Amount
<b>FIBER/COMMUNICATIONS FUND</b>				
AHLERS & COONEY P.C.	640-8550-64110	PROFESSIONAL SERVICES, COMMUNICATI	11/30/2015	1,738.50
CITY OF INDIANOLA - UTILITY	640-8550-63464	11/03/15 - 12/02/15 (96-00001-01)	12/31/2015	560.75
Total FIBER/COMMUNICATIONS FUND:				2,299.25
<b>WATER CAPITAL PROJECTS FUND</b>				
HD SUPPLY WATERWORKS	700-8100-67405	MATERIALS	12/11/2015	780.39
VEENSTRA & KIMM	700-8100-67406	2015 W IOWA WATER MAIN PROJECT	12/18/2015	7,182.50
Total WATER CAPITAL PROJECTS FUND:				7,962.89
<b>ELECTRIC CAPITAL PROJECTS FUND</b>				
DIG AMERICA INC	730-8200-67303	BORING AT HWY 92/BASEBALL FIELD (PARK	12/16/2015	4,797.00
DIG AMERICA INC	730-8200-67303	BORING AT N. E & W. GIRARD (WARREN CO	12/16/2015	1,400.00
KRIZ-DAVIS COMPANY	730-8200-67906	2" PVC 20' STICKS FOR Y ST. & WR CONNEC	12/04/2015	581.56
KRIZ-DAVIS COMPANY	730-8200-67906	2" X 20' PVC	12/11/2015	671.30
KRIZ-DAVIS COMPANY	730-8200-67906	150 WATT NON/CYCLE BULBS/PHOTO CON	12/18/2015	505.41
P & E ENGINEERING CO.	730-8200-67903	2013 DISTRIBUTION RELOCATON PROJECT	12/17/2015	13,763.25
P & E ENGINEERING CO.	730-8200-67903	2013 DISTRIBUTION RELOCATON PROJECT	12/17/2015	6,965.25
POWER & TEL	730-8200-67906	SPLICE ENCLOSURES	12/15/2015	280.64
POWER & TEL	730-8200-67906	COUPLER 1.25" PUSH TO CONNECT 1.66 O.	12/10/2015	294.45
POWER & TEL	730-8200-67906	FIBER 12 FT DROP W/TONE RWP SM	12/10/2015	1,925.39
WESCO	730-8200-67906	BALLAST KITS FOR HWY LIGHTS	12/18/2015	253.13
Total ELECTRIC CAPITAL PROJECTS FUND:				31,437.38
Grand Totals:				93,259.52

Board of Trustees: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**IMU Regular Downstairs**

**4. B.**

**Meeting Date:** 01/11/2016

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**Information**

**Subject**

Minutes from the December 14, 2015 Board of Trustees Meeting

**Information**

The minutes from the December 14, 2015 Board of Trustees Meeting are attached for formal approval.

**Financial Impact**

N/A

**Staff Recommendation**

Simple motion is in order.

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**Meeting Date:** 01/11/2016

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**Information**

**Subject**

November 2015 Treasurer Report

**Information**

Trustees approved the November treasurer report at the December 14th meeting, however a credit adjustment has since been made to the water O&M fund therefore approval of the amended report is in order.

**Financial Impact**

N/A

**Staff Recommendation**

Simple motion is in order.

---

**Attachments**

[Amended November 2015 Treasurer Report](#)

**FINANCIAL REPORT**  
**MONTH OF NOVEMBER, 2015**

FUND	Beginning Balance	Monies Received	Monies Disbursed	Transfer In	Transfer Out	Clerk's Balance	% of Total
001 General Government	1,198,206.29	65,016.67	129,898.78	115,991.67	2,753.28	1,246,562.57	
011 Police	800,933.98	71,636.52	183,150.45	54,626.23	324.45	743,721.83	
015 Fire	478,883.67	22,053.22	42,249.54	7,504.27	24.72	466,166.90	
016 Ambulance	394,205.28	72,941.68	74,146.74	3,969.65	5,572.66	391,397.21	
041 Library	145,420.63	13,398.34	38,153.01	13,854.51	61.80	134,458.67	
042 Park & Recreation	504,010.35	40,355.72	102,532.48	5,341.20	123.60	447,051.19	
045 Memorial Pool	-26,117.65	6,073.69	2,252.26	0.00	0.00	-22,296.22	
071 General Fund Deb Service	91,453.49	3,434.45	0.00	0.00	0.00	94,887.94	
099 Franchise Fees-MEC	386,085.70	15,102.46	0.00	0.00	0.00	401,188.16	
<b>GENERAL FUND SUB-TOTAL</b>	<b>3,973,081.74</b>	<b>310,012.75</b>	<b>572,383.26</b>	<b>201,287.53</b>	<b>8,860.51</b>	<b>3,903,138.25</b>	
110 Road Use Tax (Streets)	1,371,066.91	158,048.29	69,374.98	0.00	175,866.48	1,283,873.74	
112 Trust & Agency	0.00	60,420.86	0.00	0.00	60,420.86	0.00	
115 YMCA Maintenance Obligations	93,081.46	0.00	0.00	0.00	0.00	93,081.46	
125 TIF--Downtown	515,244.63	33,970.83	135.50	0.00	0.00	549,079.96	
126 TIF--East Hwy 92	0.00	0.00	0.00	0.00	0.00	0.00	
127 TIF--Hillcrest/Industrial Park	589,435.47	46,124.98	4,206.93	0.00	0.00	631,353.52	
141 Library Special Revenue	40,168.46	3,635.61	862.44	0.00	0.00	42,941.63	
142 Park & Rec Special Revenue	133,249.97	3,636.75	766.74	0.00	0.00	136,119.98	
160 Downtown Revolving Loan	70,396.16	0.00	0.00	0.00	0.00	70,396.16	
161 Downtown Business Inc Program	61,248.28	2,089.94	525.74	0.00	0.00	62,812.48	
177 Police Forfeiture	19,830.07	0.00	0.00	0.00	0.00	19,830.07	
190 Vehicle Reserve	74,437.71	0.00	0.00	2,083.33	0.00	76,521.04	
199 Police Retirement	97,328.44	153.17	0.00	0.00	1,041.67	96,439.94	
<b>SPECIAL REVENUES SUB-TOTAL</b>	<b>3,065,487.57</b>	<b>308,080.43</b>	<b>75,872.33</b>	<b>2,083.33</b>	<b>237,329.01</b>	<b>3,062,449.99</b>	
<b>200 DEBT SERVICE (SUB-TOTAL)</b>	<b>1,945,127.89</b>	<b>64,776.03</b>	<b>5,996.25</b>	<b>51,600.00</b>	<b>0.00</b>	<b>2,055,507.67</b>	
301 Capital Projects (General)	331,457.92	22,169.36	0.00	0.00	0.00	353,627.28	
321 Capital Projects (Streets)	-151,195.55	1,182.00	4,716.74	160,000.00	0.00	5,269.71	
344 Community Athletic Facility	4,311.18	7.02	168.10	0.00	0.00	4,150.10	
353 Community ReDevelopment (D&D)	-49,336.89	0.00	0.00	0.00	0.00	-49,336.89	
<b>CAPITAL PROJECTS SUB-TOTAL</b>	<b>135,236.66</b>	<b>23,358.38</b>	<b>4,884.84</b>	<b>160,000.00</b>	<b>0.00</b>	<b>313,710.20</b>	
610 Sewer	339,957.09	0.00	18,148.01	143,725.00	35,951.04	429,583.04	
650 Stormwater Utility	470,393.36	16,984.95	0.00	0.00	5,116.67	482,261.64	
670 Recycling	81,407.99	18,102.85	16,035.62	0.00	1,508.33	81,966.89	
710 Sewer Capital Projects	411,286.33	255,740.87	11,108.50	0.00	231,466.67	424,452.03	
771 Sewer Reserve	114,238.70	0.00	0.00	0.00	0.00	114,238.70	
781 Sewer Plant Improvement	350,905.83	0.00	0.00	2,083.33	0.00	352,989.16	
791 Sewer Revenue Bonds	500,411.20	0.00	0.00	58,791.67	0.00	559,202.87	
820 Health Insurance	831,061.12	106,954.79	212,841.13	0.00	0.00	725,174.78	
830 Health Reimbursement Account	308,287.11	0.00	15,629.33	0.00	0.00	292,657.78	
840 Flex/STD	210,428.49	1,925.40	2,325.40	1,359.60	0.00	211,388.09	
850 Liability Insurance Reserve--City	29,386.89	45.20	0.00	0.00	0.00	29,432.09	
<b>CITY UTILITY &amp; IS SUB-TOTAL</b>	<b>3,647,764.11</b>	<b>399,754.06</b>	<b>276,087.99</b>	<b>205,959.60</b>	<b>274,042.71</b>	<b>3,703,347.07</b>	
<b>TOTAL CITY FUNDS</b>	<b>12,766,697.97</b>	<b>1,105,981.65</b>	<b>935,224.67</b>	<b>620,930.46</b>	<b>520,232.23</b>	<b>13,038,153.18</b>	<b>63%</b>
<b>TOTAL IMU FUNDS</b>	<b>7,126,448.24</b>	<b>1,465,668.02</b>	<b>844,246.26</b>	<b>241,500.01</b>	<b>342,198.24</b>	<b>7,647,171.77</b>	<b>37%</b>
<b>GRAND TOTAL CITY &amp; IMU</b>	<b>19,893,146.20</b>	<b>2,571,649.67</b>	<b>1,779,470.93</b>	<b>862,430.47</b>	<b>862,430.47</b>	<b>20,685,324.94</b>	
Cross Check Total						20,685,324.94	
<b>Investments</b>							
Bankers Trust	\$ 14,043,846.12	2.20%				Clerk's Balance	20,685,324.94
Iowa Public Agency Inv. Trust	\$ 111,121.40	0.010%				Plus Outstanding Checks	39,015.09
Payroll Account, City State Bank	\$ -	Earnings Credit				Outstanding Deposit	-17,766.44
Checking Account, City State Bank	\$ 249,406.38	Earnings Credit					
Checking & Payroll Account, Community Bank	\$ -						
Sweep Account, City State Bank	\$ 6,299,202.06	0.04%					
Wells Fargo	\$ 2,997.63						
<b>BANK BALANCE</b>	<b>20,706,573.59</b>						<b>20,706,573.59</b>

600 Water	90,120.32	207,461.08	136,901.30	0.00	118,051.04	42,629.06
620 IMU Administration	81,563.77	0.00	62,270.48	88,350.00	31,229.68	76,413.61
625 Revolving Economic Development	105,976.19	165.71	0.00	0.00	0.00	106,141.90
626 USDA RLF	300,000.00	0.00	0.00	0.00	0.00	300,000.00
630 Electric	1,671,396.54	1,104,459.91	152,069.75	22,566.67	185,100.85	2,461,252.52
640 Fiber/Communications	316,949.02	26,418.68	18,780.68	0.00	7,816.67	316,770.35
700 Water Capital Projects	1,077,938.21	0.00	20,104.00	35,991.67	0.00	1,093,825.88
730 Electric Capital Projects	2,529,846.45	127,137.53	180,597.55	0.00	0.00	2,476,386.43
740 Fiber/Comm Capital Projects	0.00	0.00	0.00	0.00	0.00	0.00
770 Water Reserve	135,000.00	0.00	0.00	0.00	0.00	135,000.00
773 Electric Reserve	0.00	0.00	0.00	0.00	0.00	0.00
780 Water Capital Improvement	75,000.00	0.00	0.00	0.00	0.00	75,000.00
783 Electric Improvement	0.00	0.00	0.00	0.00	0.00	0.00
790 Water Revenue Bonds	252,542.18	0.00	273,522.50	22,925.00	0.00	1,944.68
793 Electric Revenue Bonds	475,395.30	0.00	0.00	71,666.67	0.00	547,061.97
855 Liability Insurance Reserve--IMU	14,720.26	25.11	0.00	0.00	0.00	14,745.37
<b>IMU SUB-TOTAL</b>	<b>7,126,448.24</b>	<b>1,465,668.02</b>	<b>844,246.26</b>	<b>241,500.01</b>	<b>342,198.24</b>	<b>7,647,171.77</b>

<u>INTEREST DISTRIBUTION</u>	<u>INTEREST</u>			
	<u>INCOME</u>	<u>% OF TOTAL</u>	<u>CALYTD</u>	<u>FYTD</u>
Electric Funds	\$ 8,251.12	32.86%	\$ 101,967.72	\$ 44,808.52
Water Funds	\$ 2,400.36	9.56%	\$ 24,535.42	\$ 11,682.95
Sewer Funds	\$ 1,787.73	7.12%	\$ 22,843.36	\$ 9,042.00
Police Retirement	\$ 153.17	0.61%	\$ 1,662.62	\$ 785.64
Community Redevelopment	\$ -	0.00%	\$ 12,930.95	\$ -
All other	\$ 12,516.03	49.85%	\$ 129,858.37	\$ 69,057.18
<b>TOTAL</b>	<b>\$ 25,108.41</b>	<b>100.00%</b>	<b>\$ 293,798.44</b>	<b>\$ 135,376.29</b>

**Meeting Date:** 01/11/2016

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**Information**

**Subject**

Electric Superintendent Recommendation

**Information**

Following the retirement of Bob Miller last summer, it was the Board's preference to delay the hiring process for that position until a new General Manager was on board.

Three interviews were held this past Thursday and General Manager Rob Stangel is pleased to make the following recommendation:

Promotion of Mike Metcalf to Electric Superintendent, CE 12-6, \$85,031, effective January 10, 2016 with eligibility to advance to CE 12-7 following a twelve month waiting period and satisfactory performance evaluation.

Mike has served the utility in some capacity since 1997 including Line Apprentice, Journeyman Lineman, Lead Line Mechanic, Safety Director, Technical Services Coordinator and most recently as Interim Electric Superintendent. Mike has worked extensively with staff, contractors, engineers and Trustees during IMU's last two major electric projects and has shown the ability to assume the duties of Superintendent. Congratulations Mike!

**Financial Impact**

N/A

**Staff Recommendation**

Simple motion is in order.

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**Meeting Date:** 01/11/2016

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**Information**

**Subject**

Consider Member Resolutions for Municipal Energy Agency of Nebraska and Nebraska Municipal Energy Agency Appointments

**Information**

Attached to this item are the resolutions appointing General Manager, Rob Stangel as Indianola's representative and Chris Longer as the alternate representative to the MEAN Management Committee, MEAN Board of Directors and NMPP Members' Council.

**Financial Impact**

N/A

**Staff Recommendation**

Roll call vote is in order.

---

**Attachments**

Combined Resolution NMPP-MEAN

## **Member Resolutions for Appointments**

### ***Representative and/or Alternate Representative to NMPP Members' Council***

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa, that:

1. Such City be and hereby is a member of the Nebraska Municipal Power Pool.
2. The Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa does hereby appoint Rob Stangel as the representative of Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa, to the Members' Council of the Nebraska Municipal Power Pool.
3. The Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa, does hereby appoint Chris Longer as the alternate representative of Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa, to the Members' Council of the Nebraska Municipal Power Pool.

### ***Representative and/or Alternate Representative to MEAN Management Committee***

WHEREAS, the Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa, is a party to the Electrical Resource Pooling Agreement and, pursuant to the terms of such Agreement, it is the responsibility of the Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa to designate a representative and alternate representative to the Municipal Energy Agency of Nebraska Management Committee provided for under the terms of said Agreement.

NOW THEREFORE, BE IT RESOLVED by the Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa, that:

1. The Board Chairperson is hereby directed to give written notice to the Municipal Energy Agency of Nebraska of the appointment of Rob Stangel as representative to said MEAN Management Committee.
2. The Board Chairperson is hereby directed to give written notice to the Municipal Energy Agency of Nebraska of the appointment of Chris Longer as alternate representative to said MEAN Management Committee.

***Director and/or Alternate Director to MEAN Board of Directors***

This is to certify that the Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa duly appointed Rob Stangel to serve as director to represent Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa on the Board of Directors of the Municipal Energy Agency of Nebraska. The appointment will run for a term of three (3) years with the powers and duties incident to such office. This certificate is issued in compliance with the Municipal Cooperative Financing Act contained in the Nebraska Revised Statutes §18-2401 et seq. (1987).

This is to certify that the Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa duly appointed Chris Longer to serve as alternate director to represent Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa on the Board of Directors of the Municipal Energy Agency of Nebraska. The appointment will run for a term of three (3) years with the powers and duties incident to such office. This certificate is issued in compliance with the Municipal Cooperative Financing Act contained in the Nebraska Revised Statutes §18-2401 et seq. (1987).

*This is to certify that the appointments set out above were approved by the Board of Trustees of the Indianola Municipal Utilities on behalf of the City of Indianola, State of Iowa, at their meeting on January 11, 2016.*

(SEAL)

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*Deb White*  
*Board Chairperson*

**Meeting Date:** 01/11/2016

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**Information**

**Subject**

Possible Motion for Choosing a Consultant for the Fiber To The Home Feasibility Study

**Information**

At the December 14th meeting, Trustees received three responses to the RFP for a fiber to the premise feasibility study. The consensus was to table the selection process until General Manager Rob Stangel was able to review the proposals and make a recommendation. Trustees also were in favor of having CCG Consulting and Lookout Point Communications present their proposals in person as did Magellan Consultants back in October.

The first to present will be Eric Lampland with Lookout Point Communications. Eric founded Lookout Point, an independent consultancy, in 1997. A network architect for over thirty-five years, Lookout Point focused initially on large scale, mostly global, networks and their unique technical issues. In 2003 Lookout Point redirected its efforts toward aiding municipalities and public utilities. Today Lookout Point has developed the most experienced national team concentrating on the deployment of fiber optic and wireless networks for this segment. Mr. Lampland has served on standards forums, various boards and in multiple companies advising and birthing new technologies. He advises, and learns from, the financial and vendor communities concerning technical and business trends. Currently, his focus has moved to Software Defined Networks using Network Function Virtualization as a means to lay the foundation for the next stage of Internet architectures. He is frequently called upon to share insights at various technical and regional conferences.

The second to present will be Doug Dawson with CCG Consulting.

The three proposals are being attached again for your reference. If Trustees are prepared to select a consultant following the presentations, simple motion is in order. Otherwise the item may be tabled for further consideration.

**Financial Impact**

N/A

**Staff Recommendation**

If the Board so chooses, simple motion to approve is in order.

---

**Attachments**

Lookout Point Communications

CCG Consulting

Magellan Advisors

*Indianola Municipal Utilities  
Fiber-To-The-Premise  
Feasibility Study  
Strategic Planning and Consulting Services*



**INDIANOLA MUNICIPAL UTILITIES**

**IMU**

**Electric • Network Services • Water**

Presented By:

Lookout Point Communications with  
NewCom Technologies

December 11, 2015

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December 11, 2015



Ms. Chris Longer  
Program Coordinator  
111 South Buxton Street  
Indianola, IA 50125

Lookout Point Communications  
880 Osceola Avenue  
St. Paul, MN 55105

Dear Ms. Longer,

Lookout Point is pleased to respond to Indianola's Fiber-To-The-Premise Feasibility Study RFP. We have served communities, counties and regional areas that have explored this path. In Iowa our clients extend from small efforts in Lenox, strategic reviews in Algona, to substantial work with Muscatine in their conversion from Hybrid-Fiber-Coax (HFC) to Fiber-to-the-Home (FTTH). Currently we are evaluating designs, architecture and preparing the final business case for twelve cities, that have come together to realize millions of dollars in savings in the northeast quadrant of Iowa. Five of those communities will also be doing feasibility studies similar to yours this year. As with your project their motivation is similar – advancing communications in Iowa communities. We enjoy being a part of this progress.

Included within are those elements IMU requested in your RFP. In *Section 1: Firm's Capabilities and Qualifications*, we offer information concerning our companies. Our long-term partner, NewCom Technologies, is joining Lookout Point for this response. NewCom will perform all outside plant (OSP) design and costing. In Section 1, we include data about both companies: firm's profiles, contact information, a statement of independence and three references.

In *Section 2: Project Scope – Work Items*, we address the actual work planned to meet your requirements. This is itemized in two phases. The first phase details a five-step process, plus one optional step, for understanding your environment: competitive analysis, IMU's goals, anchor institution requirements and more. We will analyze requirements against current approaches used including equipment, connectivity, services and partnerships. We will examine the addition of services such as smart grids. We will begin a knowledge transfer to IMU personnel concerning national FTTH efforts, technology trends, identify options for design, and potential partnerships for your consideration. Surveys will then be added to gain further understanding of community needs and alignment. Legal and regulatory issues will be documented. The results of this data collection effort will be discussed with the IMU personnel and documented. The deliverables from Phase 1 work are listed at the end of the section. They include all aspects requested in the Situational Assessment and Network Design Alternatives components of the RFP.

The second phase will join the inventories, requirements and desires with Lookout Point and NewCom expertise. Work in this phase will develop various models for strategic examination. IMU states that they are seeking a financially viable business model or models to choose between. Further that certain approaches have been tried to either generate revenues (e.g. tower leases) or create various public-private monetization models. IMU has had an ongoing relationship with MCG including a partial deployment in Indianola of FTTH. This experience requires review, but more importantly it requires alignment with community needs. It requires alignment with current technology, changing business models and opportunities. Lookout Point would consider such an assessment and recommendation to be a strategic review rather than a simple feasibility study. Of course any strategy must be sustainable; it must meet IMU's overall goals; it must be cognizant of the marketplace and approachable opportunities; and, it must be a clear, usable and adaptive strategy. This is a very difficult task today. It is also great question you asked and we will do our best to help you answer it.

Fiber plant, network design, financial proforma, legal and governance issues will combine in this second phase as we approach your answers. NewCom's Esri GIS layouts will produce visual maps to display alternative network designs and provide careful costing of the OSP. We then add designs for the electronic/optic infrastructure and services and then iterate these combinations against requirements and models. The first model will identify network connectivity and operations using existing IMU equipment and associated MCG, INS and Broadcom equipment and circuits (e.g. optics, routers, switches, access equipment, fiber paths and service infrastructure equipment). The second model will define an optimum approach using traditional architectural approaches to meet current requirements defined in Phase 1. The third model will test whether SDN/NFV benefits can provide capital and operational expense reductions and pave the path to rapid new service implementations, programmatic flexibility and open the avenues to future business and resident usage through public and/or private participation. These three core models will be iterated with differing partnership opportunities where found, differing funding assumptions and with alignment to the goals and community desires documented in Phase 1.

All costs – equipment, OSP physical structure and operations – will be defined along each of these approaches, or models. Feasibility will touch on current expenditures, anticipated growth and funding alternatives (e.g. bonds of differing types, partner financing, banks and/or potential federal and State grants) and differing network models. A full financial pro forma will be created for each model and variance yielding revenue, cost-of-goods, operational expense, capital expense, cash flow analysis, income statements, debit retirement and balance sheets.

In *Section 3: Proposed Schedule and IMU Participation*, we itemize the timing for the study. This can be further adjusted to meet IMU's needs. *Section 4: Proposed Costs* defines a fixed price that will deliver all that you have asked for and incremental pricing should you wish to add or change work elements. It also identifies an optional task that we identify on Phase 1, which will depend on the depth IMU wishes to pursue in establishing community requirements.

We believe context and knowing where you are headed is extremely important. It is our responsibility to provide you with simple clarity, honesty and good judgment. The Feasibility Study will provide a firm and grounded vision defining what is desired by IMU, what is to be built, what benefits will be achieved, who might be involved including public and/or private partners, with the specific costs, financial plans, governance and legal guidelines to achieve those results.

Lookout Point is committed to this project and to your success, both now and in future years.

Thank you for your invitation to participate in your success.

Sincerely,

A handwritten signature in blue ink that reads "Eric Lampland". The signature is fluid and cursive, with a large loop at the end.

Eric Lampland  
President,  
Lookout Point Communications

## 1. Firm's Capabilities and Qualifications

There are two firms -- Lookout Point Communications and NewCom Technologies – jointly responding to this RFP. We have been partners in hundreds of communication projects including FTTP, wireless cell tower deployment as well as transport and special function networks. We work seamlessly together and provide you with a single point of contact. Lookout Point has provided traditional network designs and implementations to many clients. In addition we assist communities with feasibility studies, strategic planning, vendor solicitations and review, implementations and analysis of existing systems.

We are considered by some to be the most technically adept consultants in the municipal markets. In the last few years we have been spearheading implementations of Software Defined Networks and Network Function Virtualization (SDN/NFV). SDN/NFV is an entirely new way of architecting networks with enormous benefits. These new disruptive technologies are being pursued aggressively by major services providers and cloud infrastructures worldwide. All major vendors are now offering these new structures. For IMU this technology brings with it compelling attributes that will bridge you into the future. At minimum is the ability to leverage significant capital and operational savings affecting both wireless and fiber infrastructures. Should IMU find use in these approaches, Lookout Point is one of the few consultants, and currently the only one in the public markets, that can deliver the substantial benefits found here.

Lookout Point will have primary responsibility and be the point of contact for IMU. In addition, Lookout Point will conduct the reviews, develop architectures and differing models, cost all feasibility facets, present funding alternatives and codify this data into usable decision criteria. NewCom brings over 20 years in the design and construction for fiber outside plant (OSP).

**Statement of Objectivity:** Both firms have been independent corporations for almost twenty years. Lookout Point was founded in 1997 to consult in matters relating to the design and architecture of advanced wireless and fiber communications. NewCom was founded in 1995 to design and engineer outside plant (OSP) infrastructure. Neither firm is engaged in the businesses of selling, servicing or renting communications equipment. Both firms maintain extensive relationships with product vendors and the industry at large, including vendors that do sell such equipment. We respect them all and favor no one in particular. Our recommendations are driven by the requirements of our customers.

### 1.1 Contact Information

Lookout Point Communications  
880 Osceola Avenue  
St. Paul, MN 55105

NewCom Technologies  
6000 Grand Avenue  
Des Moines, IA 50312

Primary contact: Eric Lampland  
[eric@lookoutpt.com](mailto:eric@lookoutpt.com)  
651.227.8122 (office)  
651.815.3333 (cell)

### 1.2 Firm Profiles

Lookout Point Communications and NewCom are corporations by structure that are fully insured carrying general liability, professional errors and omission policies and associated policies (auto, health, etc.) to protect our customers. We bring years of experience in leading edge technologies complemented by senior management business acumen. Experience has taught us much. We understand the difficulties that constrain success and have developed approaches and solutions to overcome those hurdles. Difficulty has many faces – sometimes it's

hype, sometimes fear, sometimes lack of vision or preparation, sometimes technical or marketplace misunderstandings, but most often it is simply not getting the right knowledge, simply and usefully conveyed, to those who need it. This is our skill – we bring simple clarity drawn from years of experience and deep understanding.

Each member of the team assigned to IMU has built and run technology companies. We have each started companies; lifting ideas off paper and making them real. We have each been responsible for operational aspects of large networks. Each has over thirty years of engineering, design, operations, project execution, business and partnering negotiation in communications technology. Some have worked within governmental organizations. Some have been involved in creating technical standards: the protocols and architecture that are used today. We know how these networks work, where they work – and where they don't. We have built networks; had success and stubbed our toes. We have a lot of learning to bring.

Our partners are likewise reviewed for in-depth knowledge and, dare we say, a little wisdom. Some of our partners have been with us for many years. We have formed good relationships. Key to this first phase is NewCom Technologies. We have worked with NewCom for over twelve years and have found them to be one of the best outside plant designers in the business. For this first phase, NewCom will obtain shape files and geodatabases from IMU, currently maintained by MCG we believe, and this will allow simple extrapolations necessary for cost estimates of the various alternatives. GIS allows us to build layers of information (e.g. conduit, fiber, physical aspects such as creeks and roads, etc.) that can be manipulated as evaluation proceeds and decisions are being formed. Initially, NewCom will do the physical fiber layout including a GIS based layouts and design – if and as required. NewCom's initial work can be leveraged through the actual walkout, field engineering, documenting construction specifications and providing final build oversight. We have included basic information concerning this company in the following.

Other partners of note include legal resources, environmental assessment firms, video service experts, voice communication specialists, IT professionals and those engaged in leveraging advances in and for today's advanced communication fabrics. Lookout Point brings various specialty companies that provide in-depth technical and business knowledge in all possible service infrastructures such as video design and the negotiation of programming contracts and Internet Transit costs, in virtualization and security. Our recommendations to IMU do not anticipate significant work for this first phase in any of these categories. However, Lookout Point's capabilities, and what we bring to this initial study, are enhanced through these relationships. Importantly, those resources are available quickly as IMU proceeds with future stages of development should you need them. Regardless of the direction and requirements identified in this project phase, or perhaps later in expansions, Lookout Point and its partners can deliver sound professional consulting from early education, through business cases, network design and even to actual implementation.

We have been involved in many of the alternative approaches cities and regions have taken. Each approach has specific issues. Lookout Point knows them and our partners know them. We add this knowledge immediately and effectively to this study.

We also maintain excellent relationships with equipment and service vendors and today's standards bodies. Team members have worked for many of these companies and a particularly useful aspect of Lookout Point is that we provide industry analysis to those same vendors and the financial community. We really do know them – their equipment, their finances, their vision, and their people – inside and out. These same vendors and investors turn to us for objective views of the marketplace and themselves. We are members of several vendor consultancy programs (Alcatel-Lucent, Adtran, Calix, Cisco, Juniper, Tyco/ADC and more), maintain close ties with multiple parts and equipment distributors and are consulted by others who wish knowledge in these fields. Ours is a robust eco-system.

One important caveat about vendors: we are not a template shop. We don't do the same thing over and over. We work for our clients. There are many reasons driven by client visions to select one architecture or another; one equipment vendor or another; or, select a particular partnering or monetization approach. Each study is unique. It needs to serve the goals of our public sector clients – a surprisingly diverse mix of technology, city and town goals, partners and approaches.

We understand the political and regulatory processes and requirements. We are right beside you and can bring you the knowledge and tools to manifest your vision.

### Lookout Point Communications

Lookout Point Communications provides the most experienced team concentrating on fiber and wireless networks in the country. We are sought out technology leaders. We have built networks for years and understand both traditional approaches and the newest architectures of SDN/NFV being deployed in fiber and wireless networks.

Eric Lampland, Lookout Point President, delivers telecommunications consulting and industry analysis, delivers reports and analysis on critical subject matters in the telecom industry to the vendor, financial and venture capital community, is a consultant to vendors, investors, and companies on technology trends and supplies product suitability and marketing. He will serve as IMU's primary consultant.

### **Company Highlights**

- ✓ Lookout Point has been in business since 1997.
- ✓ Specific involvement with municipal FTTH, public/private cooperative projects, incremental city only or school district only projects and other related municipal fiber infrastructures have been our focus since 2004.
- ✓ Multi-state experience including: Alabama, California, Colorado, Illinois, Iowa, Louisiana, Michigan, Minnesota, and Wisconsin. In addition we have done work in Canada.
- ✓ Served somewhere above 200 cities and towns to date including individual cities, municipal utilities and regional efforts.

Lookout Point Communications, St. Paul, Minnesota, offers consulting in various aspects of communications technology.

- **Strategic Planning**
- **Program and Project Management**
- **Feasibility Studies**
- **Financial Modeling**
- **RFP Creating and Review**
- **Team and/or Staff Development**
- **Education and Training**
- **Technology Assessment**
- **Technical Architecture and Design Engineering**
- **Vendor Management**
- **Integration Services including Video Headends, VoD & OTT, voice services and Internet**
- **Network Operational Planning and Implementation**
- **Standards Development**

### Key Personnel Assigned to IMU

#### **Eric Lampland, President, Lookout Point**

Mr. Lampland will lead and manage all aspects of the IMU project.

Mr. Lampland has a Bachelor of Computer Science from the College of Science and Engineering at the University of Minnesota. He has been President of Lookout Point Communications, an independent consultancy, since 1997 and a network architect for over 30 years, specializing today in the development of municipal fiber networks and the wireless overlays that we all need. He served as a member of the Blandin Foundation's Strategy Board on Broadband for six

years; provided initial inputs to the National Broadband Plan and continues his support for communities seeking advanced communications technologies. Currently, he is deeply involved in the emerging technologies of Software Defined Networks and Network Function Virtualization that is revolutionizing how we construct and build networks and service infrastructures today.

His entry into Fiber-to-the-Home networks began in 2003 when Lookout Point contracted to fill the role of Director of Architecture and Network Engineering for Door County's initial FTTH efforts. Exposure to the consequences on citizens and business of living in under-served markets, caused by restricted investment of legacy carriers, spurred a new focus for Lookout Point. Today his efforts are directed at enabling public efforts addressing the growing gaps emerging between the United States and the developed world and between large cities and smaller markets in communication services. He is a sought after speaker at industry trade shows and community forums addressing technology. These have included the IAMU Municipal Broadband Conference, Optical Fiber Conference (OFC), Rural Broadband Conference, FTTH Council, MTA, Blandin Conferences, MACTA, Badgerland Finance Rural Community Summit(s) and the Broadband Communities annual Summit show.

### **Harvey Freeman, Associate, Lookout Point**

Dr. Freeman brings a strong combination of program/project management along with deep knowledge of the communications industry. Dr. Freeman will provide project management for any complex set of tasks that IMU develops. His range of knowledge in project management includes such developmental methodologies as SDLC, PMI, DMAIC, AQMS, Booz Allen proprietary and the newer techniques of Agile and Scrum. This is primarily expected for the next phase should the design and development proceed: those necessitating coordination between multiple groups. His involvement in the next phase will be substantial. Dr. Freeman has been involved with many companies during his 30 years in the communications industry: Booz Allen, Corning (fiber), Bank America, Ameriprise and more. His work with the IEEE (source of Ethernet and WiFi standards, amongst others) is legendary. He is the current President of the IEEE Communications Society, was its past treasurer and CIO and is the perennial force behind Infocom, which is the leading academic technical communications conference. Dr. Freeman sits on the IEEE Communications Society Board and has contributed much to today's networking.

### **NewCom Technologies**

NewCom's senior associates together have engineered, designed, built, and operated more than 200,000 miles of fiber, copper, and coax plant, serving millions of subscribers, and in many cases are the origins for best practices in broadband communications and OSP design and construction nationally.

The company is staffed and organized around personal experiences of operating commercial telecommunications systems. For instance, Jim Petro, NewCom's Founder and Chief Technology officer, was Vice President of Engineering and Operations for Heritage, charged with technology advancement, construction, and management of more than 20,000 miles of outside plant, as well as engineering 200-plus headends across the U.S.

NewCom has planned, designed and built plant from rugged rural terrain to teaming cities through all seasons and has integrated planning and implementation procedures exclusively designed to meet specifications and deadlines for telecommunications and public service providers.

The team's specialty is technology-based OSP development and management, primarily focused on:

- **OSP Survey (including GPS)**
- **Facility and subscriber database development**

- Fiber-to-the-Home/Business passive optical network design
- Broadband network planning, engineering, permitting, and implementation
- Small-cell engineering and placement
- On-site project/construction management
- Central office, tower site, and headend engineering
- Telephone facility planning and design
- and management
- Subscriber lift solutions
- GIS conversion & data development
- GIS application development
- Computer-aided design and drafting
- Municipal services engineering and documentation

The NewCom engineering team — architects, designers, facilities engineers, network specialists, project managers, drafters, field engineers, GIS specialists, programmers, developers — are personally familiar with telecommunications operations, most coming from the RUS, LEC, CLEC, and MSO environments. NewCom is noted for its innovative resources in the telecommunications industry.

### 1.3 References

It is always hard to pick relevant projects. Projects have differing intent and we provide very tailored solutions to each. Importantly we picked projects in which both Lookout Point and NewCom were involved. Having said that, here are three references:

1. **Current Project:** [Iowa Association of Municipal Utilities](#), Northeast Pilot Project (aka: Iowa Fiber Alliance)

**Relevance:** Twelve nearby Iowa communities that have worked with Lookout Point (Bellevue, Cedar Falls, Charles City, Decorah, Independence, Maquoketa, Muscatine, New Hampton, Osage, Reinbeck, Vinton and Waverly). Multi-county transport using SDN/NFV technologies delivering true open access.

This is a fascinating project that will build a 600-mile transport network among twelve cities, and twelve counties, in the northeast quadrant of Iowa. The transport network will connect to three primary Internet access carrier hotels in Chicago, Dallas, and Denver providing enough savings over current expenditures that the entire build cost can be recovered in less than five years; after which it provides virtually limitless, and cost free, growth capabilities. The transport infrastructure will also provide a sharing of the services infrastructure (voice, video, data, remote health care, education, etc.). Much of the vision is still being solidified but may include both public and private providers and if successful will be extended statewide in Iowa. The promises of this network will be pursued using Software Defined Network and Network Function Virtualization technologies providing open access, true network adaptability, rapid implementation of new services and much, much more. This will provide northeast rural Iowa the finest abilities of any network in the world for years to come.

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515.650.0251

## 2. 2014 Project: **Algona Municipal Utility (AMU)**

**Relevance:** Strategic Planning: Review Existing Network(s) and Recommend Modifications.

AMU and their people are always looking forward seeking to improve the services they provide. They are an advanced and high quality service provider to residents and businesses. They also rely on several key partners for services and transport capabilities. We were asked to examine their current environment, including their technology and those of their partners. We then provided a series of recommendations to better align with new technologies and address cost concerns. We have a continuing relationship.

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## 3. 2012 Project: **Prior Lake Fiber Optic Network Feasibility Study**

**Relevance:** Prior Lake is located in Scott County, MN; a suburb of Minneapolis. Prior Lake's project was a feasibility study assessing the implementation of FTTP and potential utilization of the Scott County ring.

The Prior Lake Broadband Advisory Committee contracted with Lookout Point for this feasibility study. Naturally it included all components of a full study: technical design, cost estimations, business cases, model alternatives, and coordination with multiple groups including Scott County.

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## 2 *Project Scope – Work Items*

The Work Items listed in this section describe the activities and deliverables that meet all of the criteria in Indianola's RFP; particularly addressing those itemized in the Project Scope Sections. This section has been broken into two phases.

The first phase deals with information collection and exchange. It lays the groundwork for educating us, the consultants, on goals sought, existing conditions, future requirements and desires. In addition it provides a vehicle to share with IMU the knowledge collected and to convey an understanding of various technologies that pertain to current and future choices.

The second phase codifies this data. OSP structures will be created and costs will be estimated. Equipment and operational expenses will be costed. Various models will be created against this data to determine feasibility for each approach. Finally, reports and presentations will convey this knowledge to all appropriate stakeholders and decision makers.

## **2.1 Phase 1: Identification and Data Collection: Situational Assessment and Network Design Alternatives**

IMU states that they are seeking a financially viable business model or models to choose between. Further that certain approaches have been tried to either generate revenues (e.g. tower leases) or create various public-private monetization models. IMU has had an ongoing relationship with MCG including a partial deployment of FTTH. This experience requires review, but more importantly it requires alignment with community needs. It requires alignment with current technology, changing business models and opportunities. Lookout Point would consider such an assessment and recommendation to be a strategic review rather than a simple feasibility study. Of course any strategy must be sustainable; it must meet IMU's overall goals; it must be cognizant of the marketplace and approachable opportunities; and, it must be a clear, usable and adaptive strategy.

In today's networking environments – that's difficult.

The video services markets are in complete disarray. This week Amazon announced its Streaming Partner Program and some say it will disrupt the entire entertainment industry. Tim Cook of Apple has said the future of TV is apps. Comcast, Verizon, Dish and Direct TV, much less HBO, CBS, Hulu and others, have all announced various streaming services for Internet based video, because the truth is that linear broadcast is significantly declining, especially in younger audiences.

Voice services can now be obtained over the Internet, not just Skype, but what we think of as normal traditional wireline services. And wireline services are only used by something in the area of fifty percent (50%) of all users today, while smartphone use is almost ubiquitous.

Meanwhile technical architectures, software and physical equipment, are being completely disrupted by technologies called Software Defined Networking and Network Function Virtualization (SDN/NFV). Convergence that used to refer to combining voice, video and data services under IP protocols is now referring to bringing new services and new partners together. Ensuring smart meters are connected to the same fiber network that conveyed old fashion network services. Convergence now means bringing education and healthcare across FTTH networks using new partnerships, new backend support systems, not to mention, new sources of funding for that all important issue of feasibility. Most importantly, convergence means developing a strategy to be able to adopt new services rapidly. Services that are just emerging like bandwidth on demand; the ability to purchase bandwidth for short time frames is becoming a business requirement for those using cloud structures. And we must be prepared for the services that we cannot see yet.

Lookout Point believes in finding value among all stakeholders. In projects such as IMU's the divergence of knowledge and the range of community needs are usually quite striking. Lookout Point lives in technology. It is our business. We see what is new long before it emerges in the public arena. This is not normally what persons with other interests and responsibilities do. So we begin with education – our education of you, your education of us. We will seek to understand your particular interests and requirements. And this is key to the value we will bring throughout the project – continual and mutual education, flowing in both directions.

Phase 1 will document core attributes of IMU's offerings, the local competitive environment and contextualize that data respecting Indianola's demographics and likely marketplace changes.

Step One – Homework: Prior to our first meeting with IMU team, we will have analyzed all local competitors and created a complete competitive matrix that includes services and service providers (speeds, technologies, bundles offered and priced); connectivity points (carrier hotels used, colocation data centers if any, current access to transit and peering points, etc.); and, fiber

providers. We will section stakeholders into a proposed schedule for *optional* presentations and interviews. We will have prepared a series of questionnaires for later surveys. General legal and regulatory information will be reviewed collected where necessary (e.g. changes in E-rate qualities, FCC healthcare pilots, etc.) We have all the telecommunication national and state legal and regulatory information already. Much of this initial analysis can be derived from the web, conversations with IMU and MCG staff and a few phone calls or emails. It will be augmented with the following tasks.

Step Two – Initial Team Meeting: The purpose of the first meeting is to ensure that all team members – IMU, Lookout Point and NewCom – are very clear and in agreement with the project plan. We will seek to understand IMU objectives and short and long-term goals. Work completed in Step One above will give context to that discussion. Lookout Point will present our planned approach and provide a multi-part general education seminar. The first part will cover the broad outlines of known municipal and regional approaches. We will share understandings across 400 communities nationwide. We'll discuss the Iowa Fiber Alliance in northeast Iowa. We'll discuss funding alternatives, issues and lessons learned from cities that have gone before or are entering now. The presentations will also provide high-level understanding of the technology markets, current architecture approaches, trends in services and general cost factors including both traditional structures and the just emerging disruptive technologies of SDN/NFV. An educational conversation will surround technology with a further bisection of the architectural highlights and their impact on various different business models. Models such as Open Access, partnerships of various types, retail and wholesale structures will be discussed. All of the information collected in Step One will be highlighted, documented and shared.

Step Three – OPTIONAL Stakeholder Meetings, Education and Data Collection: It has always seemed unfair to ask people outside of technology what they would like to have or how much they would use over the next 3 or 5 or 10 years. Often they don't know what they use or want or what is available today. We hold this task as our job – to educate with patience and respect. Ultimately, the long-term commitment that IMU needs from businesses and residents is absolutely vital to your success. And building that commitment begins here. It begins with involvement and we take that very seriously. To glean valuable inputs from stakeholders, Lookout Point recommends beginning with a series of stakeholder educational sessions. These sessions will group common interests together.

This is more costly to do. As such we include it as an option here and in the pricing section. However, to hold several community meetings and to meet with key stakeholders (business, education and governmental groups) are often more productive than conducting just a blind survey. We have also honed this approach for efficiency.

Certain data gathering will also occur in these groups to elicit relevant detail. The data gathered will support and extend the data sought in surveys (Step Four). The groupings will have been agreed upon in Step Two. Lookout Point will present the intentions of the study, cover the basics of what can be done today, what is known and agreed upon within industry circles and a sampling of what other communities have achieved. In turn the participants can share their needs, requirements, and we hope they will give us their dreams.

The presentations will take roughly forty-five minutes and we'll schedule another forty-five minutes for interacting and questions.

Step Four – Survey Participants: A market survey will be conducted. We will discuss the best method of reaching out to participants with IMU and do so accordingly. Options to connect to survey participants are many. Often considered are newsletters, mailing enclosures stuffed within monthly bills, email lists if IMU processes them and so on. The content of the survey

will be presented first to IMU to ensure that what is being sought meets with IMU expectations. Minimally, we will extract satisfaction and service cost indicators and parse those by demographics. Should IMU optionally elect to conduct Step Three above we find with a little time passing following each stakeholder session, people often discuss what they learned and what they wish they had asked. The surveys are directed to elicit what is now a moderately educated and thoughtful response. These surveys and outputs from the optional sessions will be gathered and codified with guarantees to participants of anonymity.

Survey data collected will be assessed. Customer demographics, from surveys and census data, will be aligned with national studies that seek similar information. This will be further correlated with industry trends.

Step Five – Network Design Alternatives: A key strength of Lookout Point is networking technologies. We are sought out and known for our expertise. Our work in Iowa, and that of our Des Moines based partner New Com, means that we have extensive knowledge about what exists here and might be available. We also have extensive contacts in the vendor communities. We will present an assessment of design options; identify backhaul facilities, technologies, peering points and cost structures; recommend equipment solutions to meet IMUs current and future needs; and, identify partnership opportunities such as the Iowa Fiber Alliance affecting network design alternatives. For each alternative recommendation we will obtain specific quotes for equipment or services. The outside plant (OSP) infrastructure will be laid out upon the MCG ESRI GIS database and be used for both costing and implementation considerations. Finally, we will prepare a recommended approach, and alternatives, to the phase-in of network facilities.

We recommend that a series of meetings with IMU be devoted to model development and discussion of network design alternatives. This is an area that Lookout Point can offer guidance and consultation. Our experience suggests that the transfer of this knowledge requires effort, which we are happy to provide.

Step Six – Align, Document and Discuss Findings: As a preparation to developing business models, architectures, services and financial models, the results of the previous steps will be codified, documented and presented to IMU.

Deliverables at this point will include:

1. An inventory and assessment of IMU's current network, external linkages to INS, Broadnet and MCG, current services offered and the additional connections to the City, County, medical, DHS and others IMU has established.
  - a. The assessment will identify areas of concern and areas excellence. Recommendations for strategies, equipment modifications and architectural approaches will accompany this assessment where pertinent.
2. A complete competitive landscape by provider including services, pricing and marketing approaches will be created. All commercial broadband providers will be identified including the geographic areas they cover.
3. Survey results, and optionally those from individual community meetings, will be codified for review. The survey results will be segmented by demographics and include satisfaction measures for IMU and competitive providers.
  - a. Survey results will also be assessed as they relate to national industry trends including pricing and service offerings.
4. An overview and identification of legal and regulatory criteria will be provided. Most of this is straightforward but will depend upon what models and services IMU chooses.
5. Potential business partners will be documented and initial business model identification will define potentials for monetization models.

6. Network design alternatives will be documented. Importantly, Lookout Point recommends that such designs and alternatives be the focus of several educational presentations to fully convey both the traditional approaches and those that are emerging over the next several years.
  - a. Recommended network design options and equipment will be documented
  - b. Service options, backhaul facilities and implementation considerations will be documented
  - c. Implementation plans for network build out will be documented.

## ***2.2 Phase 2: Strategic Planning Phase – Business Model Alternatives, Financial Modeling and Proforma***

As input to this phase we will apply collected information, assess the output of tools and models, add experiential data from other city, county or regional efforts and add in best practices in technical architecture and policy development.

### **Model Development**

Model development, done well, is a complex of technology, partnering opportunity and includes various IMU short and long term goals. Model development begins to structure governance criteria under differing operational assumptions such as partnerships. It evaluates current skills and postures those that need to be acquired. Importantly, it understands, and includes as variables, future trends of multiple types. With factors such as these, we will create models, each doable along some set of metrics, which can be iterated for key variables (e.g. customer penetration rates, services [take rates], and adaptability in the face of change, etc.). Models will then be presented – side-by-side – with appropriate evaluative commentary including experiential data from those who have tried some of these approaches. Finally, each model will define attributes such as technology and architecture, staffing and external inputs or relationships. This is particularly important as current architectures, which may serve for a time, are under great stress from the emerging disruptive technologies of SDN/NFV. Lookout Point is a leader in these newer architectures and will offer guidance and education as we move through this phase.

Lookout Point will also offer our experience on partnering. There are opportunities in services, in funding, in operational aspects that the private sector is beginning to offer. Several of these are opportunities are emerging today. Naturally, some caution needs to be reflected and the partner interests need appropriate scrutiny. Lookout Point is also helping establish a partnering opportunity for members of the Iowa Association of Municipal Utilities to which IMU belongs. This pilot project, known as the Iowa Fiber Alliance (IFA), will interconnect twelve communities in northeast Iowa and develop a transit network and shared services infrastructure that will be among the most advanced in the nation. We have been responsible for all aspects from network design to governance. The business case to be delivered soon demonstrates savings in the tens of millions for these communities. The lessons learned will be shared with IMU as you develop your own strategies.

Finally, IMU has asked for an understanding of services: VoIP, video, data, security, education and even dark or lit fiber leasing. As we understood the request, it also spoke to us of future services. This is an area that is of significant concern in the industry today, which we briefly touched upon in the introduction to Phase 1 (see Section 2.1). No area in fiber communications and network architectures is receiving as much attention as this aspect is today. Fiber networks are robust with virtually unlimited capacity. Convergence of services in a given. Any idea of simple triple-play (voice, video and data) services is rapidly disappearing. It is too expensive and future needs are too great to stay with older structures, even older FTTH structures. We are leaders in this area and can offer that it is all about how you “build” this network. Architectural separation of services and infrastructures is a given. Movement to software is

now dominating services discussion. The advances in SDN/NFV pave the way not only to less expensive operational and capital costs, but focus tightly on adaptability – adaptability for new services that may be spun up for short periods of time, that may be unknown at this time, that come from new partners and that may impact your community in the next ten years. It is a great question you asked and we will do our best to help you answer it.

Deliverables for Model development will include:

1. A summation of business models currently in use by municipalities throughout the country. This will also address the lessons learned by those communities.
2. Identification of partnering opportunities with public or private entities. This will also include the opportunities emerging from the IFA.
3. Identification of existing services in Indianola and those that we can see in the coming years will be documented. Importantly, we will define the trends in network architectures that are paving the way forward. We will offer an understanding or view to the unfolding of new services that may enrich Indianola.

### Revisiting Architecture and Financial Modeling

Lookout Point will bring together the research from Phase 1, bearing a keen understanding of potential business models, into a set of choices for IMU. Architecturally we need to understand both the models and architecture to develop solid costs. Developing physical OSP infrastructure will be the responsibility of NewCom who is gifted in this area. Site connectivity, physical redundancies, external interfaces (e.g. Internet peering points, carrier hotels, data centers) will all be mapped and alternatives examined. Existing fiber will naturally be leveraged. The output of this work will provide visible understanding of the network and all costs to construct.

Architectural approaches will be defined in three likely models. The first will identify network connectivity and operations using existing IMU equipment and associated MCG, INS and Broadcom equipment and circuits (e.g. optics, routers, switches, access equipment, fiber paths and service infrastructure equipment). The second model will define an optimum approach using traditional architectural approaches to meet current requirements defined in Phase 1. The third model will test whether SDN/NFV benefits can provide capital and operational expense reductions and pave the path to rapid new service implementations, programmatic flexibility and open the avenues to future business and resident usage through public and/or private participation. These three core models will be iterated with differing partnership opportunities where found, differing funding assumptions and with alignment to the goals and community desires documented in Phase 1.

All costs – equipment, OSP physical structure and operations – will be defined along each of these approaches, or models. Feasibility will touch on current expenditures, anticipated growth and funding alternatives (e.g. bonds of differing types, partner financing, banks and/or potential federal and State grants) and differing network models.

Financial proforma will be created for each model considered. The proforma will assess potential take-rates by the number of homes subscribing and by individual services within homes, business services, cell tower revenue or other ancillary revenue. These criteria will define revenue and cost-of-goods to generate revenue. Operational, maintenance and capital costs will be individually itemized and separately captured. Funding sources will be iteratively applied detailing the cost of obtaining funds as well as expected payments. These inputs will generate cash flow analysis, income statements and balance sheets. Forecasted projections will be made to align with funding mechanisms. For example, revenue bonds are the most common method of funding FTTH networks and are usually issued for 20, 25 or 30 year terms. In such a forecast we will provide monthly detail for the first three or five years and then yearly detail for

the remaining term. Other grants or methods of financing will be treated similarly aligning with their financing periods.

### Develop Strategies

We will jointly develop a vision, a starting point. Leveraging our years assisting communities, and in close observation of Indianola goals and realities learned within this project, we will begin to share the opportunities possible for business and residents through public augmentation or private sector efforts.

A final note on Strategy: In Lookout Point's view strategy is not about how to define a single, unchanging vision for the future, but rather is a way of thinking about how to deal with the future. Ask any legacy provider, or the numerous failing industries of yesterday (brick and mortar bookstores, 35mm film makers, travel agents and on), whether they saw the "signs on the road," adapted well and built sustainable enterprises. Most did not see the signs and you *should* consider their failures. Strategy is about dealing with change gracefully on a variety of timescales. Lookout Point does this better than anyone in the municipal communications market and we will bring it to you. Strategy is an iterative process that we weave throughout initial collection, model development, and feasibility; then focus it tightly here in this last phase. Strategy is also different than tactics, but like tactics it has metrics and milestones, implementation planning and establishes alternative approaches all aimed at a vision that will be developed by all participating groups during this study.

### Deliverables

1. Construct three to five useful business models. Including at minimum the current partnership model with MCG, a build/own model and a partnership with other utilities in the IFA project. Other models can and will be considered.
2. Preliminary engineering of both outside plant constructs and equipment architectures.
  - a. We will define network services to be implemented and methods and architectures to accommodate change.
    - i. Specific information centered on demand management, outage management, voltage reduction and monitoring using smart grid services will be addressed.
  - b. Networking equipment and operational cost analysis of for all models will be itemized. Costs will include all future detail design costs.
  - c. OSP estimates will include all follow-on costs for design engineering and construction expense.
  - d. Operational expense including personnel, equipment and software backend systems will be defined including:
    - i. Billing and customer service systems'
    - ii. Personnel appropriate to each model
    - iii. Support systems and components: software, trucks, physical facilities, etc.
    - iv. Trends in operational expense drivers and advantages emerging with SDN/NFV for cost reductions.
  - e. We will define an implementation roll out plan for selected network facilities.
3. Common financing alternatives will be presented.
  - a. National and State funding sources will be identified to possibly further feasibility.
  - b. Bonding costs and/or other financial requirements will be itemized.
4. Legal and regulatory issues will be categorized and an overview will be presented.
5. All financial pro forma will be created for each model considered.
6. An IMU Vision and Strategy Document will capture the outputs of this study.

### 3 Proposed Schedule and IMU participation

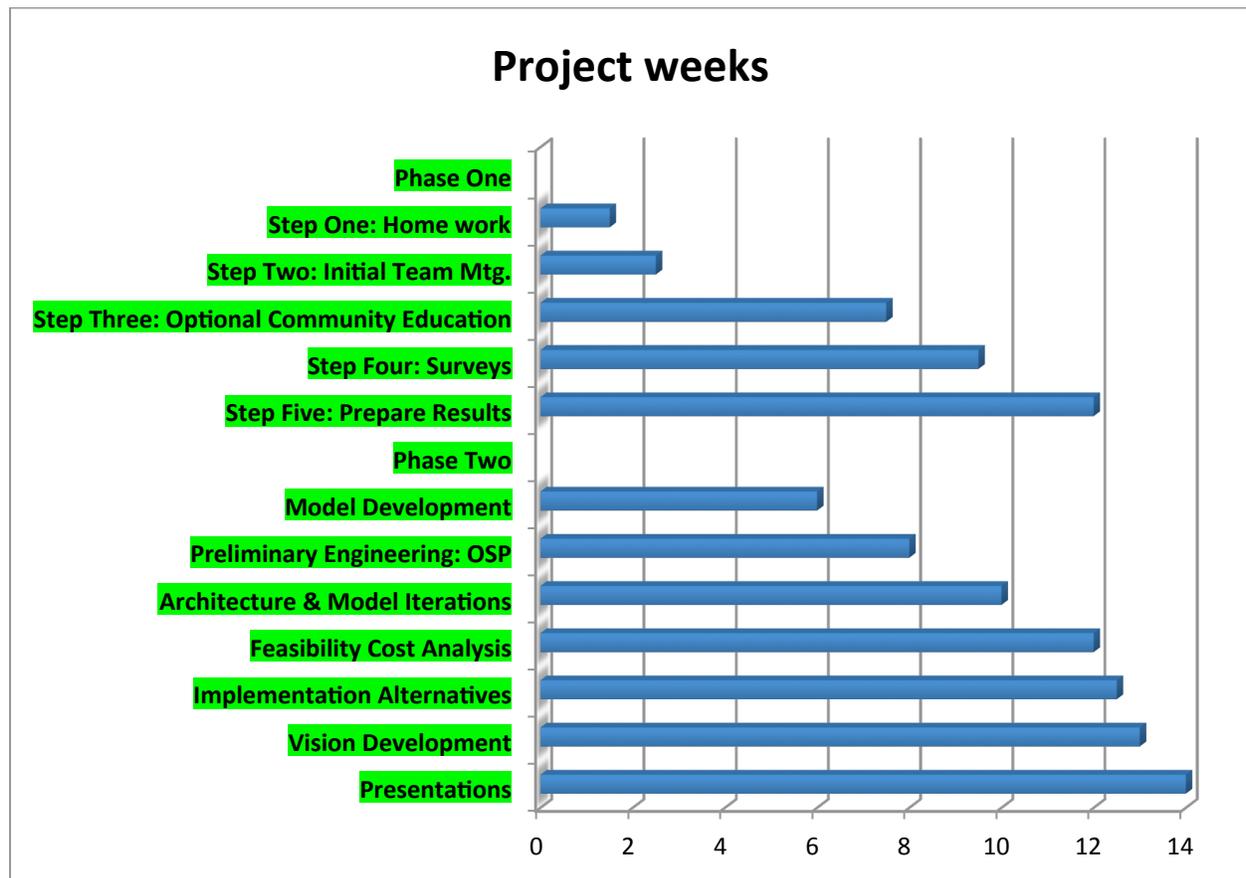
The schedule contained in this section anticipates a total duration of four months beginning at contact signing. It is assumed that IMU team members will take time to review all submissions, perhaps conduct interviews, and then finalize contracts. The period for this activity is currently anticipated to complete by February 1, 2016. Should Lookout Point be selected, we will discuss the actual timing and schedules desired and align this schedule accordingly.

#### IMU Personnel Involvement and Expectations

Lookout Point believes strongly that participation breeds success. We welcome as much involvement as you choose to give. Beyond that we do have certain specific requirements.

- ✓ We expect that the IMU will facilitate all meetings; either providing a location or recommending sites that Lookout Point can pursue to hold any necessary sessions.
- ✓ We expect that the initial kick-off meeting will be arranged by IMU.
- ✓ We expect that information sources, where known, be shared with Lookout Point as we gather primarily stakeholder data, requirements and goals. In particular, we request IMU to obtain, or give permission for us to obtain, the Esri GIS data held by MCG.
- ✓ We expect that the IMU team members provide critical oversight. That they take responsibility to ensure that their needs are being met. Lookout Point is very capable and can provide more than is documented in the RFP. We obviously want you to succeed. Please don't be shy. If we use language that you don't understand, say so. If we suggest approaches that you are not comfortable with, say so. If we miss the mark somehow, say so. This is a partnership and we will do everything we can to make it successful for you, but we need you to be all in.

#### Tentative Schedule



Project management techniques will be those established by IMU. Lookout Point can, of course, recommend a structure that meets IMU's needs. We are conversant with multiple approaches. Please see assigned personnel, Dr. Harvey Freeman, on page 7. Dr. Freeman is a highly regarded communications professional with over twenty (20) years of project management experience.

#### 4 Proposed Project Costs

The current tasks are very straightforward in substance. Activities involving possible partnership negotiations are difficult to assess for time duration. Allowing for that difficulty it is hoped that the overall calendar duration is three to four months. All will require active involvement by the IMU and various stakeholders. Lookout Point has many services that can modify our proposal should any area of emphasis or additional needs be identified.

**Feasibility Study costs for all work tasks: \$ 53,000\*.**

**Optional in depth review of Community Concerns and Desires (Step 3, page 11): \$20,000.**

There are no significant breakouts for the cost of this study, save for changes to the project work scope desired by IMU. Lookout Point is amenable to such a discussion should IMU so desire.

#### Individual Hourly Fees

In the event that IMU wishes to proceed on an hourly basis, per hour charges for each basic discipline are as below. In such cases Lookout Point provides bi-weekly reporting of hours expended and can identify in a manner the IMU chooses: project task, IMU accounting unit or other nomenclature. This can be useful in the early formation of work scope or a change orders occur.

<b>Key Personnel Title</b>	<b>Rate/Hour</b>
Principal Consultant	\$ 225.00
Project Management	\$ 125.00
Marketing Survey Consultants	\$ 100.00
Outside Plant Engineers - Senior	\$ 125.00
Outside Plant Engineers	\$ 70.00
Economic Development Consultant	\$ 125.00
GIS Analyst	\$ 98.00
Clerical	\$ 40.00

\*Note: Rates charged within the stated fixed price contract are less than the normative hourly rates (above) in recognition of the quantity of work involved. For follow-on work, or work that arises during this engagement Lookout Point would be happy to provide a separate bid, if such is beneficial to IMU. The bid price also includes certain direct costs such as web survey fees, mail handling and other documentation costs, which do not lend themselves to hourly quotations. Travel expenses are not included within the above estimate.

#### Proposed Payment Schedule

The payment schedule for this project assumes a three to four month calendar completion with a retainage of 10% held until the final report is submitted.

It is currently assumed that review by IMU will take some period of initial time. Following that a contact can be established. This schedule presumes that such can be accomplished by February 1, 2016. The schedule is as follows:

<b>Payment Percentage</b>	<b>Payment Date</b>
10%	Due upon IMU signing of the agreement
25%	Due at the end of first full month
25%	Due at end of second full month
25%	Due at end of third full month
15%	Due on delievery of the final report



December 3, 2015

Ms. Chris Longer  
Indianola Municipal Utilities  
P.O. Box 356  
111 South Buxton Street  
Indianola, Iowa 50125

**Re: Response to the Request for Proposal for a Fiber-to-the-Premise Feasibility Study**

Following is a proposal from CCG Consulting for conducting a broadband feasibility study for the Utility. Throughout the report we use the words ‘utility’ and ‘city’ interchangeably.

We appreciate the opportunity to make this proposal and we hope our proposal is responsive to your needs.

CCG has done far more feasibility reports for municipalities than any other consultant. We also have more municipal consultants which have gone from feasibility to completed and operating network than anybody else. And what probably most distinguishes us from the other consultants that will respond to this RFP is that we also work for a large number of commercial broadband providers. We think that work has taught us to have a focus on making sure that any solution we recommend is financially self-sustaining.

As we note at the end of the proposal we are willing to negotiate the deliverables of our proposal if it doesn’t meet your budget. We often find that after we more fully understand what is most important to you that we can help you find a set of deliverables that will allow you to make the decisions you need to make.

We can easily deliver a completed study within your desired delivery target of May 31, 2016.

Doug Dawson, President  
CCG Consulting

## **Our Proposal**

### **Situational Assessment**

*The consultant shall gather and assess information on the current status of services and facilities available to the residents of Indianola. The assessment should include, but not be limited to:*

- *An inventory of services currently available to Indianola locations that examines available providers, service offerings, pricing data and competitive rate comparisons, bandwidth and analysis on the necessary level of bandwidth to adequately serve the community.*
- *An evaluation of Indianola demographics, accompanied by a community market survey to assess consumer satisfaction with existing services and interest in IMU-provided services, including but not limited to, recommended service rate pricing and bundled service offerings.*
- *A review of communications facilities currently owned and operated by IMU.*

### **Inventory of Market Products and Prices**

We generally take a two-step approach to understanding the products and prices available in the market today.

The first is the traditional way of doing research to determine what the various providers in the market offer. This would include doing things like web searches to see if we can determine what these carriers charge and the prices they offer. We also talk to smaller local providers who are often willing to share their pricing with us.

But we also realize in today's market that a lot of companies don't have a set of fixed prices. Rather, they offer various promotions and negotiate prices individually with a lot of customers, and so there might be a wide range of different prices being charged in the market today for the same products. Further, with bundling it's often difficult or impossible to understand what a carrier is charging for a single product.

Understanding prices in a market is also complicated by the fact that carriers today often have somewhat deceptive billing practices. They often break out pieces of their charges and make them look like some kind of tax or fee, when in fact these extra charges are all kept by the carriers. We see this with both telcos and cable companies in many markets.

And so, in addition to the normal kind of web research on prices we want to solicit copies of actual customer bills. We would ask the utility's help in asking the community to send us samples of their bills. The detailed bills tell us what people in the market are actually paying, which is often quite different than the standard prices the carriers might publicly quote.

We pledge to anybody who send in bills to keep the amount they pay confidential. In fact, they can feel free to black out or cut off any identifying information from the bills before

they provide them to us. But even if they don't remove their name, we would not reference any specific customer in our reports and we will destroy the bills once they have been analyzed and summarized. We would not make the bills part of the public record and we would not give them back to the city when we finish the report.

Our deliverables:

- Through web research and by analyzing actual bills we will be able to talk about the products, prices and actual bundling discounts being sold in the city.
- We will summarize this as part of the written report on market research.

### **Demographic Review**

We would start by looking at the normal demographic information such as ages, family sizes, home ownership, family income and other statistics. We will be able to tell you the impact these various statistics have on broadband penetration rates by applying what we have learned from working in hundreds of other markets.

But the primary research tool you are requesting is a customer survey to look more deeply at the specific issues of providing broadband in the city.

There are two different ways of doing a survey today – by telephone or in person. We are providing options for both of these methods in our pricing.

There are general issues that are important for any kind of survey. First is that the questions are unbiased and don't lead respondents into answering in a given way. At CCG we have given hundreds of similar surveys and we can prepare survey questions that are not biased, and for which you can then believe the answers. I want to note that the RFP asked about including questions on product prices and we just want to warn that surveys have proven to be very unreliable for those kinds of questions. People have a natural bias to answer that they want very low prices (probably hoping that this answer will influence you to do so), but yet in real life their purchasing practices are very different than what was predicted by the survey. But surveys can be a very accurate predictor of how many people might buy service from a new network, and are just notoriously unreliable on questions having to do with pricing and bundling.

It's also important for a survey to be valid that it is given randomly to people. We have a lot of experience in designing surveys procedures that meet the random test.

You also want a survey that you can believe, and this speaks to the accuracy of the answers obtained in the survey. Most business and major political surveys are done with an accuracy of 95% plus or minus 5%. What this means is that if you were to ask the same questions to 100% of the people in the city that the results should not vary by more than 5% from what was obtained in the survey. That is a pretty high level of accuracy. But other levels of accuracy are possible. We can work with you to determine the level of accuracy you want and to determine how many surveys are needed to get that accuracy.

Finally, you are going to want somebody to help you interpret the results. For global questions this is very straightforward and the accuracy of the responses will be at the level of the accuracy of the survey (such as 95% plus or minus 5%). So, for example, if you ask how many households already have broadband, the results you get would be at the level of accuracy. But there is a natural tendency to want to analyze the answers from a survey more deeply. For instance, you might want to look at how many different households at different levels of household income have broadband. Unfortunately these responses are not nearly as accurate as the response from all respondents due to the fact that you are looking at a much smaller universe of respondents for a given income group. With the smaller universe comes a much reduced level of accuracy in trying to make definitively statements about the results of the survey.

I see this all of the time and you will see national surveys that are at a decent level of accuracy on generic questions but then draw conclusion about a smaller subset of the survey results – such as, in this survey Millennials believe X. I have a masters in mathematics and I understand the fine nuances of statistics. I will make sure that you don't draw any inaccurate conclusions from the responses.

Again, we are offering several options for conducting the survey:

#### Telephone Survey

The primary issue to consider with doing a telephone survey today is that it no longer makes any sense to do a telephone survey if the survey doesn't include cellphones. Nationwide the people who give surveys all now recognize that to give a survey only to landline telephones is no longer a representative sample of the community. The people that still have landlines are generally older than the population as a whole and you don't want to make any business decisions based only upon them.

CCG has callers on staff ready to do the surveys by telephone. But this is only an option if the city somehow can provide a calling list of cellphones of city residents. And this list has to be somewhat random. For instance it might be numbers you have gathered from being in the water or electric business. What we can't do is to solicit cellphone numbers just for the purpose of doing this survey, since it's likely that there would be a bias towards those who want fiber.

At CCG we have assembled an in-house calling group and our rate for conducting these surveys is among the most affordable in the country. Our callers work for CCG directly and we control the quality of the calling. Other cities have praised us for the courteousness and friendliness of our callers. We won't do things like interrupt folk's dinners.

### In-Person Survey

We also offer two options for instead offering the survey door-to-door. This is the only real alternative to doing the survey by telephone.

Option 1. In this option the city would find volunteers to go door-to-door to give the surveys. We will write the survey questions and will come to the city one time to train the survey takers.

Option 2. CCG could instead hire local survey takers. We have never had anybody elect this option, so our price for this is just an estimate, as will be discussed in the pricing section.

Our deliverables:

- 1) We will analyze the demographics of the city and describe how what we find probably impacts potential broadband penetration rates.
- 2) We will provide a draft of survey questions. It is very important that survey questions are not written in such a manner as to bias respondents towards a certain response. We have conducted hundreds of surveys and we will prepare a list of questions that we think work well. You are free to modify that questions but we want to work with you to make sure that any changes don't add bias. One thing we will also help you with is to not let the survey get too long. There is a phenomenon called survey fatigue which says that a lot of people will stop taking a survey if it's too long. We will make sure that the overall survey is reasonable.
- 3) We will determine how many completed surveys are needed to be statistically significant. Ideally we will shoot for getting an accuracy of 95% plus or minus 5%.
- 4) Under any of the options described we will devise a plan to make sure that the sample is random.
- 5) Depending upon the option we will provide staff to administer the survey or work with city volunteers, depending upon the option selected.
- 6) Once the survey is completed, we will analyze the responses and tell you what the responses mean statistically (meaning how much faith you can put in interpreting the answers). We will provide a written report on the survey results.

### Review Current IMU Assets

Since there is already some working fiber in place we will want to inventory and understand what is already there. We will want to understand geographically what is covered as well as to understand the age and type of electronics being used to light the fiber network. We will look at all other assets involved in providing the existing fiber service. We will also look at other IMU assets that might be of use in expanding the fiber networks.

We will also want to understand the current financial performance of the existing fiber and we will want to look at the revenues and expenses associated with operating the network.

## Network Design Alternatives

*The consultant shall provide an assessment of network design options, common vendor and technology alternatives and related high-level price estimates.*

- *Consultant shall research and present alternative fiber network design options, including recommended equipment solutions that are compatible with existing equipment.*
- *The analysis should include an assessment of what services the options are able to deliver. The consultant shall research and present analysis on the acquisition of backhaul facilities and integration into the communications utility.*
- *Consultant shall also provide guidance with regard to the best approach for a phased-in build out of the envisioned network facilities.*
- *Presented alternatives should be accompanied by high-level cost estimates.*

We generally call this phase of our studies pre-engineering. By that we mean that when doing a feasibility business plan we recommend doing only very high level engineering with the goal of understanding the overall cost of building a broadband network. This sort of engineering is mostly done from our offices and involves only a few days of field work. In this high level engineering our goal is to estimate a high network cost to make sure we have estimated sufficient dollars for the cost of expanding the network. But we don't want to estimate too high, so our goal is to get as close as we can to the cost of the network while still staying a little conservative.

Your case is particularly challenging since we will want to fully understand the fiber and electronics that are already in place today. We will look for network design solutions that most easily and affordably mesh with the current operations. It may be possible that there are better solutions for the rest of the city than have been used the original network, and if so we would provide a detailed plan for integrating different technologies along with a plan to eventually bring them into synch. Without analysis we don't know if this will be needed, but it is a situation we encounter regularly when working with telephone and cable companies.

More engineering will be required if the project eventually moves forward and you build the new network. But the goal at the feasibility stage of the project is to do just enough work to make a good estimate of the cost of the network without spending a lot of money doing any detailed field engineering. Unless there is something very different about your community, this high level of engineering is sufficient and we have made hundreds of these kinds of estimates. Once it is time to build fiber the construction engineers will look at every foot of the network as part of the design. But it would be wasteful to do any more work than necessary at the early stages, because any preliminary engineering would have to be redone again later as part of the final build-out. In this case we are going to make three separate cost estimates for each of the three scenarios.

We will talk to construction companies that have worked recently in the area to get the most recent costs for building fiber locally. We will also look at the other assets needed to

build a network. This would include such things as the electronics needed to light the network, the drops and electronics needed to serve customers, and the electronics needed to provide the triple play service. We also look at the cost of ancillary equipment including vehicles, computers, furniture, software, etc.

The RFP asks that we look at backhaul - the availability of existing fiber leaving the community that is used to connect to the Internet backbone. We will look at all of your options tell you which ones might be the most promising. At the feasibility study stage we probably cannot get firm price quotes for backhaul – the companies that provide it normally don't do quotes unless a potential sales can happen quickly. We will also look at redundancy to see if there is a reasonable way to connect to more than one backhaul route so that the community doesn't lose connectivity with a single fiber cut.

The RFP also asks us to take a look at the services that can be offered. We are very familiar with a number of different options that can be used to deliver each of the trip play products and we will describe those to you and consider different options for outsourcing services rather than providing a facility-based solution.

In your case I would expect that we will provide several different options for you. We can't know specifically until we get started exactly what those options might be. But they might include options like: 1) building the new network in the same technology as the original network, 2) building the network in a newer technology along with a plan to integrate the two technologies, 3) offering all services locally, and 4) outsourcing the triple play products as practically possible. We will work with you to define these options before we get started.

We will provide a cost estimate for each option that we consider and will describe the assumptions we made in developing each option. While these estimates are somewhat high-level, we have always found that we can probably get within 10% of the final cost of building each option.

We always build in a construction contingency and we vary this between 10% and 15% percent of the project depending upon how good we feel about all of the assumptions used in the study. I can't think of any time that we have had a project come in with higher construction costs than what we had projected.

We also do something in our business plans (described below) that many other consultants don't do. We know that assets have to be replaced. For example, vehicles rarely last more than five years. The core electronics are going to be obsolete within 7-10 years. The fiber is likely to last until all of us are dead, but there will still have to be repairs made every year. We make sure that we build replacement costs into the business plan so that we can always make sure that you will have sufficient cash in future years to cover these routine and predictable events.

As requested, we will also develop a plan for a phased-in approach to building a new network. We will discuss this with the city first to make sure that we understand the realistic

constraints that might make you want to consider a phased-in approach so that any assumptions we make will be reasonable and realistic to meet your goals.

The deliverable for preliminary engineering is to produce a detailed cost estimate for each study scenarios. The specific deliverables include:

- A discussion with the city to define the specific options to be studied.
- We will then propose a network design that we think best meets each of the options. We will describe all of the key assumptions used in each network design.
- We will develop a cost estimate of each option. The cost to build fiber will be based upon recent actual construction costs from other projects in the area. We will describe our assumptions on electronics costs. Our estimate we will include a construction contingency.
- We will look at the availability of existing fiber leaving the city that could be used to connect to the Internet.
- We will look at the products that can be delivered with each option and describe alternative you might have for this.
- We will work with the city to develop a phased-in approach to building the network.
- All of the above items will be presented in the form of a written report that will discuss our research, our findings and our rationale for making the choices we made.

## **Business Model Alternatives**

*The consultant shall research and present common business model alternatives for the operation of an IMU-owned FTTP network.*

- *Consultant shall research and present alternative business models for consideration by Indianola. Those alternatives, at a minimum, should include:*
  - *IMU-owned and partnerships with public and/or private entities, including other utilities and businesses, and including delivery options for all services offered by IMU.*
  - *Fiber lease opportunities.*
- *Consultant shall research and present services that can be delivered to Indianola residents and businesses over the envisioned network, including but not limited to Voice over Internet Protocol (VoIP), video, data, security, education and potential bundled service options.*
- *Consultant shall research and present information on the future use of fiber for demand management, use by IMU for outage management, voltage reduction, voltage monitoring and smart grid purposes.*
- *Consultant shall research and present analysis on the need for additional systems necessary to handle billing and customer service needs and estimates of additional staffing and or equipment that will be necessary to implement these services, including but not limited to technicians, billing, customer services, trucks, buildings, tools, etc.*
- *Consultant shall review operational cost drivers and provide information*

*regarding the implications of those items on the business model.*

### **Best Business Model**

Since CCG Consulting has over 800 clients, including over 100 municipalities we think we have seen about every variation of business models that exist in the country. Because of this we are familiar with what has worked and not worked well for various cities using different business models. So we are well prepared to talk in detail about what it takes to be successful with any given business plan idea.

And so we can discuss the pros and cons of any business model including discussing various nuances that other cities are either doing or have thought about doing. We are completely flexible in the business plan options you want to have studied. One of the first things we would do if hired is to talk the various business models over with you to better define what you have in mind. We might also propose other ideas that you might not have considered.

One thing that we have learned is that a solution that might be right in one market might not work in another. Because of this we think that it is important to match up the pros and cons from this analysis with the financial business model work that is discussed in the next part of this proposal. In my mind, the basic expectation of any business model is that it ought to be able to pay for itself. There are a handful of cities that have purposefully created a subsidy situation, and these are generally places that have some external source of revenue that can help to pay for broadband. But the vast majority of cities want a plan that is self-sustaining and that is not going to require taxpayer subsidy. And so for each idea that we explore in this section we also would prepare a financial business plan analysis. This is the only way we know of to see if a given idea will work in your city with your specific circumstances.

We've seen a few other consultants that try to peddle one or two different business plan ideas to their clients. We are just the opposite. We want you to succeed and that means finding a plan that can pay for itself. And so along with a discussion of the pros and cons of a given business model will be some financial analysis to see how it works in Indianola.

### **Potential Products and Services**

Again, since we work for so many different clients, both municipal and commercial, we get a really good look at how companies are introducing new products into the market. For instance we already have clients that are selling things like advanced security, energy management, home automation and a long list of other products. We can describe what it takes to be successful in each of these product lines and the more nitty-gritty details of how to sell and price various products.

CCG also keeps an eye into the future. I would refer you to the daily CCG blog, Pots and Pans by CCG at <http://potsandpansbyccg.com/>. In this blog I look at a lot of different industry issues, but I also spend a lot of time during the year looking at future products and

I keep my on things like the Internet of Things or skinny bundles for cable TV and a host of other products that my clients find of interest. Almost all of my clients are small carriers like Indianola and they often don't have the time to keep up with what is going on in the many parts of our industry.

### **Benefits to the Utility**

A significant number of our municipal clients also operate municipal electric companies and we can address the ways that they have leveraged a fiber network to make their electric utility better. We can talk about how they use bandwidth from everything from SCADA through smart grid. Our proposal is to interview the utility to find out how you do things today and then describe the sorts of things that you might want to consider in the future when there is fiber throughout the city.

One of the most important aspects of providing services to the electric utility is to ask how much you might reasonably charge the utility for use of the fiber network. The utility can be a significant customer of the fiber network and can help to make it a financial success, but most cities want to be careful not to set up a subsidy situation where the electric utility carries the fiber network beyond what is normally expected and reasonable. So we will discuss how other utilities charge for the kinds of functions that the electric utility will likely use on the fiber network.

### **Software Platform Requirements**

Again, since we have so many clients we see the full range of software solutions that range from companies that have a platform that provides just the bare rudimentary needs through multi-million dollar platforms that handle almost all of the software functions for their business.

The main thing that affects the cost and complexity of software is the number and scope of the functions you want to perform with it. For instance, the right solution might be very different for you if you wanted to consider one platform that would handle both telecom and your other utilities versus a platform just for telecom. So one of our first steps will be to talk to about what you use software for today and where you might want to go with the existing functions in the city.

The right solution for you is going to be somewhere along that spectrum, and once we come to understand the most likely business plans for you we will describe the specific software products in the market that are probably the best fit for what you want to accomplish.

This is one of those areas that will distinguish CCG Consulting from others who might respond to the RFP. Many of the companies that respond to these RFPs are engineering companies and they can do a great job of figuring out the cost of a new network. But CCG has a lot of real-life operational experience and we assist our clients every day in finding solutions for their existing telecom businesses. That practical experience gives us a head

up over an engineering firm in areas like software, regulatory compliance, business structure and all of those areas that have to do with operating the business after the network is built.

### **Operational Cost Drivers**

This is something that we routinely do as part of building the financial business models that are discussed below. As part of creating those models we always discuss the most important cost drivers. And we routinely undertake sensitivity analysis so that we can understand the cost drivers that most important to your specific business plans.

The specific deliverables for this portion of the project includes:

- A written exploration of the pros and cons of various possible business models. We will explore the ones you have listed in the RFP, but we will suggest others that we think might work for you. Each of these models will be further explored as part of the financial business plan models described in the next portion of the RFP.
- We will provide a written list describing the various broadband products we see other providers selling today as well as a discussion of the most likely products to hit the market in the next decade.
- We will look at the needs of the electric utility and describe solutions that you might want to consider to take advantage of the fiber network. We will also discuss what you might reasonably charge the utility for using the network for these kinds of functions and talk about the issue of cross-subsidies between different parts of the city.
- Once we understand the best options of a business model for the city we will look at the kind of software functions you will need to best run the business. While we are unlikely to recommend a specific software vendor, we will provide some guidance on the reasonable amount you ought to spend on software to perform the functions you need to do.
- While there was an item in this section for operational cost drivers, we will deliver this product and include the price for it in the financial business models discussed below.

### **Financial Model, Financing Alternatives and Regulatory Assessment**

- *The consultant shall provide guidance on common financing alternatives likely to be available to IMU.*
- *Based upon a reasonable set of assumptions to be determined by the Consultant, the Consultant will prepare and present forecasted financial results for the envisioned network operations, including multi-year financial projections, including revenues, operational and maintenance costs, capital costs, etc.*
- *Consultant shall provide an overview of regulatory matters that will be relevant to the operation of the envisioned network. In addition, an overview of regulatory trends and current regulatory issues should be provided.*

## **Financing Alternatives**

CCG has a lot of experience in helping clients obtain financing. We have helped numerous municipalities through the bond process to fund fiber projects. We have obtained numerous loans and loan guarantees from the federal government and from commercial banks. We've helped a number of projects find grant money to pay for portions of fiber projects. It is getting harder and harder to fund projects from just one revenue source, and so we will also compile a description of all of the funding sources we have seen other entities use to help pay for fiber projects.

In your case any discussions of funding must also consider how your commercial partners are going to find the money they need to partner with you. As we prepare the financial business models discussed below we will not only quantify the amount of money that will have to be financed by the city, but will also quantify how much will be required by any commercial partners. We have deep experience in the issues that small commercial telecom providers face, and as we get to know your specific business model better we will be able to discuss the business plan ideas from their perspective as well as for your perspective.

## **Financial Forecasts**

CCG has prepared hundreds of financial business plans for our clients. We have studied and helped implement almost every conceivable type of competitive communications network and venture. Through years of this experience we have refined our business plan models such that they are thorough, focused and grounded in experience. Our business plans are not pie-in-the-sky since we have extensive experience of how companies function after they build the network.

We have an extra step to take with your plans in that we need to build any future networks we study on top of the existing fiber business today. That is something that we routinely do because a lot of the business plans that we prepare are for existing clients that already operate a telecom business. We generally give clients like you two choices – we can create an *incremental* financial analysis, meaning we look at only the incremental new costs incurred by adding the new part of the business, or we can create an *integrated* financial look that layers the new business on top of what is already there. Most of our clients opt for the integrated model since it tells them how the entire business will operate after the new changes. The incremental analysis can be misleading if not used properly because it only includes the new out-of-pocket costs in the analysis. For example, if there are existing employees that work for the fiber network they would not be included in the incremental look even though they would contribute significantly to the new business. This can make the incremental results look better than they actually are.

We will generate a separate financial business plan for each scenario. Each financial business plan will include in-depth detail relative to the organization, operating costs, overheads, equipment and materials required to operate the proposed business. This is a normal product of our business plan models due to the way we develop our plans. We build

our business plans from the ‘bottom up’ and we can make detailed projections of the required staffing, capital and equipment needed to meet the plan objectives.

The RFP wants us to look at public / private partnerships. We must caution that there is no ‘standard’ model for how to build a public private partnership. We are very familiar with almost every network that operates in this manner, and each of them has come up with a different solution on how to make it work. There are as many ways to do a public private partnership as there are public companies and no two that exist are the same. So we would propose to discuss this with you first so that we can create scenario that you think are reasonable and realistic.

CCG has helped to create a number of public private partnerships and also numerous partnerships between commercial operators, so we have a lot of ideas of ways that this can be made to work for you. We can show you realistic models that other have implemented rather than some theoretical model based upon some consultant’s idea of how it ought to work.

When we used the phrase ‘bottom up’ earlier, it meant that we show you all of the details. Take the issue of proper staffing. We will not only suggest the right number of employees needed to operate the network, but we are going to suggest specific titles and salaries that we think are appropriate for your part of the country. A lot of other consultants make very broad high level assumptions and you have no way to understand what is in their numbers. For example, we have seen business plans that estimate revenues by using a simple ARPU, or average revenue per user. The trouble with this kind of analysis is that you have no idea if that number can actually be achieved. Instead we show you all of the revenue in detail. This way we can understand that the revenues in the model are based upon the prices that we are proposing that you charge.

The primary approach we take in looking at a business plan is to determine the market penetration rate needed for success. We call this the breakeven point. If you were the retail producer this means we would determine the number of customers needed for the business plan to be a success. If you are in a wholesale model with a commercial partner we would determine how many customers they need to get for this to work for you. In both cases we define success as the ability to generate enough cash to cover all of the costs of the business including operating costs, financing costs and bond payments, and ongoing capital. We define a successful municipal business to be one that can cover all of their costs and not require an external subsidy.

We normally build our models to coincide with the expected length of the debt just to be sure that there are not underlying assumptions that eventually mean trouble. The business plan will be sufficient to seek financing of a fiber project. It will also give you the facts needed to look for a commercial partner. Our models are “banker ready” and many bankers have remarked that ours is the best telecom business plan they have ever seen.

All of CCG’s business plans provide monthly level of detail for the first two-years of operation. Subsequent years are provided on an annual basis. Our models are so detailed

and easy to use that many of our clients often utilize our models as budgetary and ongoing management control tools. Because our models are detailed and accurate they can be used with little modification when it comes time to raise money.

We also explore the impact on the business models for all the major cost drivers. We call this sensitivity analysis and we will use it to quantify the impact on changing the major cost drivers. As an example, if one of the cost drivers is interest expense we would show the dollar impact of changing the interest rate.

We will provide all of the spreadsheets of our models to you as part of the work product. We know of consultants who don't do this, in which case you are then beholden to them after the study process if you want to consider any other options. We assume that our models are part of the work product that you have paid for.

### **Regulatory Overview**

CCG has one of the most experienced team of regulatory staff in the industry. Many of our clients hire us to provide turn-key regulatory services and we prepare and file all regulatory compliance documents for them. Because of this experience we are very knowledgeable about all of the regulatory requirements that might affect you.

Even should you only create a network that provides wholesale connections to other carriers there are still a few regulatory requirements that you will need to meet. Once we understand the most likely business models that you are likely to pursue we will describe the regulatory requirements that applies to each potential option.

Our proposed deliverables for this portion of the project:

- We will prepare a written report that describes the common financing alternatives that you are likely going to need to finance the specific business plans that the study concludes are likely. These financing recommendations won't just look at the city but will also consider any commercial partners you might have and will discuss public private partnership financing.
- We will prepare several financial business plan models to match the business models determined in an earlier portion of the RFP response. These models we will include:
  - We will include the results of the pre-engineering and the product and price research conducted as part of the study.
  - We will prepare a financial model for each of the scenarios the city wants as well as any others that we think are worth consideration.
  - For each scenario we will calculate the minimum market penetration rate needed to make the model a success.
  - We will also undertake sensitivity analysis of the most important cost drivers of each model.
  - We will provide a list of the detailed assumptions of operating costs, overheads, staffing and other costs of operating a broadband network. The model will cover the period of anticipated financing. The model will show monthly detail for the

first two years with annual data after that. The model will include an estimated cost of debt;

- The models include standard financial statements including an income statement, a balance sheet and a statement of cash flow.
- We will provide a written report of the regulatory requirements that are required for the various business plans we consider.

## **Overall Report**

Each of the four above sections will have a written report component that describes what we did and found during each of the four sections of the project. We propose preparing an overall written report that summarizes everything we did and tying all of the above into a comprehensive report.

We will then describe the outputs we produce. We will describe the results of our engineering analysis. We will also analyze and describe the results of the financial business plans. We will make sure that the report is jargon-free so that the report can be understood by non-technical people.

Finally, we will make specific recommendations. We will tell you what we found and how you might best use it. We will tell you what options we think are realistic for moving forward and we will outline the next steps you ought to take after getting our study.

## **Presentations**

We are proposing the following meetings as part of this proposal:

- An initial trip by a CCG engineer to gather the data needed to prepare the engineering cost estimates and to understand the existing network.
- An initial visit by Doug Dawson at CCG to understand the existing broadband business and to discuss in more detail the various options you want us to study.
- When the study is completed we propose a visit to present the results. We are flexible and we can meet with whoever makes sense for you. We often meet with multiple groups on this final visit, such as with city councils, utility and city staff and even sometimes with the public.

## **What We Will Need from the Utility**

Several of these tasks require assistance or feedback from the utility. That list is as follows:

- We want you to help us to collect samples of actual customer bills
- We are going to want to talk to current service providers in the area, particularly any who already use your network or who have considered using it. We would like introductions to those providers.
- We would like your feedback on the questions to include in the survey. We will draft the initial set of questions but would like your help to make sure that we are asking what you are hoping to learn.

- If you choose the option where CCG does the surveys by telephone we will need to get a list of cellphone numbers for as many of your utility customers that you might have as well as a copy of the white pages listings for the city.
- If you choose the door-to-door option for the city we will need your help in either finding volunteers to give the surveys or helping us find a few local people that we would pay to administer the surveys.
- We will want to see as much detail as you have on the current network.
- We will want to see financial and customer data on the current fiber business.
- Our engineer will have a fairly detailed data request for the utility that is going to ask about things like the number of street miles, the number of housing units, the number of water meters and other facts about the city. While we will also try to verify these from external sources we always want to double check this against the utility's numbers.
- We will want to have a detailed discussion up front talking about your expectations for the various business models. You have included two options in the RFP and we will want to make sure that we have the same understanding of them that you do. We will also likely suggest other alternatives that you might want to consider.
- We will also want to have a discussion about how you would envision integrating a larger fiber business into the utility. This will help us to estimate the number of new positions that will be required to operate the various business plans.

## **Proposed Pricing**

Following is a list of our proposed prices for the tasks proposed above. Unless noted below, each quoted fee is a 'do-not-exceed- fee and is the most that we might bill you for any task. However, should we require less effort than we have estimated we would bill less than these estimated amounts. We also want you to know that we do not feel constrained by these fees and that we will expend whatever time is needed to complete the project to your satisfaction. You will not get a degraded product due to us exceeding our estimated time estimates. We do want to caution, however, that we very regularly put in more hours than we have budgeted and so we generally do not come in under budget for more than a few items on our proposed list. But it is fairly normal for us to not bill the entire estimated amount.

We bill on a monthly basis as work is performed. We do not require a retainer. We bill travel expenses at cost, without mark-up. We try our best to travel responsibly.

### **Demographic Review**

An inventory of current products and prices in the market.

**\$ 3,500**

### **Survey (3 Options)**

For each items CCG will assist in developing the right survey questions, will determine the number of surveys required, will summarize the results and prepare a written report explaining the results. They three options differ by the manner in which the survey is given.

#### **Telephone Survey done by CCG**

CCG staff will administer the survey by telephone assuming that the city can provide a calling list that includes a list of cellphone numbers.

**\$ 7,200**

#### **Door-to-door Survey done by Volunteers**

The city will provide volunteers who will give the survey. CCG will come to the city and train the volunteers in proper surveying techniques.

**\$ 3,000**

#### **Door-to-door Survey done by Paid Temporary Staff**

CCG will hire local temporary staff and we will train them to do the surveys. We have never had anybody take this option so this is the one proposed price that could be slightly higher than proposed. But we think this is adequate.

**\$ 7,500**

### **Review IMU Assets**

Research the prices charged for broadband and related services in the market.

**\$ 2,000**

### **Network Design**

Prepare several alternate network designs that also include a plan for integrating with the existing network including estimates of network costs.

**\$ 9,000**

### **Business Model Alternatives**

Look at the pros and cons of several business models.

**\$ 2,500**

**Products and Services**

Define products that can be delivered over the network.

**\$ 3,000****Use of Fiber for the Utility**

Discuss how the proposed network can integrate into the Utility

**\$ 2,000****Software and Backoffice**

Recommend solutions for backoffice and software that fit the business models.

**\$ 3,000****Operational Cost Drivers**

Evaluate the major operational cost drivers. This is included in the price for the Financial forecasts.

**\$ 0****Financing Alternatives**

Describe ways to finance the various alternatives.

**\$ 2,500****Financial Forecasts**

Create financial forecasts that look at the best alternatives for moving forward.

**\$ 10,000**

The analysis will also look at calculating breakeven penetration rates as well as doing sensitivity analysis to understand the impact of changing the most important cost drivers.

**Regulatory Overview**

Define the regulations that would apply to each of the likely business models.

**\$ 2,500****Overall Written Report**

Provide a comprehensive written report that describes all of the work done, the results obtained and making specific recommendations.

**\$ 3,000****Final Results Presentations**

Present the final results in whatever setting is desired by the city

**\$ 2,000****Travel Expenses.** This is an estimate of travel expenses for the project.**\$ 4,500****Total Price****\$50,000- \$54,500**

We note that we are open to the idea of working with the utility if this price does not fit your budget. We first note that these are ‘do-not-exceed’ prices and that we would normally bill less than these amounts. Further, we often can discuss the defined deliverables, and in doing so we often find out that we have over-interpreted the RFP requirements. Because we have done so many studies we also can suggest to you those steps that might be deferred until later until you know the engineering and financial results of the study.

## **BIDDER QUALIFICATIONS**

*Bidders should provide the following items as part of their proposal for consideration:*

- *Description of experience in compiling municipal broadband feasibility studies*
- *List of how many full time, part time, and contractor staff in your organization*
- *Examples of 3 or more completed municipal broadband studies*
- *Testimonials from past clients*
- *Anticipated resources you will assign to this project (total number, role, title, experience)*
- *A full testing plan*
- *Timeframe for completion of the project*
- *Project management methodology*

### **CCG's Experience**

We have assisted numerous other communities with similar studies and we can bring this experience to help you find the right solution. CCG is the largest telecom consultant in the country in terms of clients and serves over 800 broadband providers. Among those clients are about 100 municipal clients, but we also serve a lot of commercial broadband providers. Our work in the commercial sector has taught us to have a very strong focus on profitability and efficiency which we think is essential for municipal projects.

CCG is a full-service telecom consulting firms, meaning that we help with a very broad array of services that are needed by broadband providers. CCG has one of the broadest technical knowledge bases in the industry because we work with almost every kind of network possible including fiber, copper, HFC/coaxial, and a wide variety of wireless technologies. We work with clients that serve farms and very rural areas and other clients who work in NFL cities. This wide range of client work means that we have to stay current and on the cutting edge of technology to anticipate the needs of tomorrow.

We also work in the trenches with clients in terms of implementing broadband businesses. We are experts in the specific aspects of providing the triple play services and we provide a wide array of services involved with entering those or other new business lines like security, energy management, and soon, the Internet of Things.

CCG has a lot of experience working with local governments. CCG's first client, dating back to April 1997, was the Electric Power Board of Chattanooga, TN. CCG has worked with numerous local governments since then on projects similar to this one. This is not a total list of municipal clients, but some of the major ones that have (or considered) broadband networks include: Idaho Falls, ID; Gulfport, MS; Monticello, MN; Sibley County, MN; Bristol, VA; Lafayette, LA; Martinsville, VA; Anoka County, MN; Bowie, MD; Braintree, MA; Bluefield, WV; Auburn, IN; Urbana and Champaign, IL; Prince William County, VA; Woodbury, MN; North Kansas City, MO; Independence, OR; Hampton, VA; Price George County, VA; Louisa County, VA; Mecklenburg County, NC; Charles County, MD; Seattle, WA; Provo, UT; Kutztown, PA; North St. Paul, MN; Austin,

MN; Northfield, MN; Cook County, MN; Lakeville, MN; Tacoma, WA; Chelan County, WA; Salisbury, NC; Mille Lacs County, MN; Stanly County, NC; Palm Beach County, FL; Gillette, WY; Ruston, LA; Mille Lacs County, MN; a consortium of towns in Vermont; and Alameda, CA.

## **CCG's Background and Experience**

CCG Consulting, LLC is owned by Doug Dawson. He is the founder and President and started the firm in 1997. CCG is a Delaware corporation. The company was founded as a C corporation in 1997 and was subsequently reorganized to an LLC. Our website is <http://www.ccgcomm.com>.

Following is a brief summary of CCG's key accomplishments and successes.

- CCG has worked with over 800 clients on all aspects of communications. We have worked in every state in the country. Our clients include cities and municipalities, independent telephone companies, CLECs, ISPs and wireless carriers. We have assisted many of the largest and most successful municipal clients get into the telecom business including places like Lafayette, LA, Chattanooga, TN and Bristol, VA. We have over 100 municipal clients.
- CCG has completed over 200 infrastructure analyses, business plans, and feasibility studies for clients throughout the United States.
- CCG has a high percentage of retained client business, even though our work is very project related – that is, we complete specific projects for clients with no guarantee of an ongoing relationship. For example, over 80% of our clients in 2013 were also clients in 2014. This reflects the fact that our clients continue to come back to us for operational support as they implement our recommendations.

CCG specializes in the following areas. CCG is a full-service telecom consulting firm and we help clients with almost every aspect of providing any or all of the triple play services. We specialize in helping businesses to get started, to open new markets and to stay profitable once in the business. Some of our areas of expertise include:

**Planning Services.** Strategic Planning, Policy Development, Business Plan and Feasibility Studies, Assistance with Financing

**Regulatory Services.** Interconnection Agreements, Certification Assistance, Regulatory Compliance, Tariff Creation

**Marketing Services,** New Product Development and Implementation, Market Research, Marketing Plan Development, Development of Pricing, Packaging and Promotional Programs

**Implementation Services.** Timelines and Gantt Charts, Customer Service and Billing Platforms, Hiring and Training, Setting Sales Quotas and Sales Training, Number Portability, Finding Vendors

**Engineering Services.** Facilities-based Network Design and Optimization, Design Central Office Facilities, Network Interconnections, Sizing, Ordering and Implementing the Network, Network Migration Strategies, Detailed Customized RFPs, Vendor Selection

**Contract Negotiations.** Contract Mediation and Dispute Resolution, Local Exchange, Utility and Municipal Agreements, Right of Way and Pole Attachment Fees

**Partnership Opportunities.** Financing Solutions, Strategic Alliances, Third Party Relationships, Outsourcing of Non-strategic Competencies

Doug Dawson, the President of CCG writes a daily telecom blog for small carriers at <http://potsandpansbyccg.com>. We hope you will look at the blog to see a sample of the wide range of topics we cover. We look not only at the current market, but we are focused on where the industry is headed in the next five to ten years. We don't think there are many firms that spend us much effort as we do in looking forward.

Doug is also on the Board of Directors and is an active participant in Yavapai Regional Capital, an infrastructure merchant bank that helps to fund public private partnerships. YRC's web site is: <http://www.yavapairegionalcapital.com/>.

## **Our Staff**

Most of the CCG staff has been together as a team since 1997. Our team has a huge amount of experience at working as a team and we are efficient. We also have a tremendous amount of industry experience and we do not believe there is a more experienced core team in the country. Our team has worked with companies of all sizes and with many different technologies and there is very little that we have not worked with in the marketplace.

The RFP asks us how many employees we have and the answer is zero. Two years ago we restructured our company to become an association of independently employed consultants. We still have the same core of people who used to be employees. This move was sparked by a request from employees to be more flexible and the new structure let's our folks work part-time, full-time, or a few even more than full-time and get compensated appropriately.

With that said, we have a core of six consultants who have been with the company since the 1990s plus we draw in expertise from a wide range of part-time people as needed for specific projects. Almost everybody who works for us has had operational experience in operating broadband businesses in the past.

However, as will be discussed below, for your project virtually all of the work would be done by two senior CCG staffers.

## **Examples of Broadband Studies**

We have included electronic versions of two broadband studies we have done for municipalities that I think are relevant to Indianola. I feel constrained by only being able to send you reports that have been released publicly. We have done four other reports in 2015 that have not been released (many cities never release these reports to the public for various reasons – mostly to keep them away from the incumbent providers or potential competitors).

We also have done three reports from this year that are still in the draft stage but which will probably become public eventually, but which have not yet been released – for Gulfport, MS, Idaho Falls, ID and Nobles County, MN.

Additionally we often do similar reports for operating fiber businesses that either want to improve their processes or which are thinking of expanding somehow. Almost none of these reports are ever released. However, there was one such analysis that was released to the public this year for the City of Tacoma, WA. I have included this as two documents - an engineering report and a financial analysis. I think this is relevant to show that CCG stays engaged with our clients long after they first build networks and we continue to assist them as they operate the business.

I chose these three reports for a few reasons. First is to show the wide range of the technologies and sizes of our client base. The Mille Lacs County study was looking to find a solution for very rural households. The Austin, Minnesota report is for a community similar in size to you, but which also includes a rural area surrounding the city. And Tacoma is one of the larger municipal systems that operates a traditional cable TV network and is looking at ideas for changing their business model. They also had us explore the idea of upgrading their coaxial cable network to be able to offer gigabit service.

We think the wide range of our clients makes us better consultants. We get to dive deeply into small, medium and large communities which helps us understand the impact of economy of scale to understand why a business plan might work great in one community but not in another. And we also work with every conceivable telecom technology from copper, coaxial cable networks, wireless and many versions of fiber. We also get to work with cities that have tackled every conceivable business model – from a standalone triple-play provider to Tacoma which operates a hybrid open access network where they offer retail cable and ISPs offer retail voice and data. The only business model I know of for which we don't have a client is one that was recently launched in Leverett, MA where the city paid for the fiber network by increasing everybody's property taxes.

One thing all of these various projects has shown us is that no two cities are the same and so our recommendations vary widely. We do not have a stock answer that says that you should always build fiber if we don't think the resulting business can pay for itself.

We have included electronic copies of the following three reports:

Mille Lacs County, MN. This is a report just finished a few months ago. The report looked at bringing broadband to an entire rural county. However, the cities in the county largely already have decent broadband and they also are served by smaller cable companies that seem dedicated to delivering fast and affordable data speeds. This meant trying to find a solution that would fit the rest of the rural parts of the county. After considering all of the facts our recommendation was to start a cooperative to build the rural areas with fixed wireless, and to use the profits from that effort to expand fiber over time. This is the first time we have ever recommended a fixed wireless solution, but this looks to be the only reasonable and affordable path forward for this community.

Austin, Minnesota. This report was for a community not dissimilar than Indianola in size. But the study was complicated by the fact that the community doesn't just want a solution for the city but wants to cover the entire school district that stretches far into the surrounding rural areas. The community also happens to be home to Hormel, the large food company and there is some thought that they might contribute some grant towards funding a project. The city is also home to a tiny fiber overbuilder which also probably ought to be part of a solution. The city was very interested in 'community ownership' of a network (which is not the same as city ownership of the network). The final recommendation offered several solutions that might work for the city. We offered the city a wide range of possible scenarios that varied by how the business might be funded and operated.

Tacoma, WA. There are two documents included. The first is an engineering report that looks at the possibilities and cost for upgrading the city's existing network to offer gigabit data speeds. The second report issued at the same time looked at an unsolicited offer the city had gotten to lease their entire network to an existing broadband provider. You will notice that this report is not as comprehensive as the other two reports included. This is probably the sixth or seventh report I have done for the city over the last four years and so it goes straight to the subject being studied without repeating all of the background research which was done previously. The city is still considering all of its options that vary between upgrading the network speeds and offering the triple play through leasing the whole network.

## **Testimonials**

Following are a few references from municipal clients for whom we have done similar work as requested by this RFP. Several of the municipalities we have listed have gone on to launch a fiber business and can tell you how CCG also was able to help them after the study as they become operational. I can provide a much more extensive list of references if you want more.

**RS Fiber Cooperative** – Sibley and Renville Counties in Minnesota hired CCG to do a feasibility study that is almost identical to the scope of this RFP. We are proud of this project, which is just now under construction. It took five years of effort to finally find funding and a structure that would work to build what is largely fiber-to-the-farm. This started as a municipal venture, but when bond financing become difficult the business

model got structured as a cooperative with the local governments contributing a significant portion of the funding.

Contact there is Mark Erickson, EDA Director, City of Winthrop, MN. 507-240-1130, [memoe1954@gmail.com](mailto:memoe1954@gmail.com)

**Lafayette Utility Services** – Lafayette Utility Services (LUS) is the electric and water company operated by the City of Lafayette, Louisiana. They began selling wholesale access to fiber and still operate a successful wholesale network. They have since built a FTTP network to pass each home and business in the City and they have become quite successful financially. We still consult with them almost monthly on a wide range of different areas.

Terry Huval, Director, Lafayette Utility Services, Lafayette, LA: 337-291-5804, [thuval@lus.org](mailto:thuval@lus.org)

**Bristol Virginia Utilities (BVU)** – BVU, the electric arm of the City of Bristol Virginia has built a fiber-to-the-home network to reach all residents and businesses in Bristol as well as some surrounding communities in seven counties. Bristol's offers its residents and businesses voice, video, and high-speed Internet access. The project started in 2000 and we still provide consulting services almost every month of various kinds.

Stacey Pomrenke, Executive VP and CFO Bristol Virginia Utility Services, Bristol, VA, 276-645-8707. [SPomrenke@bvua.com](mailto:SPomrenke@bvua.com)

**Austin Vision 2020, Austin, MN** – This was a feasibility study looking at broadband for the City of Austin and the surrounding school district that considered a wide range of issues like those covered by the RFP. The study also asked for an engineering analysis and business plans.

The City is still considering their options and has a fiber network identified in their ongoing economic development plan.

Contact there is Chris Holt, President/CEO of the Cooperative Response Center, Inc. (CRC), Austin, MN 55912. 507-437-2002. [chrisholt@crc.coop](mailto:chrisholt@crc.coop)

## **Our Resources for this Project**

At CCG we love doing feasibility studies and this is probably the most fun part of our job. It's always a challenge to find the right solution for a community and even after having done a hundred of these studies we have not yet suggested the same solution twice. There are so many factors that affect the ability to launch a successful fiber network and business that we can't foresee how this will look for you until we've looked at the cost of building fiber in your community as well as understood the financial forecasts.

Almost all of the feasibility work for your project would be done by two of the most senior people at CCG. We will be using additional employees for various clerical and lower level

functions, but the two people who will do most of the work is as follows. There would be no change in staff from the following:

Douglas A. Dawson, President

Doug's primary responsibilities at CCG are helping clients realize their potential through detailed needs assessment and strategic planning. Doug has helped devise strategies enabling clients to survive and thrive during the recent telecommunications industry slowdown. Doug brings a broad background to his work with experience in telephone accounting, engineering, regulatory, and business planning. He is directly in charge of all client consulting at CCG.

Doug's role in the project will be hands-on analysis of the data and formulation of ideas and plans. Doug will be doing the basic research and will create the financial business plans. Doug will author any written reports. Doug will be the one presenting the final results.

Doug has been working in the telecom industry since 1975 at several different operating companies. He has both a consulting and an operational background. Doug has a degree in Accounting from the University of Maryland and a Masters in Mathematics from the University of California at Berkeley.

B. Derrel Duplechin, Vice President of Engineering

Derrel Duplechin's primary responsibilities at CCG Consulting are network design, cost estimation, planning, specification and procurement of equipment, construction management, commissioning, testing, and interconnection of networks. Derrel is a very competent and well-rounded engineer who understands all of the technologies now in deployment in various fiber networks.

Derrel's role in this project will be to estimate the cost of the fiber network needed to achieve the various scenarios you are studying. Our goal at CCG is to be conservative with our estimates so that there will not be cost overruns if you implement the project. To date all of the projects we have estimated have been built for less than we originally estimated.

Mr. Duplechin began his career with the State of Louisiana, Office of Telecommunications Management where he served as a Project Engineer for the design and implementation of State telecommunications projects. In 1992, he joined Hart Engineers in Baton Rouge, LA, where he held various engineering positions. He was responsible for multiple stages of telecommunications network implementation including strategic planning, network design, financing, testing and installation. In April 1999, Mr. Duplechin joined CCG as the Director of Engineering.

Mr. Duplechin received his Bachelor of Science in Electrical Engineering from the University of Southwestern Louisiana. He continues to attend professional courses and

seminars to maintain expertise in the newer technologies, services and service methods associated with a competitive telecommunications environment.

## **Our Testing Plan / Study Methodology / Time Frame for Completion**

Since we have done more than a hundred similar studies we have a very efficient process for getting this done. Assuming that we can obtain the data we need from the city, then the tasks proposed generally take between three and four months from the time that our engineer first visits. In order to meet your suggested date we would hope that we can come to a contractual agreement sooner than February 1. But even if not, we will meet your date.

Our process generally works as follows:

- We generally get through the contract process very quickly and we are amendable to almost any contract the city might propose. Alternatively we can provide a very simple contract to you that provides a list of deliverables that many cities have used.
- The first thing we do is to issue a data request from our engineer which we then follow up quickly with a visit to the city to meet with your staff to understand all of the local issues that might affect a fiber network cost. In your case we will also want to investigate in detail what has already been done with fiber in the past.
- We also proceed immediately to get the survey process started. I would have a call with you to define what you are most hoping to learn from a survey, and then I propose a set of survey questions for the city's consideration. There is generally some back and forth until final questions are ready. In your case, we have proposed three options for giving a survey and you will have to determine which of these will work best for you.
- While our engineer is investigating network costs we investigate the other needed facts. This means looking into current market products and prices. It means talking to your current partner and other key players in the market that you think we ought to talk to. This would include demographic research and gathering all of the facts that will be needed to create financial models.
- This is also generally when the survey is started.
- A few weeks after the engineers visit I would visit you to have a discussion about the pros and cons of the various prospective business models so that I fully understand what the city is willing or not willing to consider. I would also use this trip to understand more about how the existing and the future fiber business would fit into the utility and the city structure so that I can propose solutions that fit the way you do things.
- Next I work with our engineers to develop the various network designs and to determine the cost of different network designs. In your case that would also include determining how to integrate any new network with the network that is already in existence.
- Once the engineering estimates are done and we have gathered all of the other needed facts I begin to build the financial models that match the potential different business plans. We normally build a dozen or more variations of models that look

- at different business models, that calculate breakeven penetration rates and that do a sensitivity analysis on the major cost drivers.
- Once the financial models are done I take a shot at looking for solutions that will work. Sometimes there is a financial model that is so positive that the best solution is obvious. But often that is not the case and so I often take a week or two figuring out what the best answer or answers are for you. I am a big believer in having a solution that offers a reasonable probability that the new fiber network and business can be self-sustaining and can pay for itself. Sometimes there is not an obvious solution, and if that is the case we will tell you. There are consultants who will always tell you to move forward, but we are not afraid to tell you about all of the potential downsides of moving forward as well as the positive sides.
  - Once the best solution comes clear I proceed to write the final report. There will have been portions of the report generated all during this process. For instance we write the engineering part of the report as those results are done. We would write the report on the survey as that is summarized. We write about the market products and prices as we find those, etc. But the final report does more than just report on each of the pieces of the study. Our goal is to tie this into a comprehensive report that will provide you with a concrete set of recommendations on how to move forward. We will make very specific recommendations on what we think your best way forward ought to be. And we will provide specific next steps that we think are the things you should do if you are going to move forward. We hope that our report is more than an accumulation of facts and we want it to be a roadmap to achieve your fiber goals. Many cities have us label these reports as 'Broadband Master Plans' or some similar title. We generally deliver the study first as a draft and we will work with you modify the study as needed to meet any specific political goals you may want to use it for.
  - Finally, we come and present the results to you. We can do this in any way that makes the best sense for you. It's somewhat normal to discuss the results with city or utility staff. It's also somewhat normal to present a summary of the report to elected officials or to a utility board when that is called for. And some cities have us meet with the public if they are using our report to stir up public interest in moving forward.

Again, assuming that we can gather the needed facts in a timely manner (something that we rely on in part from you) then this whole process of going from the contract through delivering the final report can be completed in four months or less. That time line often does not include the final presentation, and the timing for that varies widely among our clients and I have made presentations immediately after delivering a report and I have waited many months until the client was ready for this.

# PROPOSAL

## FTTP FEASIBILITY STUDY

## Indianola Municipal Utilities

Due at 12:00pm CST on December 11, 2015

### Prepared For:

Ms. Chris Longer  
Indianola Municipal Utilities  
P.O. Box 356  
111 South Buxton Street  
Indianola, Iowa 50125

### Prepared By:

Magellan Advisors  
999 18<sup>th</sup> Street Suite 3000 Denver, CO 80202  
O: 888.960.5299:  
F: 888.963.5299  
E: [jhonker@magellan-advisors.com](mailto:jhonker@magellan-advisors.com)

# Letter of Transmittal

December 11, 2015

Ms. Chris Longer  
Indianola Municipal Utilities  
P.O. Box 356  
111 South Buxton Street  
Indianola, Iowa 50125

Dear Ms. Longer:

Magellan Advisors is the leading public sector broadband consulting firm, providing broadband planning and implementation services for local governments and public utilities across the United States. We assist cities, counties and electric utilities in leveraging their strengths to develop broadband networks and smart public policy, enabling their communities to thrive in the digital economy. We have worked with over 50 municipal electric utilities and over 200 local government organizations to develop and implement FTTH networks in these communities.

Magellan is bringing the most experienced team in the industry to carry out the work on the Indianola Municipal Utilities (IMU) FTTP Feasibility Study. Our team has over 100 years of direct experience working inside utility and municipal broadband providers and another 100 years of direct experience developing and implementing strategies for them.

## UNMATCHED EXPERIENCE



### JOHN HONKER

- 20 years in broadband & telecom industry
- Former Director of Internet Services for Columbus Networks, growing business unit from \$0 to \$50 million in 5 years
- Planned and deployed fiber networks in 20 countries
- Consulted with hundreds of local governments on broadband projects



### KYLE HOLLIFIELD

- 25 years in broadband & telecom industry
- Assisted 100+ local governments with broadband needs
- Planned & managed First fiber to the home projects in the US
- Former Chairman of Fiber To The Home Council
- Vice Chairman of Broadband Communities



### BARRY WALTON

- 37 years in engineering & operations management in broadband industry
- Former senior design & engineering at Bell Aliant
- Planned and executed 1 million home fiber rollout
- Co-Founded Bell's business case for FTTH
- Thought leader in fiber-based broadband



### SCOTT MOEHNKE

- 30 years in executive and operations management in utility and broadband industries
- Former COO of Bristol Virginia Utilities, global pioneer in fiber-based broadband
- Managed \$32M fiber deployments under federal BTOP stimulus program

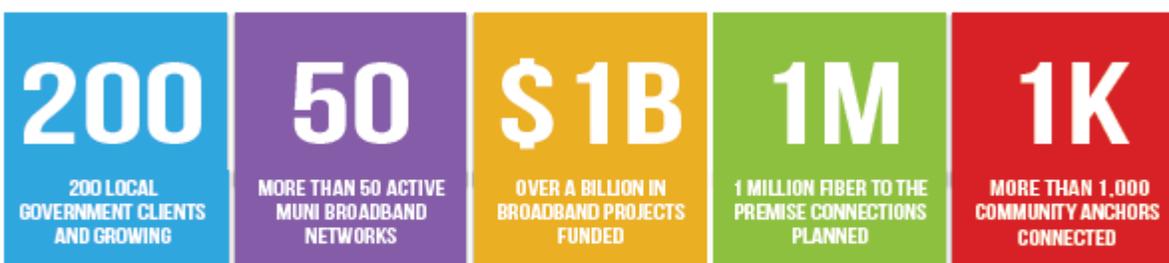


### COURTNEY VIOLETTE

- 16 years in technical and engineering management in broadband industry
- Former CIO for City of Palm Coast and developed the first open-access network in the Southeast
- Certified Fiber To The Home Planner
- Consulted with over 100 local governments on broadband projects

We believe that broadband consultants are only as good as the results they produce in their clients' communities. Through our work, we've helped public utilities transform their communities into competitive places to live, work and play.

## PROVEN PROCESS. PROVEN RESULTS.



## MAGELLAN HELPS MORE COMMUNITIES ACHIEVE THEIR BROADBAND GOALS.

We understand that IMU is at a critical point where you need a clear and detailed understanding of your options to expand broadband in Indianola. At this crossroads, you need to weigh the many cost/benefit scenarios and decide which path forward is best for IMU, organizationally, financially and operationally. Magellan is prepared to help you through this complex process to evaluate the feasible options for expanding IMU's fiber-optic network. First, we will help you understand the true broadband needs of the community through a series of community workshops, surveys and one-on-one meetings. We will document the current environment, providers, services available and future plans.

We will help you evaluate the direct models of providing broadband services versus wholesale models and public-private partnerships. Our extensive organizational and operational modeling will help you understand what it takes to manage a broadband utility. Our Broadband Financial Sustainability Model will help determine financially viable options for IMU and assess key risks to IMU in the various options. This analysis will also incorporate State and Federal regulatory analysis to determine legal operating structures for the utility to ensure that IMU understands the options.

We will guide you through the process of determining which option(s) are most feasible for IMU and provide you the decision support tools so you can decide on the best path forward for IMU and its community. If you have any questions or we can be of assistance in any way, please feel free to contact me with any questions or comments. You can reach me directly at 786.208.8952 or [jhonker@magellan-advisors.com](mailto:jhonker@magellan-advisors.com).

Sincerely,

John Honker  
President & CEO, Magellan Advisors

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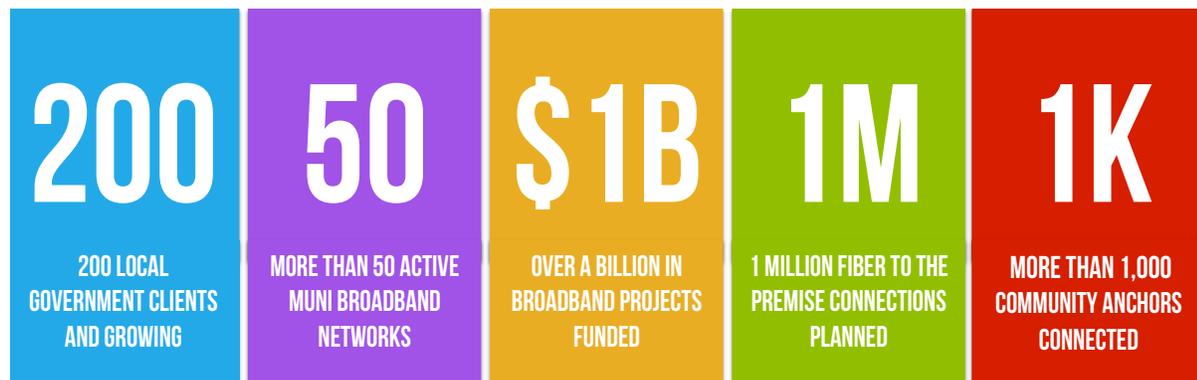
## I. Experience of Firm

### History of Magellan Advisors

Magellan Advisors has been helping local government organizations develop and implement transformative broadband networks for over 12 years. We enjoy an outstanding track record in the industry, shown by our successful broadband network deployments in 25 states across the Country. We have helped more communities plan and deploy broadband networks than any other firm in the US with over 100 municipal fiber and community broadband networks either currently being built or in operation.

We assist public utilities, municipalities, states, and federal agencies in bringing next generation broadband to communities across the country with the goals of promoting economic and community development, improving public safety operations, expanding healthcare services, and supporting educational needs. We utilize a whole-community approach to broadband planning to ensure that these networks provide the greatest benefit to all stakeholders in the community.

## PROVEN PROCESS. PROVEN RESULTS.



## MAGELLAN HELPS MORE COMMUNITIES ACHIEVE THEIR BROADBAND GOALS.

Magellan Advisors' staff provides a unique combination of broadband, local government, finance, engineering and regulatory experience that allows us to give our clients a turnkey solution for their broadband projects. This unique combination enables our clients with a one-stop shop to serve all of their broadband needs. We believe in developing long-term partnerships with our clients to help them through every phase of their broadband initiatives.

## Service Portfolio

Magellan is the only firm that provides the full spectrum of broadband planning, implementation and management services to local government organizations. This gives our clients a single source for planning and managing their broadband initiatives. We help our clients through every step in the process to make municipal broadband projects simple to understand, execute and manage. Our proven process helps local governments become gigabit communities by leveraging their own strengths, in addition to engagement from their stakeholders and key partnerships.

# Make a Gigabit a Reality in Your Community

Magellan enables communities to plan, implement and manage gigabit broadband



**FEASIBILITY STUDIES**



**BROADBAND ENGINEERING**



**BUSINESS MODELS & PARTNERSHIPS**



**FINANCING & GRANTS**



**PROJECT MANAGEMENT**

## Feasibility Studies

Magellan helps public organizations determine reasonable expectations for deploying broadband in their communities. We develop comprehensive feasibility studies that assess the current broadband environment and determine the opportunities that public organizations have to develop broadband programs. Our feasibility studies are real world tested and based on the latest broadband industry trends that provide strategic direction for communities to achieve their broadband goals.

- Community Needs Assessments
- Market Analysis & Current Environment
- Network Analysis & Inventory
- Business Models & Financial Planning
- Design & Engineering
- Opportunity, Risk & Benefit Analysis

## Broadband Engineering

Our broadband design and engineering services provide the latest technical designs for fiber-to-the-premise, backbone, metro and long-haul networks. Our wireless design and engineering services develop effective fixed wireless, microwave and WiFi networks to cover the most challenging terrain. Our services cover all aspects of broadband design and engineering, from outside plant fiber and wireless, to equipment, to services and content, to BSS/OSS and systems integration.

- FTTH, FTTP, Metro & Long-Haul Fiber
- Fixed Wireless, Microwave & WiFi
- GPON, Active Ethernet & WDM
- Routing, Switching & MPLS
- Internet, Voice & Video Integration
- BSS/OSS & Network Management Systems

## Business Models & Partnerships

Magellan is on the forefront of emerging business models and partnership development within the broadband industry. We successfully plan, negotiate and execute partnership agreements between public organizations and private operators, leveraging the strengths of each organization to benefit the community. We have a stellar record of recruiting broadband providers to local communities and helping these organizations make their communities Gigabit Ready.

- Policy-Only Dark Fiber, Open-Access & Retail
- Feasibility Analysis of Business Models
- Public-Private Partnership Development
- Partner Recruitment & RFQs
- Advocacy & Negotiation in Partnerships
- Opportunity, Risk & Benefit Analysis

## Financing & Grants

Magellan provides extensive financial planning services for public organizations looking to invest in broadband. Our extensive financial plans help cities, counties and public utilities understand the opportunities and risks concerning broadband and the most feasible financial strategies to achieve their goals. Our plans are investment ready and are routinely used to support funding with bond underwriters, banks, private equity firms and grant programs. Magellan also maintains a portfolio of financing partners and grant programs that we bring to communities to help them acquire funding.

- Investment-Ready Financial Plans
- Funding Development
- Partner Recruitment
- Broadband Grant Writing & Management
- FCC, E-Rate, CAF & State Programs
- Economic Development Grant Programs

## Project Management

Magellan helps public organizations nationwide implement their broadband strategies. We provide turnkey project management services that enable these organizations to maintain resources that cover every aspect of deploying broadband networks, from fiber and wireless network deployment, to equipment and content integration, to marketing and sales, to operations and management. Magellan provides the only turnkey solution that enables these organizations to deploy their networks in a timely manner and launch their networks with the confidence to achieve the best results in their communities.

- Procurement & Contract Negotiation
- Fiber & Wireless Construction Management
- Network Commissioning, Testing & Certification
- Content Acquisition & Programming Agreements
- Sales, Marketing & Business Development
- Business & Operations Management

## Professional Affiliations

We believe that an emerging ecosystem of communities, broadband providers, manufacturers and professionals is critical to foster broadband innovation that drives our country forward. Our thoughtful leadership and hands-on practical experience in the broadband industry affords us the opportunity to lead that innovation and share our knowledge and experience with other organizations. Our professional affiliations help us to do so.



We are a member of the American Public Power Association (APPA), National Association of Telecommunications Officers and Advisors (NATOA), National Association of Development Organizations, and a Premier Member of the Fiber-To-The-Home Council. Our consultants routinely present on latest topics surrounding broadband, fiber-optic networking, and telecom markets regularly at conferences across the country, including:

- White House Broadband Opportunity Council
- Fiber To The Home Council Annual Conferences
- Broadband Communities National and Regional Conferences
- Schools, Health and Libraries Broadband Coalition (SHLB) Annual Conferences
- Consumer Electronics Shows (CES)
- Harvard Innovation Summits
- National Association of Telecommunications Officers and Advisors Conference

## II. Firm Organization

Magellan staff includes 10 professional that are dedicated Magellan employees. We also maintain numerous relationships with contractors that are included on projects when specialized skills are required, i.e., legal counsel. For this engagement, no contractors will be utilized.

### III. Recent Experience in Municipal Broadband

The projects below demonstrate our extensive experience in assisting local governments with their broadband planning projects over the past several years:

#### Waverly Light & Power, IA - FTTP Feasibility Study

Magellan performed a Fiber to the Premise Feasibility Study for Waverly Light & Power focused on deploying fiber optics to every home, business and community anchor within the City of Waverly and the greater Waverly Light & Power electric service territory. Our consultants developed a conceptual design for the FTTP build out, and performed implementation, operational, and financial analysis for the project. The Waverly City Council and Light & Power board both accepted the FTTP Feasibility Study and commissioned the development of a Waverly Communications Utility Business Plan and a Design/Engineering Study. Waverly's network is currently in construction with the first customers due to come online in 2<sup>nd</sup> quarter 2016.

#### City of Hudson, OH – Broadband Needs Assessment and Business Plan

Magellan was retained by the City of Hudson, OH to design a Broadband Needs Assessment and Broadband Business Plan. Magellan worked with the City of Hudson and local stakeholders to assess the needs of businesses and residents throughout the City. Magellan analyzed the City's current fiber infrastructure and developed a conceptual design for a future City owned broadband utility to serve local businesses, government, schools and residents. Magellan's Broadband Financial Sustainability model (BFS) was used to analyze business plans for the City and give the City high-level financials for a proposed network. Hudson's network was built in 2015 and the first beta customers have been online since September 2015.

#### Riverside Public Utilities; Riverside, CA – Fiber Business Model

Magellan was retained by Riverside Public Utilities (RPU) to conduct a Fiber Business Model. The RPU Fiber Business Model assessed options for expansion of RPU's current Fiber infrastructure throughout the City of Riverside. Magellan performed a thorough analysis of RPU's extensive fiber optic network, along with a thorough needs assessment for the City of Riverside, which analyzed the current level of services throughout the City by incumbent providers, as well as a gap analysis. Magellan's plan analyzed the business models that can be used for future expansion of the RPU network as a tool to spur economic development in the City of Riverside. The Plan also developed long-term municipal strategies to leverage RPU's fiber network to implement public works, public safety, utility and smart city projects to improve municipal operations and reduce cost.

### City of Columbia, MO – Broadband Feasibility Study

Magellan was retained by the City of Columbia, MO to conduct a comprehensive broadband planning and feasibility study. Magellan helped Columbia, Boone County and the University of Missouri determine the overall broadband needs for its community and develop a plan to meet those needs through the City's extensive fiber optic network. Magellan completed a thorough needs assessment that defined the current environment, market, services, needs, both current and future, and gaps in existing services. We developed a comprehensive plan for build-out of the City's network to meet these needs, using strategic business insight and sound financial planning strategies. Taking advantage of the City's current network, our plan identified opportunities to utilize the existing infrastructure to significantly reduce the build-out costs. We developed a plan to attract competitive service providers to the area with the intent of creating more options for local businesses, more competition and lower prices. The build-out entailed bringing fiber-based broadband services to community anchors across the local area, followed by a buildout to local businesses and finally a potential residential Fiber to the Home build.

### City of Baltimore, MD - Fiber Optic Planning Study

Magellan was hired by the City of Baltimore, MD to conduct a comprehensive study on the ways the City could utilize its 3.7 million feet of underground conduit to expand the availability, affordability, and adoption of broadband services in the community. The project entailed a significant outreach process with the Smarter Cities Task Force to identify, measure, and plan for the needs of every class of community anchor in Baltimore. Magellan was tasked with providing an analysis of how the City's infrastructure and public policy tools could be made more effective to serve the needs of its community. Magellan helped Baltimore evaluate the various options, benefits, risks and costs for use of this infrastructure, along with comprehensive financial and business plans that indicated a series of outcomes for the City. This information will be used by the City officials to make decisions on what steps are most appropriate for Baltimore to take to secure its broadband future.

### City of Missoula, MT – Next-Generation Broadband Feasibility Study

Magellan was retained by Missoula County and the City of Missoula to develop a next-generation broadband feasibility plan that would identify the required broadband infrastructure to serve the long-term needs of Missoula's business community, schools, hospitals and other community organizations. Magellan performed a thorough needs assessment across all community stakeholders to determine what services were required, both current and future. Magellan conducted a comprehensive market analysis that identified key issues in Missoula's broadband environment that could be resolved through public organizations implanting smart public policy, public-private partnerships and strategic investments in broadband infrastructure.

## Town of Jupiter, FL – Broadband Master Plan

Magellan assisted Jupiter develop a 40-mile fiber-optic network to interconnect all City and Utility facilities to the network. The network provided an Ethernet and GPON design that would provide fiber-to-the-premise connectivity to businesses throughout Jupiter as well as local and County connections to schools, hospitals and public safety facilities. Magellan implemented the first phase of the project with Jupiter in early 2013 and completed the project on-time and under budget. This included full implementation and integration of fiber-optic components, as well as switching/routing configuration, network integration, management and monitoring. Magellan is currently assisting Jupiter implement phase 2 of the project.

## List of References

### Waverly Light & Power, Iowa, FTTP Feasibility Study

Contact: Mike Litterer  
Title: Assistant General Manager  
Office: 319-352-6251  
Email: [mlitterer@waverlylp.com](mailto:mlitterer@waverlylp.com)  
Web: [www.waverlylp.com](http://www.waverlylp.com)

Magellan performed a Fiber to the Premise Feasibility Study for Waverly Light & Power focused on deploying fiber optics to every home, business and community anchor within the City of Waverly and the greater Waverly Light & Power electric service territory. Our consultants developed a conceptual design for the FTTP build out, and performed implementation, operational, and financial analysis for the project. The Waverly City Council and Light & Power board both accepted the FTTP Feasibility Study and commissioned the development of a Waverly Communications Utility Business Plan and a Design/Engineering Study. Magellan has delivered the WCU Business Plan and Design/Engineering Study and is currently working with Waverly to secure financing to begin build out of the network.

### City of Bartow, Florida, Broadband Fiber-to-the-Home Master Plan

Contact: Frank Canovaca  
Title: Information Technology Manager  
Office: 863-534-0252, Fax: 863-534-0250  
Email: [fcanovaca.cis@cityofbartow.net](mailto:fcanovaca.cis@cityofbartow.net)  
Web: [www.cityofbartow.net](http://www.cityofbartow.net)

For the City of Bartow, Florida Magellan developed a feasibility study and business case for the City to expand the use of its network to serve the business and residential communities. The project

entailed coverage of 90% of homes and businesses in the City. Magellan's thorough needs assessment proved that current providers were not meeting citizens and businesses needs and no new infrastructure investments were being made in the City. As a result, Magellan's analysis concluded that Bartow had the opportunity to expand its network to fill these key gaps. Magellan's engineering design provided an average connection speed of 100Mbps per home and up to 10Gbps to businesses in the area. Magellan documented the utility's current fiber-optic infrastructure and developed an integration strategy to build new fiber-optic infrastructure throughout the City, cost effectively and using a phased approach. Magellan also developed Bartow's Operations Plan for the new network, which detailed the key staffing, support, operations and maintenance services required for the network, including BSS/OSS, network management, provisioning, billing and general management.

### Town of Jupiter, Florida, Broadband Master Plan

Contact: Drew Burgess

Title: Director of Information Technology

Office: 561-746-5134

Email: [burgessd@jupiter.fl.us](mailto:burgessd@jupiter.fl.us)

Web: <http://www.jupiter.fl.us>

Magellan assisted Jupiter develop a 40-mile fiber-optic network to interconnect all City and Utility facilities to the network. The network provided an Ethernet and GPON design that would provide fiber-to-the-premise connectivity to businesses throughout Jupiter as well as local and County connections to schools, hospitals and public safety facilities. Magellan implemented the first phase of the project with Jupiter in early 2013 and completed the project on-time and under budget. This included full implementation and integration of fiber-optic components, as well as switching/routing configuration, network integration, management and monitoring. Magellan is currently assisting Jupiter implement phase 2 of the project.

### Yolo County, California - Broadband Strategic Plan

Contact: Christine Crawford

Title: Executive Director

Email: [Christine.crawford@yolocounty.org](mailto:Christine.crawford@yolocounty.org)

Web: [yolocounty.org](http://yolocounty.org)

Office: 530-666-804

Magellan was retained by Yolo County, CA, and the Cities of Davis, CA, Woodland, CA, West Sacramento, CA and Winters, CA to develop a Long-range Broadband Strategic Plan oriented toward public organizations increasing availability and adoption of next-generation broadband across the California County. This plan included extensive broadband planning, design and deployment strategies and public-private partner development. The Plan developed specific

strategies for each of the cities in Yolo County, including Davis, Winters, West Sacramento and Woodland. Each city required tailored strategies to accommodate their individual needs as there were a mix of rural, remote, suburban and urban communities. Magellan helped the County develop individualized strategies for each community and a deployment plan to expand broadband across the County. Yolo County is currently implementing these strategies with Magellan's assistance.

## Client List

### Some of Magellan's Public Clients – Broadband Planning & Implementation

- City of Syracuse, NY
- Niagara County Airport Stakeholder Group, NY
- City of Hudson, OH
- City of Hamilton, OH
- City of Bartow, FL
- City of Winter Garden, FL
- City of Clermont, FL
- Seminole County, FL
- Flagler County School District, FL
- City of Manors, FL
- City of Jupiter, FL
- Matawa First Nations, Ontario Canada
- Rancho Santa Fe, CA
- Niobrara County, WY
- City of Fort Morgan, CO
- Port of Whitman County, WA
- City of Ketchum, ID
- City of Missoula, MT
- Missoula County, MT
- Colorado EAGLE-Net
- Arizona GovNET, Inc.
- Massachusetts Broadband Institute
- Columbia County, GA
- City of Hamilton, OH
- University of Florida, PURC
- Southwest Florida Regional Planning Council
- State of Florida
- State of Vermont
- City of Lake Jackson, TX
- City of Daytona Beach, FL
- City of College Station, TX
- City of Bryan, TX
- City of Riverside, CA
- Fort Pierce Utilities Authority, FL
- Riverside Public Utilities, CA
- City of Bristol, VA
- City of Cornelius, NC
- City of Albany, IA
- City of New Braunfels, TX
- Chicopee Electric & Light, MA
- City of West Hollywood, CA
- City of Winter Haven, FL
- New Zealand Ministry of Economic Development
- City of Winter Park, FL
- City of Baltimore, MD
- City of Rock Falls, IL
- North Florida Broadband Authority
- City of Sunrise, FL
- Florida Rural Broadband Alliance
- City of Fort Lauderdale, FL
- Yolo County, CA
- Strathcona County, Alberta, CA
- City of Columbia, MO
- Boone County, MO
- City of Waverly, IA
- City of Palm Coast, FL
- City of Cocoa, FL
- City of Palm Beach Gardens, FL
- City of Davis, CA
- City of West Sacramento, CA
- City of Woodland, CA
- City of Ormond Beach, FL
- City of Wellington, FL
- City of Hallandale Beach, FL
- City of Port Orange, FL
- City of Mooresville, NC
- City of Davidson, NC
- City of Walla Walla, WA
- Port of Walla Walla, WA
- Northeast Texas Consortium
- Converse County, WY
- Northeast Texas Educational Consortium
- City of Birmingham, AL
- City of Fort Collins, CO
- City of Tuscaloosa, AL
- Orlando Utilities Commission, FL
- City of Mont Belvieu, TX
- Yuma County, CO
- City of El Segundo, CA
- City of Centennial, CO
- VELCO, Vermont

## IV. Testimonials

1002 ADAMS PARKWAY | WAVERLY, IA 50677 | MAIN 319.352.6251



09/10/2014

Waverly Light and Power is pleased to recommend Magellan Advisors:

Waverly Light and Power is happy to provide this letter of reference for Magellan Advisors. Magellan Advisors has worked with Waverly Light and Power to develop a Fiber-to-the-Premises plan, network design, financial feasibility, and market study for the City of Waverly, Iowa. We have been extremely pleased with the deep and broad knowledge and the professionalism of Magellan Advisors. Their specific understanding of broadband planning and financial modeling was exceptionally helpful in creating a feasibility study that Waverly Light and Power could use to take the next step in bringing high-speed broadband services to our community. Magellan's creative, but real world step by step approach to our project has given us the confidence to move forward with this critical next step in our community broadband aspirations.

Magellan Advisors has gone above and beyond to meet the needs of Waverly Light and Power. They have delivered excellent work product and have completed the scope of work on time as agreed upon. They have always conducted themselves in a professional manner and delivered world class service. We look forward to the opportunity to work with them in the future and highly recommend Magellan Advisors.

Sincerely,



Mike Litterer  
Assistant General Manager  
Waverly Light and Power

OHIO  
**HUDSON** 

INFORMATION SYSTEMS • 115 Executive Parkway, Suite 400 • Hudson, Ohio 44235 • (330) 650-1799

June 29, 2015

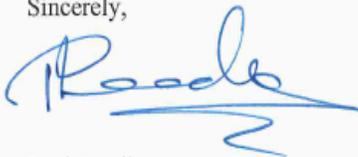
To Whom It May Concern:

The City of Hudson, Ohio is pleased to recommend Magellan Advisors. The City of Hudson engaged with Magellan Advisors on a Broadband Needs Assessment and Business Plan. The Plan was carried out with professionalism and expertise by the Magellan team, and in accordance with the initial timeline.

The City of Hudson was seeking a broadband consulting and planning firm that could assess the feasibility of a municipal broadband plan, and give us actionable and practical steps towards developing a Gigabit high speed broadband network. Magellan's staff of Senior Consultants are highly qualified and experienced in needs assessments, financial planning, broadband business practices, regulatory issues and conceptual network design. They were always accessible to our team during and after the planning process, and provided us with a report that allowed us to move forward with the next steps in creating a network.

We have been beyond impressed with the knowledge and advice supplied to us by the Magellan staff. Their real world experience in broadband and telecommunications has allowed us to take the next steps in achieving our broadband goals. The City of Hudson highly recommends Magellan Advisors for your community's broadband planning needs.

Sincerely,



Paul Leedham  
GIS Manager/DBA

**BOARD OF DIRECTORS**

Ann Boon, President  
Heather Slosar, Vice President  
Kim Eggleston, Treasurer  
Philip Wilkinson, Director  
Jerry Yahr, Director  
Mike Licosati, Director  
Fred Wasserman, Director

Bill Overton, PCAM  
Association Manager/Secretary



**COVENANT DESIGN REVIEW COMMITTEE**

Candace Humber, President  
Sharon McDonald, Vice President  
Hilary Broyles, Secretary  
Bill Cardon  
Hilary Loretta

Robert J. Green  
Building Commissioner

December 10, 2015

To Whom It May Concern:

I would like to provide my strong recommendation on behalf of the Rancho Santa Fe Association for Magellan Advisors.

Rancho Santa Fe has been working with Magellan for about one year to evaluate bringing a high-speed Internet network to our community. Magellan helped Association staff and the board of directors understand this complex issue, create specifications for a bid package, deliver the bid package to the national marketplace and evaluate bids received. We are currently working with Magellan to put together a deal with a prevailing partner.

In addition to Magellan's technical and financial expertise, I have enjoyed working with the group. We have high expectations for talent, expertise and customer service at Rancho Santa Fe, and Magellan has met or exceeded these expectations.

Specifically,

- We have been impressed with Magellan's on-time deliverables and responsive service.
- John Honker, our Magellan project management representative, has been a pleasure to deal with in person at committee meetings, board meetings and working sessions. Further, John has been in regular contact with us, keeping us up to date via scheduled conference calls, other phone updates and email.
- Magellan has come in under budget at each stage of the process. John Honker has been sensitive to our budget needs and concerns.
- We are exceptionally satisfied with the results Magellan has given us with this project to date.

Again, I highly recommend Magellan Advisors and would certainly partner with the group again on a future project.

Sincerely,

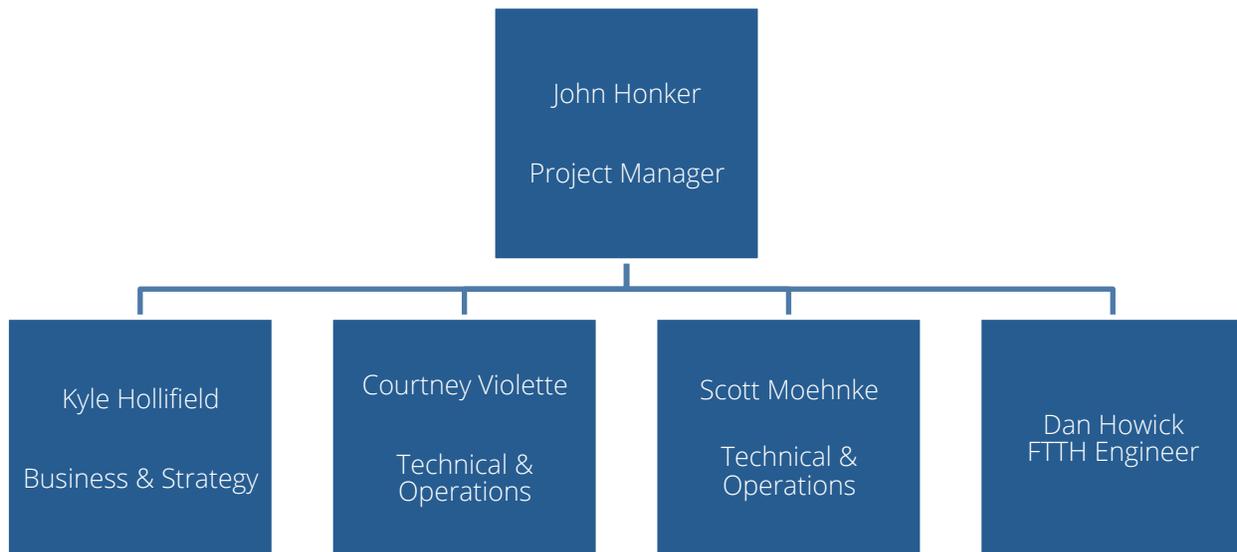


Bill Overton  
Manager, Rancho Santa Fe Association

## V. Project Staff

Magellan Advisors prides itself in the quality and professional expertise of its staff. The staff at Magellan Advisors has over 200 years combined experience in telecommunications, broadband planning, operations, and business and financial planning. Our team assigned to the IMU project has either lead or participated on at least 100 local government broadband projects, giving IMU the most seasoned team of consultants available to ensure the project is effective, achievable and financially sustainable.

For this project Magellan's staff will complete 100 percent of the work and will not use any outside consultants. The point of contact for this project will be the President of Magellan Advisors John Honker. The following employees will make up the team that will provide services for IMU.



### John Honker: Project Manager, Business & Financial

John has worked for over 17 years in the telecommunications and broadband industries. Prior to founding Magellan Advisors, he was responsible for leading development of telecommunications products and services for Columbus Networks in 15 countries across the Americas region. John was responsible for bringing emerging IP, Internet and other value-added services to markets in North, Central and South America, growing the business unit from inception to \$50 million in annual revenue. He built advanced carrier-class multi-service networks throughout the Americas region, including carrier Ethernet and IP networks that carried over 50% of the Americas region traffic into the United States.

With a strong background in consulting from his early career, John found Magellan Advisors in 2004 to provide strategic telecommunications and technology services to the public sector

market. He has assisted over 100 public and private entities with their telecom, broadband and technology needs and specializes on broadband fiber-optic planning for government entities. John has deep experience in all facets of broadband planning and development, including market planning and analysis, community engagement, design and engineering, financial planning, operational planning and regulatory planning. With a deep understanding of local government operations, utility systems and other public sector areas, John provides expert guidance to municipal organizations interested in broadband development.

John also has significant experience in grant writing, preparation, management and compliance for federal and state programs, such as the NTIA BTOP program and USDA RUS program. He has provided management oversight for broadband grants totaling \$250 million in value and actively works with large awardees across the country. Some of his key clients include Colorado EagleNET, Columbia County, GA, Florida Rural Broadband Alliance, North Florida Broadband Authority and GovNET, Inc.

John received his BA from Stetson University (BA), coupled with minors in Business Administration and Information Systems. He completed his MBA at University of Miami and is actively engaged with the University of Miami School of Business Administration as active Alum.

### Courtney Violette: Senior Broadband Consultant, Networks & Operations

Courtney Violette has spent nearly 15 years in the IT industry with 7 years serving in executive leadership roles within the public/private sectors. Courtney began his career in the US Army as a Communications Specialist and later moved into the private sector working for Florida Water Services, a private water utility located throughout the State of Florida.

In his most recent role, Courtney served as the Director of Information Technology & Communications/CIO for the City of Palm Coast, shortly after its incorporation in 1999. Courtney planned, implemented and operated the first community broadband network in Florida, launched by the City in 2011 to enhance the City's economic development potential. In this role, he was responsible for the vision, management and operation of the City's technology resources, management of the expansive city owned fiber optic network, implementation and management of all information and communication systems and processes.

Courtney currently serves as SVP of Operations for Magellan Advisors and has participated and/or led dozens of broadband planning and fiber-optic construction management projects across the country. He is a Certified Fiber-To-The-Home Professional and designs advanced Ethernet, GPON and WDM networks throughout the country.

Courtney holds a Masters of Arts in Information Technology Management and a Bachelors of Science in Computer Science from Webster University. He is an Associate Professor in the Computer Engineering Technology Department at Valencia College, and also as an Adjunct Professor at Strayer University.

Courtney holds several industry certifications to include: Certified Fiber-to-the-Home Professional (CFHP), Certified Information Systems Security Professional (CISSP), ITILv3 Foundation, Cisco

Certified Network Associate (CCNA), Microsoft Certified Systems Engineer (MCSE), A+, Network+ and has received the designation of Certified Chief Information Officer (CCIO) from the Florida Institute of Government at Florida State University where he now serves as mentor within the CCIO program.

### Kyle Hollifield: Senior Broadband Consultant, Business & Strategy

Kyle Hollifield is a 25-year veteran of the telecommunications industry and most recently has held the position of Vice President of Business Development and Marketing at Bristol Virginia Utilities Authority (BVU), while managing the FOCUS division providing consulting services to other communities wishing to build or improve high speed broadband networks. BVU Authority is a regional state owned utility offering advanced high-speed broadband networks and telecommunications products and services. The company is known for being a global pioneer in an all-fiber broadband network, and was the first in the nation to offer "triple play" services over an all fiber network. BVU Authority has recently won the National League of Cities Gold award for broadband sustainability and The Intelligent Communities Top 7 for 2009, worldwide for technology applications; Bristol Va. was the only US city to make the final 7.

Mr. Hollifield has served on the Board of Directors of The Fiber to the Home Council, (FTTH), most recently as Chairman of the Board of Directors. Mr. Hollifield also serves as Vice-Chair of Broadband Communities Magazine and has made many presentations on Broadband policy and opportunities through broadband development to the FCC, RUS, NTIA, NATOA, APPA, National League of Cities, Rural Telecom Cooperative, FTTH, Broadband Communities, NCTC and many other interest groups.

During his career, Hollifield has worked in several other key positions, including serving as a unit sales manager and assistant brand manager for The Proctor and Gamble, Executive Vice President for Standard Telephone and Cable of the UK, a world class long haul communications provider, and pioneer of Fiber Optics technology implementing fiber optic communications worldwide. As the prime consultant for the Taiwan government, (Chunghau), in the field of telecom, broadband and connectivity strategies, and as Division Vice President of Thomson-CSF, (Alcatel), providing advanced telecom access gear and products focusing on high speed Internet and fiber optic research and development.

### Scott Moehnke: Senior Broadband Consultant, Technical & Operations

Mr. Moehnke, a 30-year veteran of the utility and telecommunications industries specializing in executive and operational management, business development, and information technology. Recently, Mr. Moehnke was Chief Operations Officer at Bristol Virginia Utilities (BVU), a municipal electric company known for being a global pioneer in triple-play, and all-fiber broadband. At BVU he oversaw all the daily operations of the company encompassing financial management, customer service, inside and outside plant, construction, network operations, and engineering for the offered services (electrical, water, waste water, telephone, internet, video, home security and

home gateway). He also managed the \$36 million NTIA BTOP grant received by BVU for build-out of 388 miles of broadband fiber. He was the company's federal liaison for reporting and auditing. He was also a key member of the executive team responsible for setting and implementing development strategies.

Prior to joining BVU, Mr. Moehnke established several consulting firms to assist telecom companies in all facets of business operations with emphasis on large scale project management, executive management, vendor selection and implementation. He worked with Lafayette Utilities Systems as lead project manager for their FTTH systems rollout.

A native of Minnesota, Mr. Moehnke graduated from University of Texas–Austin before joining Texas Instruments (TI) in software engineering to develop TI's system V Unix operating system. He then joined a Midwest telecommunications service bureau where he succeeded to the role of Director of National Accounts and was part of the executive team that took the regionally based service bureau, primarily serving the LEC community, to a nationally based service bureau servicing first tier companies such as AT&T, MCI, and Sprint.

### Dan Howick: Senior Fiber-Optic Engineer

Dan Howick has over 15 years of experience working in the planning, layout and design of telecommunications networks, specializing in fiber optics. He works hand-in hand with some of the nation's largest service providers who rely on his reputation and industry knowledge to help design and install advanced fiber-optic systems throughout the Country.

Dan's expertise in the telecommunications industry focuses on fiber optic networks in both the inside and outside plant environments. His responsibilities have included the layout, and design of outside plant networks for carriers, the United States Government, local municipalities, and private networks. Dan excels in the areas of route planning and optimization, as-built recording and development, plant verification and documentation, AutoCAD layout for both plan & profile views for construction. Dan also has extensive experience in best practices, methods and procedures for design/installation in fiber optics including terminations, splicing and testing.

Mr. Howick's certifications include a license as a General Contractor, a license as a Certified Excavation and Underground Utilities contractor, completion of a fiber optic design, installation and maintenance course held by the Light Brigade. A full list of his certifications includes:

- Certificate in BST CAD
- Certified General Contractor
- Certified Excavation and Underground Utilities Contractor
- Villanova certificate Program in Project Management
- Fiber Optic Design, Installation & Maintenance Course
- Outside Plant Engineering Courses
- Certificate in Outside Plant Construction Management
- Certificate in OPEDS Job Management

## VI. Testing Plan

Magellan Advisors believes that the following approach will provide the most effective development of Indianola Municipal Utilities' FTTP Feasibility Study. We understand that IMU must be cautious in its approach to expanding broadband in the community, and we believe that thorough analyses of the following factors are key to making the right decisions and taking the right steps forward. We believe it is important to gain a detailed understanding of Indianola and IMU's community needs by meeting with and garnering support from its local stakeholders. This information will help us define and prioritize community needs and identify the greatest opportunities for IMU to positively impact the local environment. This needs assessment will be essential as a foundation to estimate the demand in Indianola and develop reasonable options for IMU to consider to serve the demand.

### *Magellan's Goals for the Indianola Municipal Utilities FTTP Plan*

- Develop community-wide support for the broadband initiative that builds on IMU's relationships with local stakeholders;
- Document true broadband needs in the community through a combination of surveys, assessments and face-to-face meetings with community stakeholders;
- Leverage IMU's broadband infrastructure and operations to create favorable synergies to bring FTTP services to Indianola at reasonable costs;
- Enable sustainable economic development, and innovation through a foundation of affordable and available high-speed Internet access;
- Enable a platform to support community anchor needs in Indianola across education, healthcare, public safety, municipal and community support organizations; and
- Accommodate growing demand for high-speed Internet access through effective use of IMU's current network, smart investments in new broadband infrastructure and public policies that incentivize new broadband deployment;
- Provide a range of potential options for IMU to consider in how to proceed forward with the development of its FTTP solution in Indianola.

We propose to use the following approach to develop the FTTP Feasibility Study:

## A.) Situational Assessment

### Broadband Market Analysis

Magellan's market analysis will determine the services that are available, providers, service level, pricing, and access. This includes not only incumbent and regional providers, but those competitive providers currently utilizing existing IMU communications facilities. We will document all publicly owned and privately owned networks in Indianola and build a comprehensive broadband map in Google Earth to illustrate how Indianola is served by broadband and through which providers. We should expect that some private providers will not share their infrastructure maps for the project, but we find that in many cases, providers will cooperate in this initiative as this collaboration often times provides opportunities for them to better understand the local market. This analysis will document fiber and copper networks, facilities, data centers, and related infrastructure in Indianola to determine how well the community is served by broadband.

### Community Needs Assessment & Stakeholder Outreach

We propose to conduct comprehensive outreach to develop the broadband needs assessment, tailored specifically to IMU's goals in the FTTP Feasibility Study. The outreach will potentially include:

#### A. Online Broadband Surveys

Magellan's online surveys will provide important information to understand perceptions around broadband services, inventory current services, test speeds across the community, and identify issues. We generally receive strong response rates from respondents in these surveys, which provide valuable information for the planning process. We propose to survey residents, businesses and community anchors in the Indianola area and utilize local organizations to promote the surveys.

#### B. Community Anchor Interviews

We will hold interviews with each community anchor in Indianola to gain an understanding of their current and future broadband and technology needs. The format for these may be one-on-one in some cases or group in other cases depending on the size of each community anchor and importance to the project. We will work with the IMU team to identify community anchors across education, healthcare, municipal, public safety, state, regional and other organizations.

#### C. Enterprise Business Interviews

For large businesses in Indianola, we propose to hold one-on-one interviews to understand their current and future broadband and technology needs. We find that individual interviews work best for large businesses because they are able to share more information with us one-on-one versus a group setting. Large business interviews are important to identify key business anchors that may utilize the IMU network.

#### D. Small & Medium Business Interviews

For small and medium businesses in Indianola, we propose to hold focus groups to understand their current and future business and technology needs. We find that these can often times be coordinated through local economic development personnel or the local chamber of commerce. Focus groups containing 10-20 businesses each provide valuable information that we will utilize to plan broadband strategies for IMU.

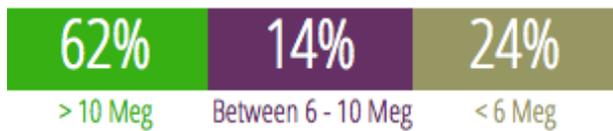
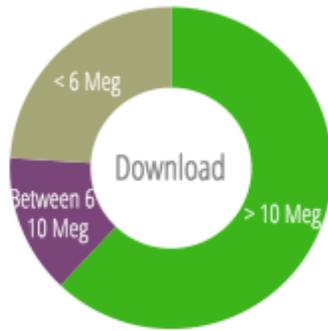
Additionally, we propose to complete a thorough evaluation of educational, healthcare, and public safety needs for broadband, looking in detail at programs such as USAC E-Rate, FirstNET, and Healthcare Connect; all of which provide federal subsidies for broadband services. Federal and state mandates are requiring these organizations to upgrade their broadband services to higher speeds and this analysis will determine their future needs and how IMU may be able to accommodate those needs.

This information will determine the community's need for additional broadband services and help IMU understand how its network may be used to achieve the long-term needs of its stakeholders. It will also provide an understanding of the potential customers available to IMU, which will determine the services IMU will need to provide and for what rates.

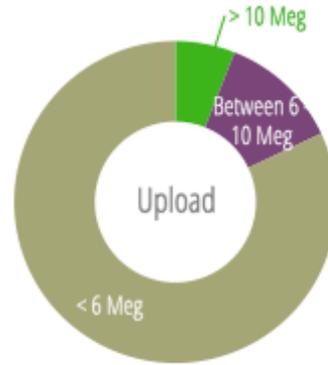
We will conduct deep analysis of collected survey data to determine the true demand and needs for enhanced Internet and other services in Indianola. Magellan's quantitative tools will give IMU statistically valid data and post-survey analysis to validate the survey results. We will also cross-reference the survey data with anecdotal information gained through stakeholder meetings and focus groups.

# Business Broadband Services - Davis Survey Data

Business Broadband Download Speed Test Results



Business Broadband Upload Speed Test Results



Reliability of Current Broadband Services



Speed of Current Broadband Services



Why Haven't Businesses Upgraded



## Broadband Issue Analysis

Based on the market analysis and information gained through the stakeholder outreach, Magellan will develop a gap analysis that identifies the key broadband issues in Indianola, for residents, businesses and community anchors. We will identify the issues that Indianola faces, focusing on infrastructure, access, affordability and other key broadband issues that we find in many communities like Indianola. Analyzing and documenting these issues will give IMU the right information to use in addressing them through its broadband initiatives.

## B.) Network Design Alternatives

Magellan will work with IMU staff to identify infrastructure that is required to meet the needs of the Indianola community determined in the needs assessment. Our team will thoroughly review

all communications facilities owned by IMU that could be utilized in a new strategy that would developed as part of this Study. Magellan will work with IMU to evaluate a range of technologies

to determine the “best fit”. Our consultants will work with IMU staff and its affiliates to understand the pros/cons of each delivery method and the costs associated with each as the infrastructure that is chosen can have a major impact on long-term financial sustainability.

The overall network design will be based on the needs of the residents, businesses and anchors that will utilize it. This will determine the bandwidths and speeds, performance, redundancy and scalability requirements and solution-specific requirements. At a minimum, we believe that the network should be capable of supporting the following:

- Gigabit-capable with a path to 10-gigabit
- High-performance, dedicated connectivity
- Reliable and redundant
- Flexible to support multiple technologies, such as GPON and Active Ethernet simultaneously
- Scalable to support future growth, density and bandwidth requirements
- Multi-service in design – voice, video, data, with the necessary QOS management
- Administratively lean, fitting well within the electric utility operational environment

Based on the network design, Magellan will provide estimates to IMU for cost of network construction, including design, construction, equipment, testing and certification as well as ongoing annual costs to operate and maintain the network. In addition, all backhaul options will be reviewed to identify the most optimal routes out of Indianola, and to identify potential interconnect points to regional Points of Presence (PoPs). Our significant work managing broadband construction projects will allow for accurate estimation of the costs IMU will bear in this process. We will incorporate these cost estimates into our financial planning tools used in the project.

We'll incorporate all cost estimates for capital into our Broadband Financial Sustainability Model to conduct further financial analysis of the proposed network. Our model provides comprehensive capital and operational costs for buildout in year-by-year schedules that accounts for all revenues and costs borne by IMU's proposed network. Details on how our model works is described in the following sections.

## C.) Business Model Alternatives and Considerations

### Business Model Evaluation

Magellan will assist IMU in evaluating various business models it should consider for the project, identifying the pros and cons of each for IMU and its community. In this analysis, we propose reviewing various models for IMU, some of which include:

- Infrastructure only (dark fiber)
- Open-access (dark and lit fiber)

- Business retail provider, Internet only
- Residential retail provider, Internet only
- Public-private partnership options

Some of the key questions that we will address in this section include:

- Should IMU provide services directly or through partnership with broadband providers?
- Will a IMU broadband utility be sustainable if IMU provides services directly?
- What types of Internet services would IMU provide and at what costs?
- Would open-access create a sustainable business model for IMU?
- Should IMU expand services to more public organizations and if so, to what extent?
- How will joint investment in broadband infrastructure be accomplished between IMU and private sector organizations in proposed partnerships?
- What legal and operational structures should be considered by IMU and private sector organizations in use of the IMU's broadband infrastructure?
- How will IMU balance private sector goals of revenue growth and profitability with public goals of providing affordable and available broadband services accross IMU?
- How will future system expansion be handled between IMU and private sector providers and what contributions will the parties make to this infrastrucutre?
- How will IMU maintain neutrality and open interconnection policies with private sector providers, promoting a competitive environment that benefits IMU's broadband user base?

## Smart Grid Opportunities

Magellan will identify opportunities to leverage existing IMU broadband assets, and those proposed to deliver FTTH services, to drive efficiencies in IMUs other utility business units. FTTH broadband assets can bring great value to IMU's utilities by introducing capabilities such as demand management, outage management, voltage reduction and monitoring, and for other smart grid purposes. Many utilities such as EPB Chattanooga and Bristol Virginia Utilities have reported significant savings to their respective utilities and rate payers through integration of FTTH communications and new energy management practices.

## D.) Financial Model, Financing Alternatives and Regulatory Assessment

Magellan proposes using our Broadband Financial Sustainability Model to evaluate the various broadband options for IMU. We will build a long-term financial plan for IMU that lays out the financial performance of its broadband initiatives over the long-term, using a phased approach to potential investments. We will model each of the business models to determine which ones are valid for the current environment in Indianola, based on the current market, competition, needs, organizational capabilities and financial sustainability.

Electric Utilities have used our financial models to determine financial feasibility of broadband projects in over 100 communities. Our models provide investment grade plans through which over \$1 billion in broadband investments have been made in the US. They are regularly used to

support public investment through bonds, bank loans and grant funding programs, including \$250 Million in Broadband Stimulus investments under the NTIA BTOP grant program.

Using our financial tools, we suggest using the following procedure to conduct the business model analysis and make recommendations. We would propose using a minimum 10-year period to analyze the project:

1. Develop the cost model for the network, including one-time and ongoing capital expenditures to build the network
2. Develop the cost model for operations, including O&M, network operations, field services, staffing, billing, and customer service
3. From the market analysis and outreach, determine the customer segmentation and growth on the network across each type of customer (business, school, hospital, etc.)
4. Determine customer growth rates for the network based on benchmarking analysis from other utility and municipal providers
5. Determine a proposed competitive rate schedule for potential services using pricing information from the market analysis and benchmarking information
6. Develop financial statements, pro-formas, depreciation schedules, and cash flows
7. Conduct comprehensive sensitivity analysis on the project to determine overall financial sustainability using key metrics such as free cash flow, debt service coverage, operating margin, and net income
8. Use scenario analysis to evaluate different business models and determine which are feasible for IMU to consider
9. Recommend the most feasible business model based on overall business and financial sustainability, community benefit, and long-term value to the IMU community

## Regulatory

Magellan will provide a regulatory review of Iowa's State and Federal statutes including FCC and State laws regarding municipal broadband providers. We will evaluate the regulatory implications of these laws and help IMU develop risk profiles for each option to become a provider of municipal broadband services. These risk profiles will help IMU determine which options are the most feasible in developing a broadband enterprise. Magellan has deep knowledge of the related statutes and will be able to advise IMU on the best path forward.

## VII. Timeline

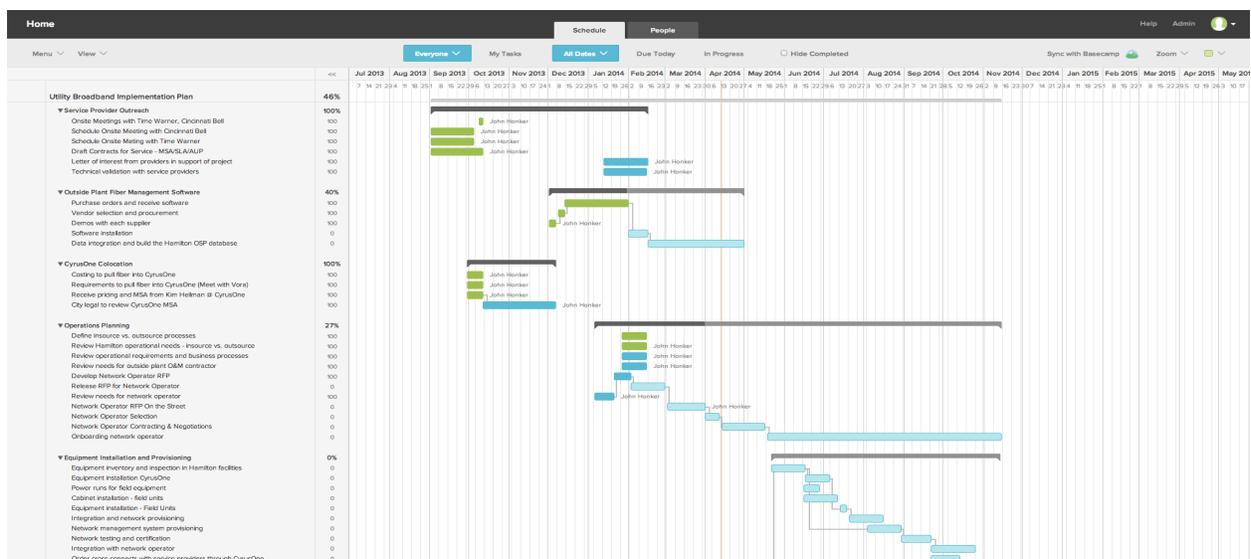
We estimate that over the 4-month duration of the project, approximately 10 days onsite will be required for successful completion of the project. During this time, Magellan will meet with IMU staff, hold meetings with stakeholders, review plans, visit regional sites and make presentations to the IMU project teams as well as other activities to be determined between the IMU and Magellan. Schedules will be determined cooperatively between IMU and Magellan. Magellan will require some resources of IMU staff to gather relevant data, participate in interviews of IMU staff with Magellan, participate on status calls and onsite meetings and participate in final presentations.

Task	Description	Month 1	Month 2	Month 3	Month 4
1	Community Needs Assessment & Stakeholder Outreach				
2	Broadband Market Analysis				
3	Broadband Issue Analysis				
4	FTTP Technical Design Options				
5	Business Model Evaluation				
6	Broadband Financial Evaluation				
7	Action Plan and Next Steps				
8	Final Report and Deliverables				

## VIII. Project Management Methodology

Magellan Advisors maintains formal project management methodologies for all broadband-planning engagements. Because these projects are often times multi-faceted and involve many parallel tasks, we have tailored our processes to efficiently execute the projects for our clients. Our years of broadband planning with many public sector clients has given us a deep understanding of how to manage these critical projects and ensure that milestones are met on time and on budget.

A testament to our project management abilities, Magellan has never missed a milestone or exceeded a project budget in over 10 years of broadband planning. We conduct strict QA/QC review of our projects by our independent project management staff to verify the best quality work products for our clients. Our online project management system allows for tracking of key milestones, deliverables, critical path items, documents and works-in-progress. We will use this tool to periodically provide status updates and performance progress reports.



At the onset of the project, Magellan will work with the IMU project team to review the scope, set expectations and identify key milestones and timelines. We want to understand your priorities for completion of the project to determine how work should be carried out and in what sequence. These projects often involve coordination with a large number of stakeholders; it will be important to define the best approach to involving stakeholders in the project.

In this engagement, we anticipate 3 site visits to successfully complete the project; if more/less are required, we will work with the project team to determine the optimal schedule and timing for these visits. We also recommend setting up a standing project status call to review the progress of key milestones throughout the project. We find that the flow of information and project momentum improves through these calls, which we anticipate scheduling weekly or bi-weekly, based on your needs.

## IX. Pricing

The total cost to IMU as outlined in the chart below is \$39,200 and includes all work to be completed by Magellan for IMU as stated in this Proposal. Our hourly rate for the proposal is \$140 per hour, while travel and overhead will be billed as incurred within the \$5,000 travel and overhead allowance. We estimate completion of this project will require 280 hours of billable work. Our proposal is priced as Not-to-Exceed, therefore IMU will only be billed for work completed toward the total.

Task	Description	Hours	Hourly Rate	Total
1	Community Needs Assessment & Stakeholder Outreach	40	\$140	\$5,600
2	Broadband Market Analysis	20	\$140	\$2,800
3	Broadband Issue Analysis	20	\$140	\$2,800
4	FTTP Technical Design Options	50	\$140	\$7,000
5	Business Model Evaluation	40	\$140	\$5,600
6	Broadband Financial Evaluation	50	\$140	\$7,000
7	Action Plan and Next Steps	30	\$140	\$4,200
8	Final Report and Deliverables	30	\$140	\$4,200
	Travel Budget – Billed as Incurred			\$5,000
	<b>Total Pricing (Not-to-Exceed)</b>	280		\$44,200

## Appendix A. Staff Resume's

### John P. Honker - President

#### Education:

*Master in Business Administration, Executive Program University of Miami – Miami, FL*

*Bachelor of Arts in Philosophy Stetson University – Deland, FL*

#### Strengths:

- Strategic Planning
- Multinational Expansion
- Business Development
- Market Planning
- Business Strategy Formulation
- Financial Planning
- Investor Marketing & Identification
- P&L Management
- Operations Planning
- Investor Relations
- Technical Design
- Technical Implementations
- Operations Management
- Performance Management

John has over ten years of executive management with new, growing and well-established firms, in the Telecommunications, Information Technology and Outsourcing sectors. Strong expertise in managing rapidly growing companies with responsibility for P&L, Business Strategy and Operations. Insightful execution of business strategy with a clear focus on achieving goals through concise management of people and resources. Significant entrepreneurial experience through the founding of several successful firms in the consulting and outsourcing sectors.

#### **Magellan Advisors LLC – Denver, CO**

**President & CEO** - *Magellan Advisors is a full service consulting and technology services firm, specializing in telecommunications planning, deployment and management for public and private sector organizations.*

Founding and current member of the firm, organized to capture strong demand from public and private sector clients requiring strategic telecommunications planning services. Responsible for core business strategy, P&L, operations, technology and finance. Leadership position that requires a unique combination of executive tactics, hands-on processes and a team-based orientation.

#### **Clear Connect Inc. – Miami, FL**

**Chief Operating Officer** - *Clear Connect is a contact center and business process outsourcing provider uniquely positioned to deliver vital business services at savings beyond what is seen in today's outsourcing market. Combining strong domain experience with a world-class workforce and adaptive technology, Clear Connect provides solutions to meet our customer's most challenging business needs.*

Founding member of the firm, specializing in contact center and business process outsourcing services for Fortune-200 based US companies. Built the firm's operations, finance and technology from greenfield into a 210-employee firm in 18-months, providing services to several large Fortune-200 companies. Responsibility for all departments, with 8 top-level manager reports.

#### **Columbus Networks Inc. – Miami, FL**

**Director of Internet Services** - *Columbus Networks is a telecommunications service provider that offers broadband and IP capacity services to telecom carriers, TV cable companies, and Internet Service Providers and network integrators.*

Built Internet Service Provider business from greenfield into \$50M business in 5 years. Multinational venture into 15 countries in Central/South America, The Caribbean and Mexico, to deliver services in new markets. Provided all operational planning, development and implementation for the business unit. Organized and lead cross-functional teams under strict timelines to deliver services.

#### **Government Technology Resources Inc. – Orlando, FL**

**Principal Consultant** - *GTR provides strategic consulting services to public sector clients, focused on leveraging emerging technologies to support the goals of local, state and federal government.*

Developed consulting practice for firm, focused on expanding existing services for local and state governments. Provided business development to build a book of business to include many local government clients.

#### **Florida Hospital Inc. – Orlando, FL**

**Network Engineer** - *Florida Hospital, comprised of eight Orlando hospitals provides a wide range of health services for the entire family, including many nationally and internationally recognized programs in cardiology, cancer, women's medicine, neurology, diabetes and rehabilitation.*

Information technology liaison for the Radiology/Radiation Oncology departments. Translated specialized departmental needs into Information Technology strategies and presented to Information Systems department heads. Provided network-engineering services to the Radiology and Radiation Oncology departments at 8 metro-Orlando hospitals. Worked with cross-functional medical and non-medical teams, vendors and technology specialists to deliver projects.

## Courtney Violette, CISSP - Senior Broadband Consultant

### Education:

*Masters in Information  
Technology Management  
Webster University – St. Louis,  
MO*

*Bachelor of Science in  
Computer Science  
Webster University – St. Louis,  
MO*

### Strengths:

- *Strategic Planning*
- *Broadband Deployment*
- *Market Planning*
- *Funding Strategies &  
Procurement*
- *Financial Planning*
- *Performance  
Management*
- *Contract Negotiations*
- *Operations Planning*
- *Technical Planning*
- *Technical Design*
- *Technical  
Implementations*
- *Operations Management*

### Certifications:

- *CISSP – Certified  
Information Systems  
Security Professional*
- *ITIL v3 Foundation*
- *CCIO – Certified Chief  
Information Officer*
- *CCNA – Cisco Certified  
Network Associate*
- *MCSE – Microsoft  
Certified Systems*

Courtney has nearly fifteen years of executive management in telecommunications, consulting and government sectors. Experience in managing government telecommunication projects, strategic planning, technical architecture, implementation and operations.

### Magellan Advisors LLC – Orlando, FL

**Managing Partner/Senior Consultant** - *Magellan Advisors is a full service consulting and technology services firm, specializing in telecommunications planning, deployment and management for public and private sector organizations.*

Senior Consultant focused on Technology, Broadband Deployment and Government Services. Performs technical consultations in the specific areas of network implementation and management, telecommunications services and information security. Assists organizations in the development of strategic management/technical plans focusing on alignment of technology initiatives with that of the business units. Coordinate and manage Data/voice/video projects for clients to include the negotiation and provisioning of carrier services from major telecommunications and upstream providers.

### City of Palm Coast – Palm Coast, FL

**CIO** - *The City of Palm Coast located in North Florida serves a population of nearly 80,000. This full service city is a leader in Florida with investments in technology initiatives in commercialized broadband infrastructure geared toward providing business class services to regional anchor institutions and the Palm Coast business community.*

As Director of Technology and Communications/CIO, managed full services department of IT professionals in areas of Network/Telecommunications, Application Development, Geographic Information Systems and Video Broadcasting. Managed the implementation of Palm Coast FiberNET, Florida's first municipal owned "carrier-class" open-access network. Created departmental goals and objectives that directly aligned with the organization's vision, values and strategic plans. Responsible for risk management, information security audits, physical security and all federal regulations related to organizational data and infrastructure.

### Valencia College – Orlando, FL

**Associate Professor** - *Valencia College ranks among the nation's top two year colleges and is considered a premier learning college that provides opportunities for academic, technical and life-long learning in a collaborative culture dedicated to inquiry, results and excellence.*

Full-Time Professor of the Computer Engineering Technology Department specializing in instruction in areas of Telecommunications, Network Services and Information Security.

## Kyle Hollifield – Senior Broadband Consultant

### Education:

*BS Degree, Business Management and Marketing University of Tennessee – Knoxville, TN*

### Strengths:

*Community, Public Relations and Business Development Professional*

- *Marketing execution and implementation*
- *Business Strategy Planner*
- *Project Sustainability Professional*
- *Capital Asset Management*
- *Financial Management*
- *Operations Planning and Execution*
- *Investor Relations*
- *Customer Relations*
- *IP Telephony Professional*
- *Fiber Optics Professional*
- *Business Analysis*

Innovative professional with 30 years of progressive management and marketing expertise in marketing, logistics, sales and distribution. Knowledgeable and successful in B2B environments, E marketing and establishing cross channel promotions in cyber space including “Cyber” communities. Expertise in strategic planning, strong customer relations, including both well established and new business start-ups, market plan execution, capital asset oversight, cost containment, budgeting/finance, training, supervision and mentoring. Vast knowledge in cutting edge technologies of community broadband, IP Telephony, FTTH/B, cable TV, video programming contracts and Unified Communications. Highly skilled in pricing strategies, competitor and market analysis. Contract negotiation, product specifications, testing, legal compliancy, staffing, purchasing and vendor relations. New product rollout, targeted marketing, and market segmentation. Expert in community relations, economic development and FTTH market penetration and sustainability. Thrives in both independent and collaborative work environments.

Participated in the following community broadband project: Vice President of Business Development for Bristol Virginia Utilities for the town of Bristol, VA. One of America’s first community broadband networks beginning in 2001, growing to over 60 million-dollar project. Senior executive in charge of a 92 million dollar broadband project for the cities of Mooresville, Davidson and Cornelius, North Carolina. Consulted for the Town of Morganton, N.C. broadband network in programming and market planning. Provided consulting and advise on all areas of community broadband projects to more than twenty communities.

Chairman of the Board of the FTTH Council; Vice-Chairman of Broadband Communities and Magazine. Both non-profit trade organizations promoting HSD broadband community networks.

### **BUV Authority – Bristol, VA.**

**Vice President** - Responsible for all community, marketing and business development activities. Achieved penetration rates of over 68% of community customers both residential and businesses as an over-builder of incumbents. Achieved sustainability and growth for 10 consecutive years bring community broadband project to positive cash flow in 24 months and operational profits by year three. Manages and oversees the FOCUS division that provides consulting services for other community broadband projects. Won the National League of Cities Gold Award for the best sustainable community broadband network and the ICF 7 award for the best Community broadband network in America and top three in the world.

### **Alcatel-Lucent – White Plains, NY.**

**Vice President** – Directed daily sales and marketing efforts, established under contract a large base of US distributors to bring the products to market. Managed advertising campaigns, reviewed products and established market penetration strategies to take market share from competitors. Managed an annual budget of over fifty million dollars in investment and expenditures, coordinated with corporate CFO from the home office in Paris, France in planning and business development issues and opportunities. Part of the corporate merger and acquisitions team. Approved sales plans, marketing efforts, new product rollouts, advertising and sales functions and product development.

### **The Proctor and Gamble Co. – Cincinnati, OH.**

**Product Brand and Marketing Manager** - Worked to maintain and build the P&G business within the trade. Established local/national Ad campaigns, marketing campaigns, prepared product profit analysis for senior managers. Tracked and managed sales results by products and revenues. Managed over 40 million dollars in sales revenues helped grow the business at 8% YOY. Managed units marketing expense budget and on-going sales and marketing plan and training.

## Scott B. Moehnke – Senior Consultant

### Education:

*BA Degree with Honors,  
Computer Science  
University of Texas Austin*

### Strengths:

*Executive, Operational, and  
Project Management*

- *Operational planning, execution and implementation in:*
  - *Fiber Optics / Broadband*
  - *IP Telephony*
  - *Telecommunications*
  - *Utility (Electric, Water, Waste Water)*
  - *Inside/outside plant operations*
  - *Network monitoring and support*
  - *Call center planning and operations*
- *Large-scale Project Management*
- *Business Strategy and Planning*
- *Project Sustainability*
- *Capital Asset Management*
- *Financial Management*
- *Customer Relations*
- *Business Analysis*
- *OSS/BSS selection and implementation*

Established professional with over 30 years of experience in executive management, project management and information technology related positions for various organizations involved in broadband/fiber, telecommunications, utility (electric, water, waste water), health and hospitality services. Expertise in executive and operational management, budgeting and fiscal responsibility, strategic planning, business development, organization structure emphasizing streamlined synergies, incorporation of new technologies as supported by cost benefit analyses, customer support and call centers, inside/outside plant, engineering, data center operations, networks, consumer and technical support, help desk, and software development.

Wide ranging experience is all facets of project administration for ventures from start-ups to large, multimillion dollar projects. Majority of projects have dealt with leadership from conception through implementation. Areas include Request For Proposal (RFP) creation, vendor liaison, RFP analysis, vendor award and contract, project coordination of tasks, vendors, in-house staff, and users during implementation/post-implementation periods. Also responsible for data conversions, operational processes, and concise tracking of expended time and costs to project budget. Managed \$36M government grant for a telecommunications provider encompassing all aspects of operations, reporting, and interfacing to governmental entities.

Expert in leadership and team dynamics. Thrives in both independent and collaborative work environments. Participated in the following community broadband project: Chief Operating Officer Bristol Virginia Utilities for the town of Bristol, VA. One of America's first community broadband networks beginning in 2001, growing to over 60 million dollar project. Also in charge of Operations for a 90+ million dollar broadband project for the cities of Mooresville, Davidson and Cornelius, North Carolina.

### **BVU Authority – Bristol, VA.**

**Chief Operating Officer** – Responsible for all day-to-day operational management for the company providing electric, water, and waste water services along with being a global pioneer in triple-play, and all-fiber broadband. Areas included customer service, inside and outside plant, construction, network operations, engineering, and OSS/BSS. Managed \$36M Federal BTOP project to expand fiber network build out of 380 miles for SW Virginia. Also a key member of the executive team responsible for setting and implementing product development strategies. Bristol, VA won the National League of Cities Gold Award for the best sustainable community broadband network and the ICF 7 award for the best Community broadband network in America and top three in the world.

### **TSM & Associates - Houston, TX**

**Senior Partner** – Managing partner of consulting firm specializing in executive management, business development, project management, information technology, and operational management for telecommunications, health and hospitality industries. During tenure, personally worked in executive and project management roles for a variety of companies and projects including manager charged with defining business requirements and best practices for a telecommunications service provider, revenue assurance auditing, designed and implemented integrity strategies to measure trends and deviations to quantify corrective actions to address discovered gaps. Also provided operational analysis for venture capitalist firms to identify potential issues affecting company which may put VC monies at risk or to establish minimum guidelines for investment.

### **CCG Consulting - Riverdale, MD**

**Chief Operating Officer**–Executive-in-charge of operations of CCG Consulting, Inc., a nationally recognized telecommunications consulting firm. Had responsibilities for overall direction, management, and budget of Planning/Implementation, Regulatory.

## Dan Howick – Senior FTTH Engineer

### Education:

*Outside Plant  
Engineer Courses  
Brevard Community  
College –  
Melbourne, FL*

### Certifications:

- *ETA Certified  
Fiber Optics  
Installer*
- *Fiber Optic,  
Design,  
Installation, &  
Maintenance  
Course*
- *DC Power Unit  
Class*
- *Certified in  
O.S.P.  
Construction  
Management*
- *Certified in  
OPEDS job  
Management*
- *Certified in BST  
CAD*
- *Certified  
General  
Contractor*
- *Certified  
Excavation and  
Underground  
Utilities  
Contractor*

Dan Howick has extensive knowledge and experience in various fields in the telecommunications industry. His desire and proven expertise in the telecommunications industry is reflected in his work history credentials. Dan's background includes experience in managing various telecommunications projects specializing in network design and building infrastructure for several major telecommunications companies. His involvement with projects has included every aspect from hands on experience working with network equipment to managing multi-million dollar engineering & design projects and personnel.

### **Danella Construction Corp. - Melbourne, FL.**

**Business Development Manager**- Dan began his career in the telecommunications industry at BellSouth in 1998, shortly after proudly serving as a Paratrooper in the United States Army. His dedication and commitment to advancing his career has lead him to hold a variety of positions in the telecommunications industry. Dan works hand-in hand with some of the nation's largest Telecommunications service providers, who relying on his reputation and industry knowledge to help design & install some if the worlds latest technologies.

### **Utility Consultants Inc. - Orlando, FL.**

**Building Industry Consultant**- Responsible for all community, marketing and business development activities. Achieved penetration rates of over 68% of community customers both residential and businesses as an over-builder of incumbents. Achieved sustainability and growth for 10 consecutive years bring community broadband project to positive cash flow in 24 months and operational profits by year three. Manages and oversees the FOCUS division that provides consulting services for other community broadband projects. Won the National League of Cities Gold Award for the best sustainable community broadband network and the ICF 7 award for the best Community broadband network in America and top three in the world.

### **NorthStar Communications Group - Orlando, FL.**

**OSP Engineer** – Responsibilities included engineering of multi-million-dollar high capacity fiber optic network for Level 3 Communications. Highly complex field engineering for 20-way conduit system, permitting for right of way use and construction in all applicable municipalities, reviewing and revising all engineering drawings received from drafting department, and generating weekly reports used for project scheduling and forecasting.

### **Fluor Daniel Telecom - Melbourne, FL.**

**Outside Plan Engineer Technician** - Job duties included, engineering of Bics, FITL, Safety, Distribution, Service Orders, Rehab, Pole Replacements, and Customer Complaint jobs for BellSouth. Submitted, maintained, and followed up on permits for jobs engineered. Input and updated job information into computer network based software applications. Used computer knowledge and teamwork in assisting other engineers with their computer complications to help achieve goals and deadlines.

## Appendix B. Broadband Financial Sustainability

### Magellan Advisors' Broadband Financial Sustainability

Our tools provide deep analytics around broadband demographics, usage, adoption and growth. We use this information to evaluate potential broadband investments across regions to determine the financial and nonfinancial outcomes of public and private funding. This data enables policymakers to make clear delineations on what areas should be targeted for funding programs. Using a valuation-based approach, policymakers can easily determine the impact of broadband investments in specific geographies, at a census tract, city, county, regional or statewide level. We also aggregate data into our easy to use dashboard that tracks investments across jurisdictions, giving policymakers a high-level performance-tracking tool for their broadband programs.

- Demographic Analysis
- Business & Industry Evaluation
- Economic Development Analysis
- Community Anchor Analysis
- Underserved & Unserved Analysis
- Fiber To The Premise & Wireless Options



Our industry-leading Broadband Financial Sustainability Plans incorporate market, demand, cost, revenue, and funding factors to build a complete financial picture of investments for the policy organization. They provide important funding support tools that are many times utilized in federal, state and local grant applications. These tools also assist policymakers track the progress of broadband investments by monitoring their financial performance. This helps policymakers understand the impact of broadband investments in communities across their regions and where to focus future funding programs.

- ARPU Analysis
- Uptake and Growth Analysis
- Demand Aggregation Strategies
- Financial Return On Dollars Invested
- Community Value On Dollars Invested
- Regional Economic Impact Analysis

## FTTH & Wireless Investment Decision Support

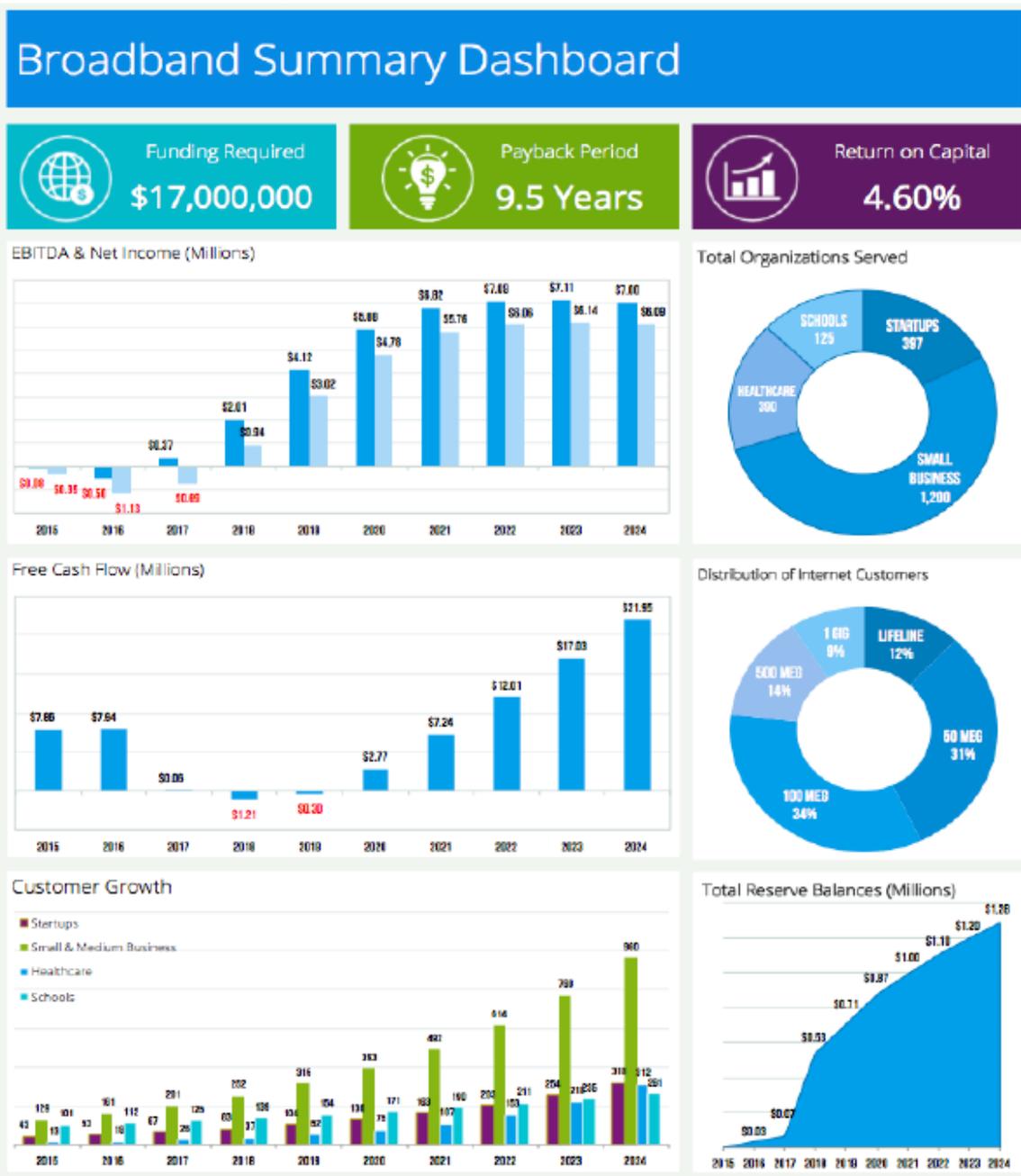
Magellan's broadband market & financial planning tools model large-scale wireline and wireless investments across diverse markets and varied demographics. Our models provide the decision support tools to determine how, when and where to finance broadband investments. They give policy makers, government organizations and private providers the insight needed to invest wisely and with the right financing strategies.

Our services enable policymakers determine the right mix of grant, loan and direct investment across their jurisdictions. Our models have helped state, regional and local government organizations across the country make sustainable investments in their communities that increase economic development improve educational services and support healthcare initiatives. Our plans have supported over \$250 million in federal and state investment in broadband nationwide.



## Magellan Advisors' Broadband Financial Sustainability Model

Magellan's dashboard-driven, Broadband Financial Sustainability Model provides financial analysis of residential and commercial broadband projects and enables municipalities to determine a range of potential broadband investments and business model options. Our Broadband Financial Sustainability Model supports open access, public-private partnerships, retail services, wholesale and many more. Our tools enable a range of scenarios to be tested using hundreds of relevant assumptions for FTTH and wireless networks.



We will build all assumptions into the model, accounting for parameters listed above. We would suggest using a minimum of 10 years for the model, but ideally 15 to account for any long-term broadband initiatives.

- Customers Served
  - Underprivileged & Low-Income
  - Residential
  - Startup
  - Small Business
  - Enterprise
  - School
  - Healthcare
- Costs
  - Upfront Capital
  - Ongoing Capital
  - Renewal & Replacement
  - Capital Expansion
  - Operational
  - Internal staffing
  - Outsourcing
  - Non-Operational
  - Debt Service
  - Depreciation & Amortization
- Revenues
  - Monthly Recurring
  - Non-Recurring
  - Receivables
  - Rate structures
- Financial
  - Gross Profit
  - EBITDA
  - Net Income
  - Funding required
  - Free Cash Flow
  - Debt Service Coverage
  - Operating Coverage
  - Return on Invested Capital
  - Return on Equity
  - Revenue sharing percentages
  - Recapitalization

Our model will provide year-by-year analysis of all aspects of broadband deployment. Based on the scope provided, we believe that the following schedules should be included in the model.

- Financial Analysis Worksheet – dynamic analysis of key financial metrics
- Financial Dashboard – “Dashboard style” presentation of overall financial performance
- Demand Dashboard – “Dashboard style” presentation of total customers connected
- Pro Forma Income Statement, Balance Sheet, Cash Flows and Owner’s Equity Statements
- Long-Term Capital Plan
- Depreciation and Amortization Schedules
- Incremental and Cumulative Demand Schedules
- One-Time and Recurring Revenue Schedules
- Staffing & Outsourcing Schedule
- Operating Cost Schedule
- Municipally-Owned Scenarios (Dark Fiber, Open Access)
- Public-Private Partnership Scenario
- Chart of Assumptions

Our models utilize dashboard-style interfaces that are designed to perform sensitivity analysis and “what if” scenarios. We maintain a list of approximately 100 assumptions in our models that can be changed dynamically to determine the impact to financial performance and feasibility. These assumptions generally fall into the following categories: demand, customer growth, revenues, capital costs, operating costs, financing costs and non-operating costs. CEL will be able to dynamically run any scenarios in the model and understand the net impact to the key financial metrics in the project with simple changes to these assumptions.