BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of	)
	)
In the Matter of the Petition of	)
	)
UMATILLA ELECTRIC COOPERATIVE	)
	)
PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY	)

TESTIMONY OF LOUIS S. TOTH, PE

ON BEHALF OF UMATILLA ELECTRIC COOPERATIVE

August 19, 2016

Q. PLEASE STATE YOUR NAME AND YOUR EMPLOYER.

A. My name is Louis S. Toth. I am employed by and serve as President of Toth and Associates, Inc., (TA) an engineering firm providing professional services in all phases of planning, design and development of electric utility power systems. The firm also provides civil and structural engineering services. TA is assisting Umatilla Electric Cooperative ("UEC") in the development of a five (5) mile overhead 115 kV transmission line from a breaker in the McNary Substation owned by the Bonneville Power Administration ("BPA") to UEC's existing Hermiston Butte Substation ("Transmission Line").

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a Bachelor's of Science degree in engineering from Clarkson University in 1970, and a Masters Degree in Business Administration from Syracuse University in 1972. Since then, I have attended numerous seminars regarding electric utility design. I have worked 42 years as a consulting engineer to the electric utility industry and have been employed by three separate engineering companies over the period. I have worked on comprehensive design and planning projects in the areas of Transmission, Substation, Distribution and Generation. I have served as president of two of the three consulting companies referenced with one of the companies being Toth and Associates, Inc. where I presently am employed.

During the years 2012 and 2013 I served as Manager of Engineering Services for Mississippi County Electric Cooperative, Inc. (Blytheville, AR) ("MCECI"). Work responsibilities included oversight of all technical design and planning functions for the

system. MCECI serves electrical loads including residential, small commercial, large commercial, irrigation and industrial. Total load served by the system was/is in excess of 500 MW of capacity.

My present engineering responsibilities are in all phases of electrical utility system work including planning and design in areas of power supply, substation, transmission and distribution. Also included are areas of environmental analysis, mapping, construction work oversight, work order certification, cost of service analysis, load management analysis, metering, and distributed generation analysis and integration.

Q. ARE YOU REGISTERED AS A PROFESSIONAL ENGINEER ("PE") IN OREGON?

A. Yes. I am registered as a PE in Oregon (88373) as well as the states of Missouri, North Carolina, Arkansas, Kansas, Illinois, Iowa, Oklahoma, and Texas.

Q. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS IN OREGON?

A. No I have not. I have testified as an expert witness before the Arkansas Public Service Commission, the Oklahoma Corporation Commission, and prepared material for the Missouri Public Service commission. I have sponsored testimony in the areas of certificates of public convenience and necessity, design, plus rate/cost of service analysis. During 1999 and 2000, I represented all of the electric distribution cooperative systems of Arkansas before the Arkansas Public Service Commission for hearings related to deregulation.

Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A. I am appearing on behalf of UEC.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to generally describe the UEC system and to describe the need for and the design of the proposed Transmission Line. I will also discuss the alternatives considered and the costs of the proposed Transmission Line.

Q. WHERE IS UEC'S SERVICE TERRITORY?

A. UEC provides electric service to Oregon customers in Morrow, Umatilla, Union and Wallowa counties. Attached as Exhibit UEC/101 to my testimony are maps showing UEC's service territory.

Q. WHY IS UEC BUILDING THE TRANSMISSION LINE?

A. The Transmission Line is needed to adequately provide reliable service to existing and new loads in the City of Hermiston and UEC's surrounding service territory. These areas are primarily served from a single 115 kV line owned by UEC, which is sourced from BPA's McNary Substation. While there may be alternate feeds to the area from the remote Boardman and Hat Rock sources, these alternative feeds are relatively weak and are separated from the existing UEC 115 kV line to the Hermiston area by open switches and are not singularly or jointly capable of picking up the Hermiston area during peak load outage conditions. In addition, as the existing 115 kV line turns east it does not have adequate capacity to allow UEC to back up the system for peak season outages that occur on the main feed out of the Hat Rock Source.

There have historically been outages on the existing 115 kV system and the existing 115 kV line described above. With the load growth UEC has experienced, and continues to experience, reliability issues are expected to increase in severity due to the added duty of the line. The proposed Transmission Line will address these concerns by increasing capacity, system reliability and ensuring that UEC can adequately serve its existing and future members.

Q. WHERE IS UEC PROPOSING TO BUILD THE TRANSMISSION LINE?

A. UEC's proposed Transmission Line will be sourced from a breaker in McNary Substation that is owned by BPA. The proposed Transmission Line will run approximately five (5) miles south along an existing transmission corridor from the McNary Substation and terminate at UEC's existing Hermiston Butte Substation. Attached as Confidential Exhibit UEC/103 are maps showing UEC's transmission system and the proposed Transmission Line.

Q. ARE OTHER UTILITY FACILITIES LOCATED ON THE ROUTE FOR THE PROPOSED TRANSMISSION LINE?

A. Yes. To reduce the physical disruption to the community, most of the Transmission Line will be overbuilt or rebuilt on existing electrical 12.47 kV distribution circuits, thus making effective use of the existing electrical line routes in the area. The proposed Transmission Line route had been used for a 69 kV transmission line that was later converted for 12.47 kV use. Most of the existing 12.47 kV line poles were sized and used for the 69 kV transmission line.

Q. PLEASE PROVIDE A GENERAL DESCRIPTION OF BPA'S MCNARY SUBSTATION.

A. The proposed Transmission Line will begin at BPA's McNary Substation. BPA's McNary Substation is an existing major transmission switching station with numerous lines running north, east, south and west from the substation. The existing transmission lines include voltages of 69 kV, 115 kV, 230 kV, 345 kV and 500 kV. BPA's McNary Substation receives power from the adjacent McNary lock and dam hydroelectric facility, in addition to area gas generating plants and solar and wind generation plants. The McNary Substation complex has several voltage transformation facilities linking the different system voltages.

Q. PLEASE PROVIDE A GENERAL DESCRIPTION OF UEC'S HERMISTON BUTTE SUBSTATION.

A. The proposed Transmission Line will terminate at UEC's Hermiston Butte Substation. UEC's Hermiston Butte Substation is approximately five (5) miles South of BPA's McNary Substation. The Hermiston Butte Substation has two 3-phase transformer units that step voltage down from 115 kV transmission voltage to 12.47 kV distribution voltage. Each transformer is rated at 15/20/25 MVA of capacity. Distribution lines exiting the station feed retail loads in and around the city of Hermiston, Oregon, as well as surrounding areas largely committed to irrigated uses, and smaller communities. The high side of the existing Hermiston Butte Substation ties two existing 115 kV lines together at the station through a ring bus switching configuration. Following completion, the proposed 115 kV Transmission Line will be connected through breaker(s) and

switch(es) to the existing ring bus and become the main feed to the station thus providing power for the two substation transformers serving the Hermiston area. The line will also connect to the transmission line running east from the station through the ring bus, and the new line will also serve to provide backup to the existing single 115 kV feed running south from McNary Source Substation into the Hermiston area.

Q. YOU INDICATED THAT THE TRANSMISSION LINE IS NEEDED TO ADEQUATELY PROVIDE RELIABLE SERVICE TO EXISTING AND NEW LOADS IN THE CITY OF HERMISTON AND UEC'S SURROUNDING SERVICE TERRITORY. CAN YOU ELABORATE?

A. Yes, UEC has experienced significant load growth, and expects this trend to continue. UEC's annual growth rate since 2012 is approximately 17 percent, calculated by total kWh sold. As such, in addition to increasing reliability, the transmission system needs to be upgraded to accommodate this growth as well as to continue to provide safe and adequate service to UEC's members. As shown on the chart attached as Exhibit UEC/104 to my testimony, the BPA 115 kV point of delivery at McNary has been interrupted on several occasions in the last 10 years. Impact of outages on the area will be increased if the proposed Transmission Line is not built.

Because the load center that the existing line is serving has several critical loads including hospital and medical facilities, large merchandise outlets, and industrial processes, loss of this single line even for short periods can be critical.

Q. HAVE YOU CONDUCTED A LOAD FLOW ANALYSIS OF UEC'S TRANSMISSION SYSTEM?

A. Yes. Our firm conducted a load flow analysis of UEC's 115 kV transmission system under forecast 2016 loads. UEC has four main 115 kV transmission delivery points which serve as sources of power into its system. The Boardman area of the UEC System has two of these, Boardman and Morrow Flat. The Hermiston area running east has the other two, McNary and Hat Rock. These source points receive power from BPA's transmission grid which runs east and west along the north portion of the UEC system. The load flow analysis shows that an outage of either the McNary or Hat Rock main 115 kV transmission feeds (into UEC) from these sources can result in low transmission system voltages and/or conductor overloads; both of which would have direct negative impacts on system equipment and customers and the possibility of extended outages to UEC members.

An outage of the existing McNary source to the Power City 115 kV line would require a transfer of loads served by this line from the McNary source to the Hat Rock source via 115 kV line switching. This situation would create an overload on a section of the 115 kV Juniper Canyon to Foster Tap transmission line if it occurs during system peak load periods. This 7.9 mile section of 266 ACSR line with normal rating of 374 amps would have to carry 441 amps of load during peak period loading. Accordingly, this back-feed path from Hat Rock would have to be upgraded to alleviate this potential condition should the proposed McNary to Hermiston Butte 115 kV line Transmission Line not be

constructed. A diagram showing the results of the load flow analysis is included as Exhibit UEC/105.

In addition, an outage of the Hat Rock source to Sandpoint GOAB 115 kV line during peak conditions would require the transfer of all of the Hat Rock load to the existing 115 kV McNary source running towards the Hermiston area (previously discussed) as well as the 115 kV transmission extension between Pond GOAB and Hermiston Butte to relieve the outage situation. In this situation, where the existing Hat Rock source load is transferred to the McNary source, an overload of the 115 kV Pond GOAB to Hermiston Butte line would occur during peak load conditions. This 3.6 mile stretch of 397 ACSR line which is rated for 479 amps would experience 623 amps of load during peak periods. To summarize, the 115 kV Pond GOAB to Hermiston Butte line would also have to be upgraded if the proposed Transmission Line between McNary source and Hermiston Butte is not constructed. A diagram showing results of load flow analysis for this contingency is included as Exhibit UEC/105.

Q. WOULD IT BE REASONABLE FOR UEC TO UPGRADE THE EXISTING 115 kV TRANSMISSION LINES INSTEAD OF BUILDING THE PROPOSED TRANSMISSION LINE?

A. No. This would not be appropriate for several reasons. First, upgrades of the transmission lines described above would not be as effective as building a new transmission line and second, these upgrades would come at a higher cost than the proposed 115 kV McNary source to Hermiston Butte Transmission Line.

It is important to note that the proposed Transmission Line will provide a second source of power from BPA's McNary Substation into UEC's system surrounding Hermiston, which includes Hermiston Butte Substation, Umatilla Substation, Power City Substation, Columbia Substation, Feedville Substation, and Westland Substation. As discussed previously, the other 115 kV lines that connect to the area are not adequate to support the current and future loads under contingency conditions. These other 115 kV lines are approximately 21 and 14 line miles from the Port of Morrow and Hat Rock Substations respectively, and are not suitable long term solutions to reliability or anticipated loading issues. If UEC were to attempt to upgrade existing transmission lines on its system to increase reliability, the resulting construction costs would be more expensive and more importantly, the upgrades would not provide the same long-term benefits as the proposed Transmission Line.

Q. WHY DID UEC CHOOSE THE PROPOSED ROUTE FOR THE PROPOSED TRANSMISSION LINE?

A. UEC selected the most practical, least-cost route for the Transmission Line. The starting and ending points for the line are fixed, since UEC must be able to transmit electricity from the McNary Substation to the Hermiston Butte Substation. By utilizing an existing transmission corridor that takes a relatively straight route between those two points, the Transmission Line will impact as few properties as reasonably possible, will occupy a space largely already set aside for that purpose, and will keep costs lower than other, longer routes.

UEC selected the preferred route between these two points by analyzing existing easements, property boundaries, the existing transmission corridor, land use, natural resources, and other development in the area. The initial analysis led to a general route, which UEC has refined through discussions with its consultants and affected landowners. Alternate line routes were reviewed and eventually ruled out since they would have to run essentially parallel to the existing route either to the east or to the west of the existing route, with larger impacts and at a higher cost. Any alternative route would require completely new easements for the new transmission route, the possible condemnation of more private property, and potential impacts to resource lands such as agricultural parcels. Agricultural parcels have additional land use restrictions, and transmission lines should usually be placed in other areas if there are reasonable alternatives.

Q. WHAT ALTERNATIVE ROUTES DID UEC CONSIDER?

A. UEC looked at two specific alternative routes in more detail, one to the east and one to the west of the proposed Transmission Line. Attached to my testimony as Exhibit UEC/102 is a map showing the proposed Transmission Line route as well as the specific alternative routes considered.

Q. WHY DID UEC REJECT THE ALTERATIVE ROUTES?

A. UEC considered the alternative routes but determined the alternative routes were inferior because they were longer, more expensive and had greater impacts on land owners and the environment. Attached to my testimony as Exhibit UEC/106, Toth/12 is a comparison of the cost of the proposed Transmission Line and the two alternative routes. The route for the proposed Transmission Line is superior because it uses an existing

transmission corridor, is a direct route and already has wood pole structures sized for transmission facilities.

Q. COULD UEC AVOID BUILDING THE PROPOSED TRANSMISSION LINE THROUGH CONSERVATION EFFORTS?

A. In my opinion, no. UEC already has a robust energy efficiency and conservation program. UEC has invested more than $6.3 million in these programs in the last five years, and achieved more than 78,000 MWh of energy savings in this period. More than 2,300 UEC members have benefited from UEC's energy efficiency and conservation programs in the last five years. The significant load growth in the area outpaces those conservation gains and requires the construction of the Transmission Line.

Q. DOES UEC HAVE EASEMENTS TO BUILD THE PROPOSED TRANSMISSION LINE?

A. UEC has already obtained consents from a majority of property owners along the Transmission Line route. Some of those consents are in the form of existing easements, while others are in the form of easements UEC more recently obtained. As far as access to the other properties, UEC intends to continue to negotiate with landowners affected by the proposed Transmission Line in an attempt to avoid condemnation. UEC hopes that it will be able to reach a mutually satisfactory agreement regarding all real property issues and will only resort to condemnation if absolutely necessary.

Q. HAVE YOU CALCULATED THE ESTIMATED COST TO UEC IN THE EVENT CONDEMNATION IS NECESSARY?

A. Yes. Exhibit UEC/107 to my testimony includes a list of each parcel the Transmission Line will cross. Using the list of parcels described in that exhibit, and removing from that list the parcels for which UEC has already obtained consent, UEC has calculated the real market value of the easement areas that are required from the remaining parcels. That value is approximately $12,589.00, which would be the estimated cost of the land easements if land was to be condemned. As already stated, UEC hopes that it will be able to reach mutually satisfactory agreements concerning all real property issues and will only use condemnation if absolutely necessary.

Exhibit UEC/107 to my testimony also shows the total estimated cost to UEC for the easements it has already obtained, and those it will attempt to obtain. The total estimated cost is $59,000.

Q. PLEASE PROVIDE A GENERAL DESCRIPTION FOR THE CONFIGURATION AND CONSTRUCTION OF THE PROPOSED TRANSMISSION LINE.

A. The proposed 115 kV line construction will consist of RUS TP-115 assembly construction and will primarily utilize single wood poles directly embedded in native soil utilizing crushed rock backfill or other equivalent materials. The elevation view of the TP-115 assembly is shown on Exhibit UEC/108 to my testimony**.** Concrete foundations or steel poles may be needed in a few discrete locations where soil strength or design loadings dictate added ground bearing strength needed for safety. Utility poles will be

spaced approximately three hundred (300) feet apart but actual spacing will vary due to physical constraints such as road crossings, buildings, trees, driveways, other utilities, land use, topography, or other items that may impact the proposed Transmission Line.

The proposed 115 kV Transmission Line will consist of three phase conductors or wires and one overhead neutral or static conductor/wire per supported structure. The three phases of transmission conductors will consist of 1272 MCM ACSR and the overhead static will be optical ground wire consisting of communication fibers wrapped with aluminum clad steel wire. The majority of the line will also have 12.47 kV distribution conductors installed below the described transmission circuit.

The 115 kV system is designed to operate within the range of (+/-) 5.0% of nominal voltage. The 1272 MCM ACSR conductor has a design capacity of 961 amps.

Exhibit UEC/108 to my testimony also shows an example of the typical distribution underbuild assembly and shows how both transmission and distribution circuits will be located on utility poles. The primary distribution conductor utilized as underbuild will be 556 MCM AAC conductor. Where existing phone, communications, or cable type facilities are installed on existing poles, the facilities will be transferred to the new Transmission Line poles with appropriate clearances and strength requirements considered.

Q. WHAT IS THE ESTIMATED COST OF THE PROPOSED TRANSMISSION LINE?

Exhibit UEC/106 to my testimony provides a breakdown of the various costs estimated for the design, engineering, and construction of the proposed Transmission Line. The estimate of the overall cost is $5,740,000.

Q. WHAT IS THE ESTIMATED COST OF THE ALTERNATIVE LINE ROUTES THAT UEC CONSIDERED?

A. Exhibit UEC/106, Toth/12 to my testimony provides cost estimates of the alternative routes. As indicated above, these alternative routes are not fiscally prudent and do not maximize reliability compared to the proposed Transmission Line. The increased length of the lines, along with the increased costs of obtaining easements or other property rights, result in $400,000 to $1,260,000 higher line costs depending on which alternative is considered. Additionally, the added lengths of the alternative routes tend to lower reliability and line efficiency, as well as increase operation and maintenance expenses. Because the Transmission Line is being constructed in large part to increase reliability on UEC's system, reasonable cost containment is necessary and prudent.

Q. HOW MANY PROPERTIES DO THE PROPOSED TRANSMISSION LINE AND THE ALTERNATIVE LINES CROSS?

A. Exhibit UEC/102, Toth/3 includes a map that shows the routes of the proposed Transmission Line and alternative lines and the number of properties the lines cross.

Q. HOW DOES UEC PLAN TO ADDRESS SAFETY RELATED ISSUES?

A. The proposed Transmission Line will be constructed, operated, and maintained to meet or exceed all applicable National Electrical Safety Code standards, as well as all applicable federal, state and local laws, regulations, and ordinances.

Q. WILL THE PROPOSED TRANSMISSION LINE HAVE OTHER REGIONAL BENEFITS?

A. Yes. Not only will the proposed Transmission Line benefit UEC members and increase system reliability, the line will also benefit the City of Hermiston's electric utility through increased reliability and capacity, and in general support the state's goals of avoiding the duplication of facilities. Attached to my testimony as Exhibit UEC/109 is a letter from Hermiston Energy Services in support of the proposed Transmission Line describing some of these benefits.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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OF OREGON

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In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

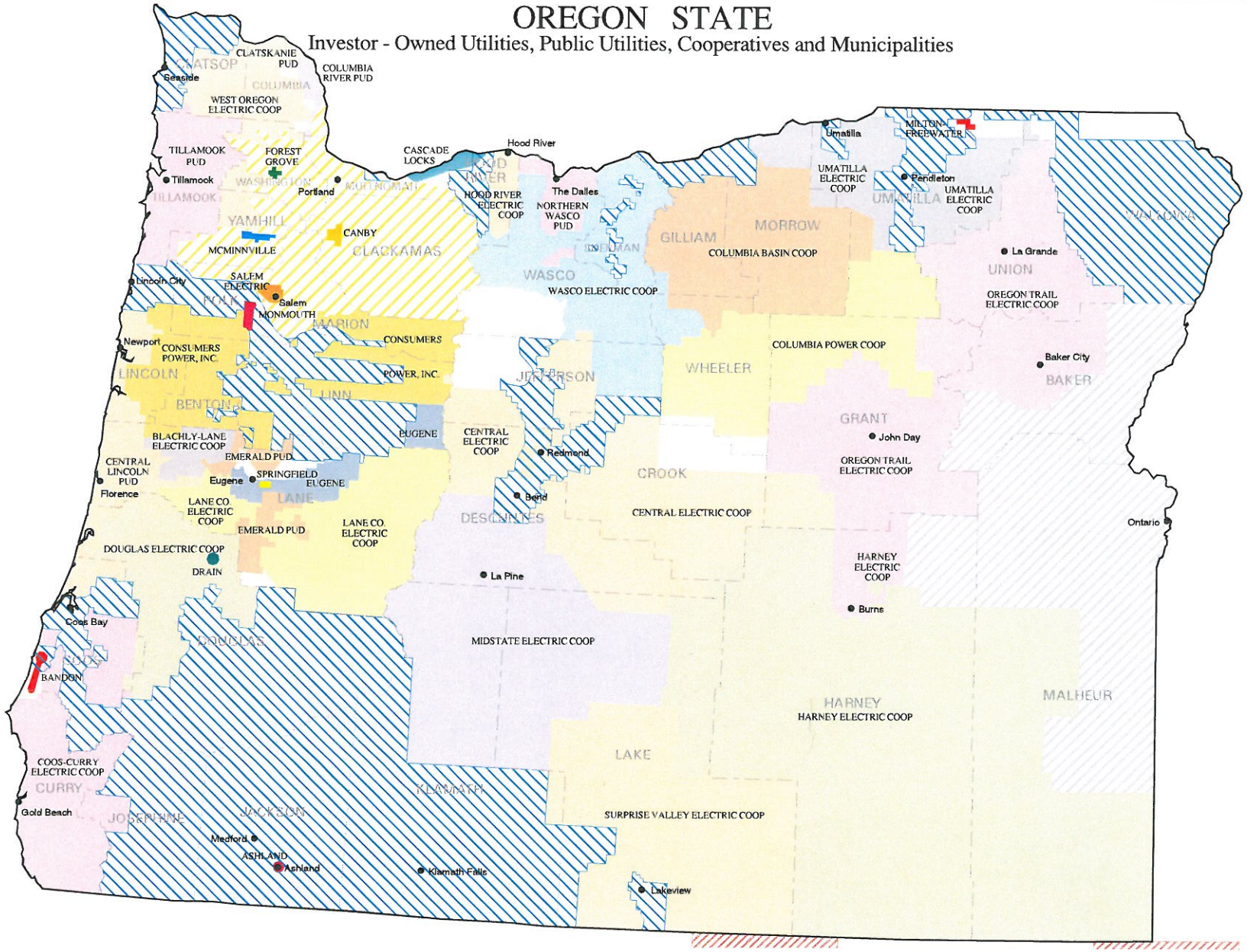
PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/101

August 19, 2016

OREGON STATE

Investor - Owned Utilities, Public Utilities, Cooperatives and Municipalities



BONNEVILLE POWER ADMINISTRATION

GIS GEOGRAPHIC INFORMATION SYSTEM

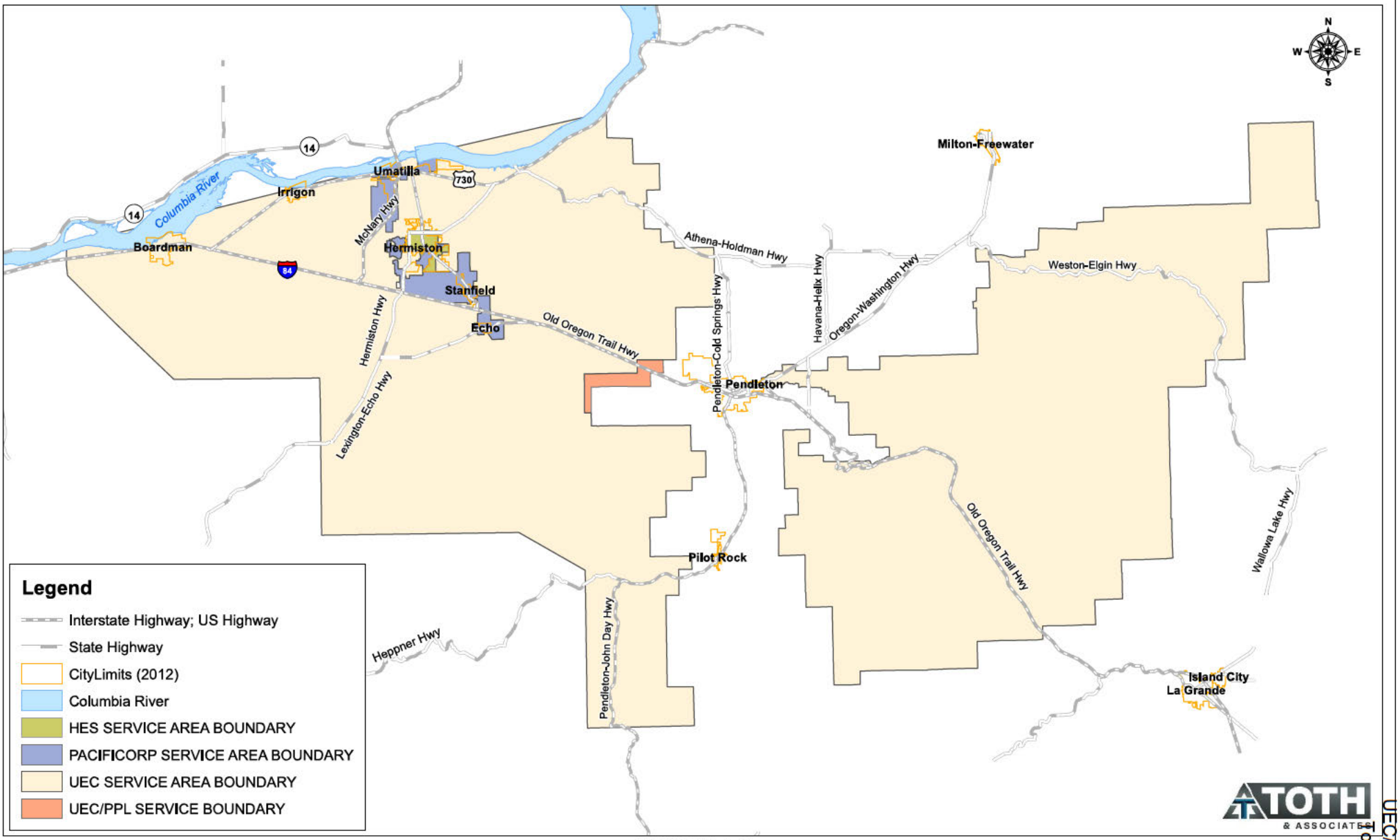
NZ21008e March 22, 2001

INVESTOR OWNED UTILITIES

- Idaho Power Company
- PacifiCorp (Pacific Power & Light)
- Portland General Electric (ENRON)
- Sierra Pacific

N W E S

UEC/101
Toth/1



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Map Date: 5/19/2016 By: JRC

UMATILLA
SERVICE AREA BOUNDARIES

0 12.5 25 Miles

TOTH & ASSOCIATES

UEC/101
Toth/2

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

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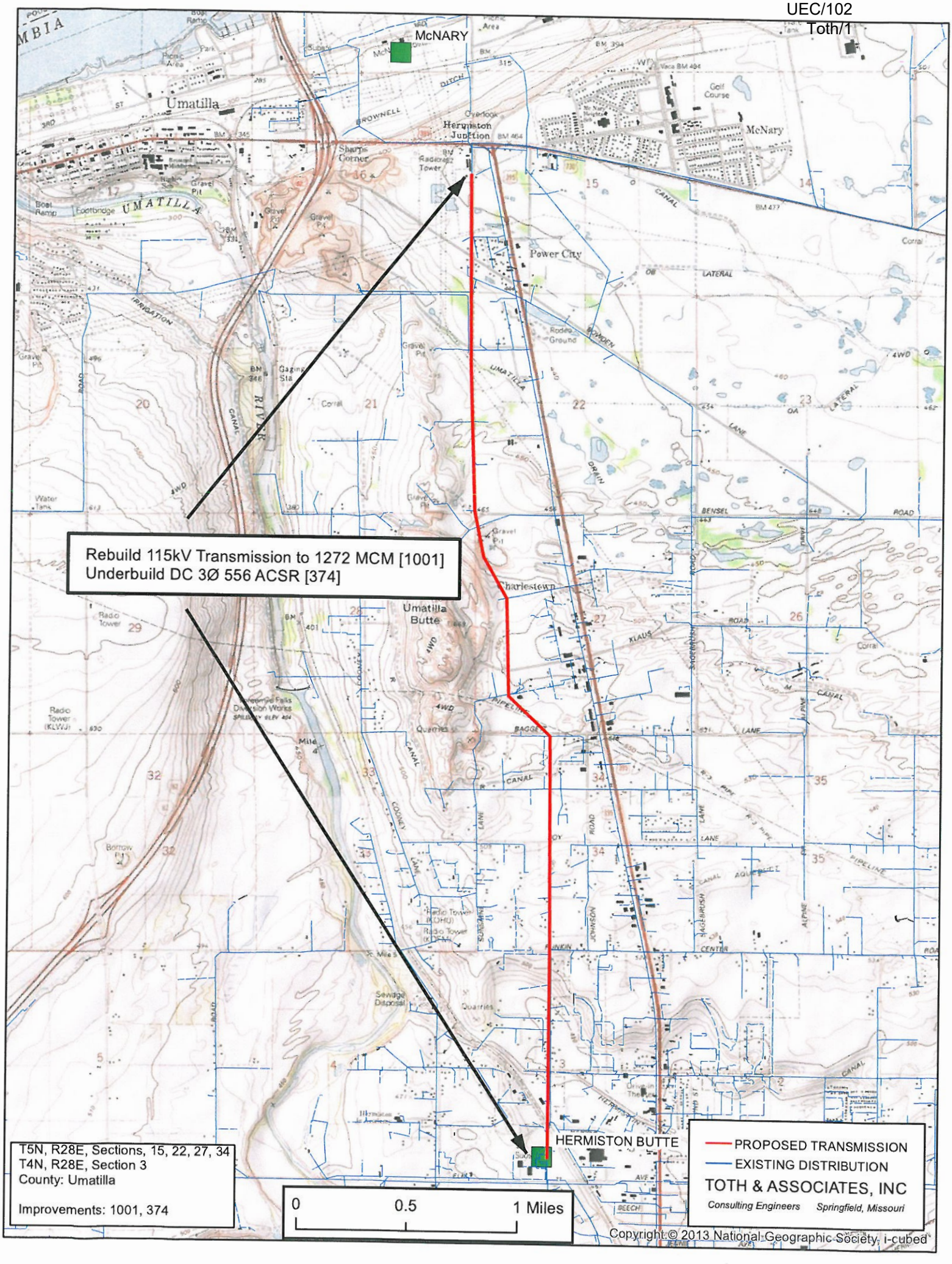
EXHIBIT UEC/102

August 19, 2016


McNARY
Umatilla
Hermiston Junction
McNary
Power City
Rebuild 115kV Transmission to 1272 MCM [1001]
Underbuild DC 3Ø 556 ACSR [374]
Umatilla Butte
Charlestown
HERMISTON BUTTE
T5N, R28E, Sections, 15, 22, 27, 34
T4N, R28E, Section 3
County: Umatilla
Improvements: 1001, 374
0
0.5
1 Miles
PROPOSED TRANSMISSION
EXISTING DISTRIBUTION
TOTH & ASSOCIATES, INC
Consulting Engineers Springfield, Missouri
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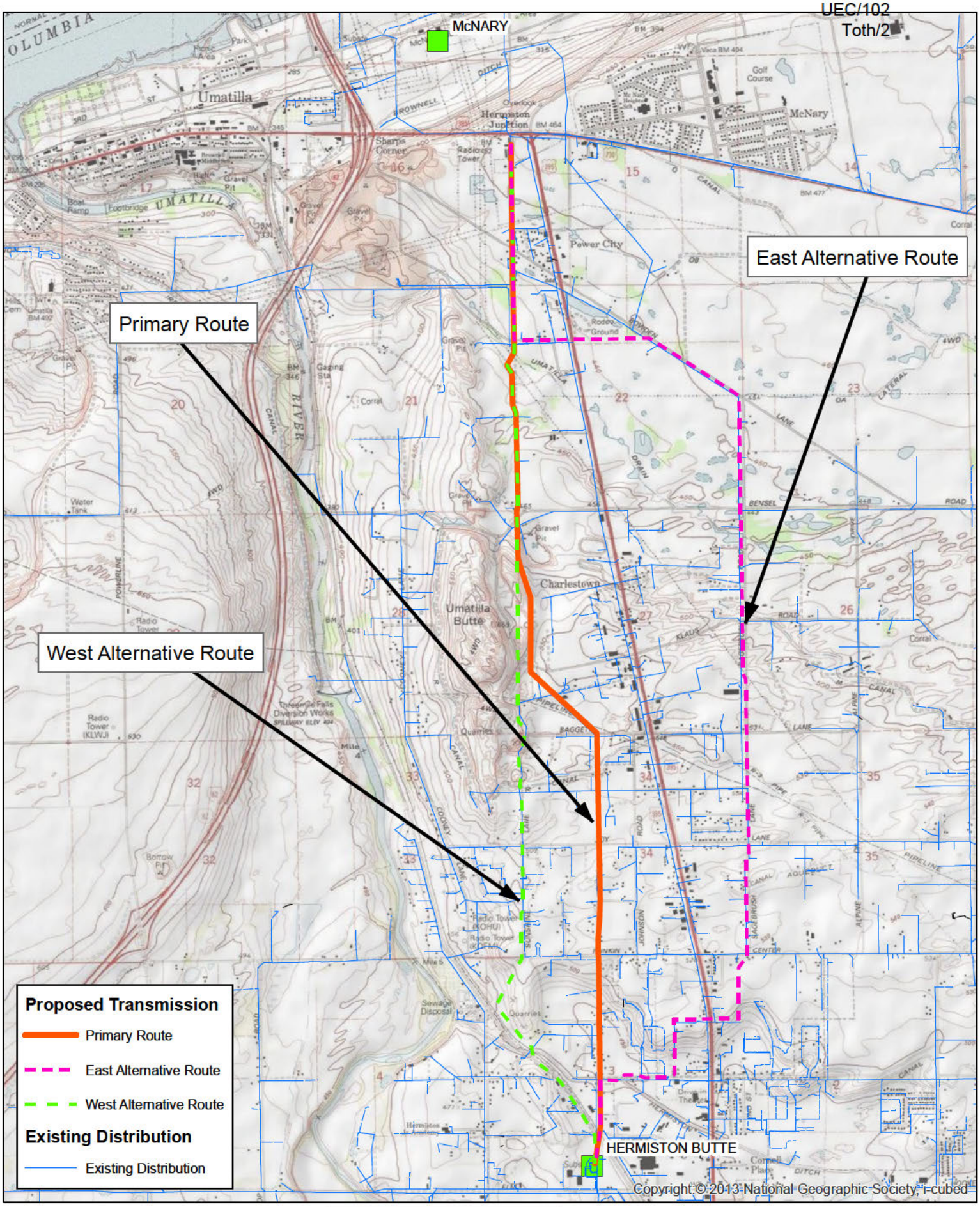

TOTH & ASSOCIATES

Primary Option
T5N, R28E, Sections, 15, 22, 27, 34
T4N, R28E, Section 3
County: Umatilla
Improvements: 1001, 374

0 0.25 0.5 1 Miles

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Butte-McNary 115 kV Transmission Line Affected Parcels Map

MAP DISCLAIMER: 2009 Parcel data obtained from Umatilla Electric Cooperative on 7/29/15 . No warranty is made by Toth & Associates or Umatilla Electric Cooperative as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notifications. GIS data is not survey grade. Coordinate and spatial locations of parcel data should be used for reference purposed only. Coordinates have an error factor of a minimum of + or - 50 feet. Subsequently there are many factors that contribute to the inaccuracy.

McNARY

HERMISTON BUTTE

Any parcel that was within 25' of the proposed routes was counted as an affected parcel.

Affected Parcels
West Alternative Route: 56
Primary Route: 77
East Alternative Route: 82

Proposed Transmission
- West Option
- Primary Route
- East Option
- Parcels West Route
- Parcels Primary Route
- Parcels East Route

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T5N, R28E, Sections, 15, 22, 27, 34
T4N, R28E, Section 3
County: Umatilla

N W E S

0 0.25 0.5 1 Miles

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Map By: abohn Date: 6/30/2016

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

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In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/103

REDACTED

August 19, 2016

EXHIBIT UEC/103 IS CONFIDENTIAL AND IS BEING SUBMITTED CONFIDENTIALLY PURSUANT TO OAR 860-001-0070 IN A REDACTED FORM WITH THIS FILING

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EXHIBIT UEC/104

August 19, 2016

2006-2016 Outage Report for McNary 115 kV Feeder #2

Customer Name	Line/POD Name	kV	OutDatetime	InDatetime	Dur Mins	Dispatch Cause	Field Cause
Umatilla E Coop	McNary: Umatilla E Coop 115kV Feeder 2	115.0	2/19/2016 14:07	2/19/2016 16:06	119	Unknown	Weather
Umatilla E Coop	McNary: Umatilla E Coop 115kV Feeder 2	115.0	9/29/2015 16:32	9/29/2015 18:34	122	Line Material Failure	Foreign Object
Umatilla E Coop	McNary: Umatilla E Coop 115kV Feeder 2	115.0	9/15/2013 17:34	9/15/2013 19:09	95	Not Reported	Not Reported
Umatilla E Coop	McNary: Umatilla E Coop 115kV Feeder 2	115.0	9/13/2013 4:12	9/13/2013 6:07	115	Not Reported	Not Reported
Umatilla E Coop	McNary: Umatilla E Coop 115kV Feeder 2	115.0	9/13/2013 2:18	9/13/2013 3:59	101	Not Reported	Not Reported
Umatilla E Coop	McNary: Umatilla E Coop 115kV Feeder 2	115.0	4/11/2012 15:25	4/11/2012 15:55	30	Unknown	Not Reported
Umatilla E Coop	McNary: Umatilla E Coop 115kV Feeder 2	115.0	5/19/2006 16:25	5/20/2006 0:24	479	Not Reported	Not Reported

Information Provided by BPA

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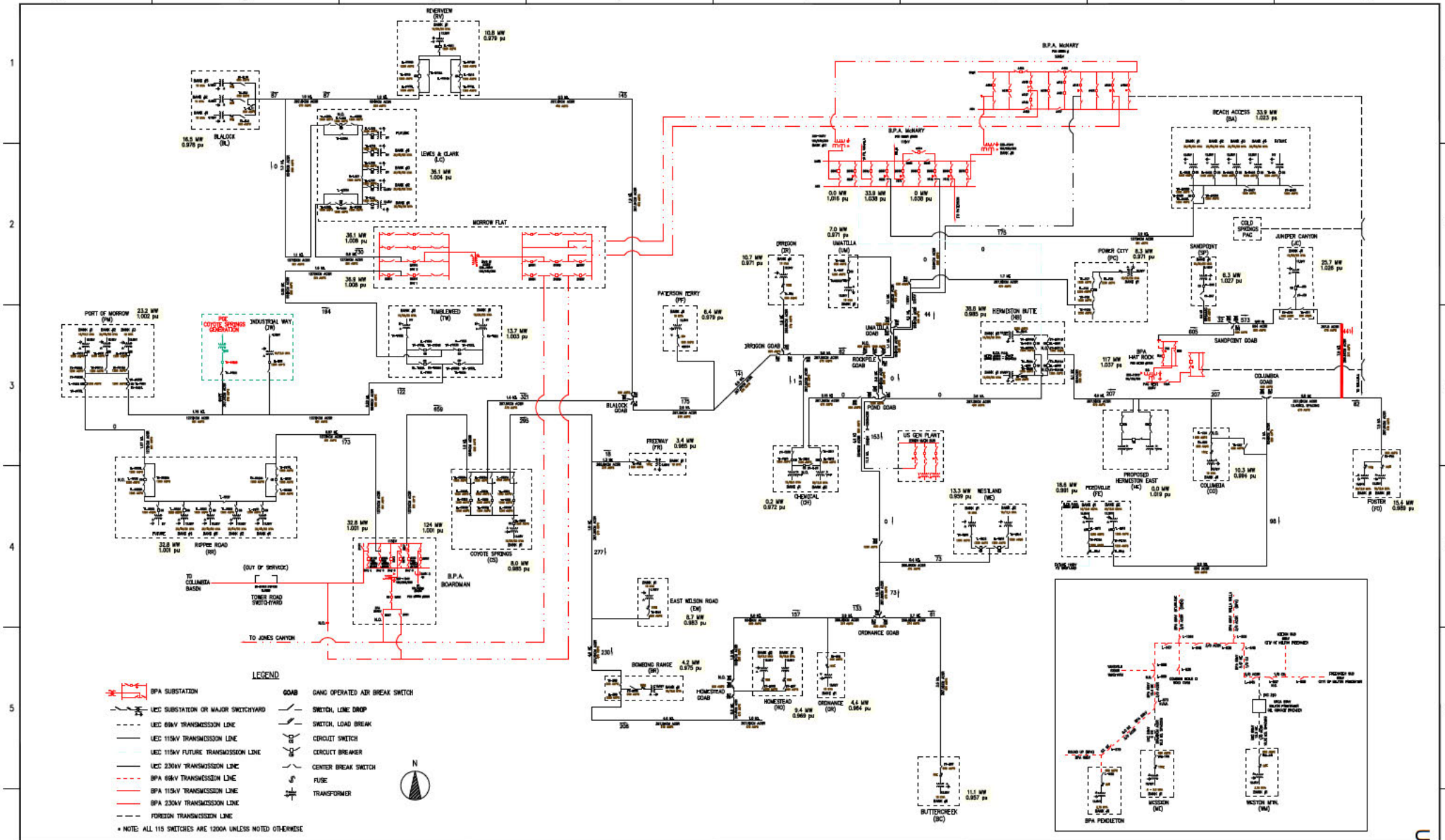
EXHIBIT UEC/105

August 19, 2016



NO	REVISION	DATE	BY	APR
1	Updates	04/20/16	BAB	JMM

TOTH & ASSOCIATES

UMATILLA ELECTRIC COOPERATIVE

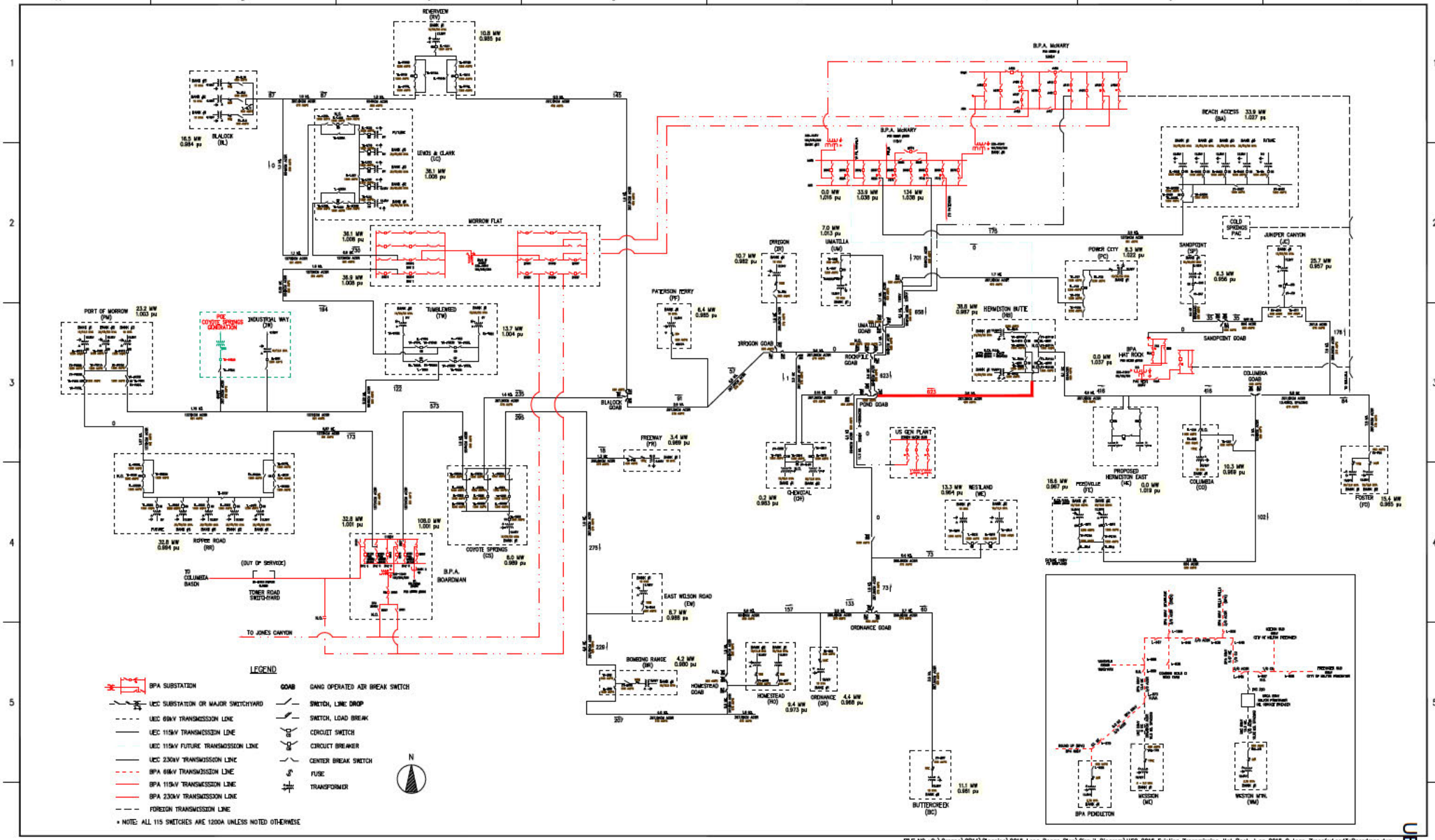
FILE NO.: O:\Oregon\OR14\Planning\2016 Long Range Plan\Circuit Diagram\UEC 2016 Existing Transmission_Hat Rock June 2016 Outage Existing.dwg

ENGINEERING RECORD		DATE
DRAWN	BAB	01/12/15
DESIGNED		
CHECKED	JMM	01/12/15
APPROVED	JMM	01/12/15
DWG SCALE: NONE	PLT SCALE: NTS	

UMATILLA ELECTRIC COOPERATIVE
MCNARY OUTAGE
TRANSMISSION SYSTEM – 2016 LOADS

Transmission TL Hermiston– Boardman | REVISION NO : 1

UEC/105
Toth/xx



NO	REVISION	DATE	BY	APR
1	Updates	04/20/16	BAB	JMM

FILE NO.: O:\Oregon\OR14\Planning\2016 Long Range Plan\Circuit Diagram\UEC 2016 Existing Transmission_Hat Rock June 2016 Outage_TransferLoadToBoardman.dwg

ENGINEERING RECORD		DATE
DRAWN	BAB	01/12/15
DESIGNED		
CHECKED	JMM	01/12/15
APPROVED	JMM	01/12/15
DWG SCALE: NONE	PLT SCALE: NTS	

UMATILLA ELECTRIC COOPERATIVE
HAT ROCK OUTAGE
TRANSMISSION SYSTEM – 2016 LOADS
Transmission 1L Hermiston– Boardman
REVISION NO : 1

UEC/105
Toth/23

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EXHIBIT UEC/106

August 19, 2016

Distribution Construction Units

Section

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
556 AAC	117.6	$2,350.00	$1,500.00	$452,760.00
C8	4	2,500.00	1,200.00	14,800.00
C9	114	750.00	950.00	193,800.00
C7	23	2,350.00	1,600.00	90,850.00
C8 (ST)	2	2,000.00	600.00	5,200.00
M2-11	40	100.00	75.00	7,000.00
G1.x	14	800.00	100.00	12,600.00
A5-1	5	100.00	100.00	1,000.00
UA1	2	3,000.00	1,000.00	8,000.00
TG-21A	34	175.00	80.00	8,670.00
TG-21C	24	275.00	150.00	10,200.00
TG-21E	16	175.00	80.00	4,080.00
TG-21B	16	250.00	140.00	6,240.00
TA-3H	44	450.00	250.00	30,800.00
TA-4L	8	600.00	325.00	7,400.00
TA-2L	6	600.00	375.00	5,850.00
TA-2P	6	800.00	80.00	5,280.00
Meter Loop	3	2,500.00	200.00	8,100.00
Comm Attach	78	225.00	25.00	19,500.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
			Total Section DISTRIBUTION	**$892,130.00**

Distribution Construction Units

WRECK-OUT, Distribution

A miscellaneous assembly unit consists of an additional unit needed in the Project for line construction but not otherwise listed in the Proposal.

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
556	54	$1,500.00	$0.00	$81,000.00
336	14	1,300.00	0.00	18,200.00
guy	56	50.00	0.00	2,800.00
C9	71	150.00	0.00	10,650.00
C8	4	400.00	0.00	1,600.00
C7	16	300.00	0.00	4,800.00
A5	2	5.00	50.00	110.00
C1	6	75.00	0.00	450.00
A7	1	250.00	0.00	250.00
G1.x	14	350.00	0.00	4,900.00
Triplex	11	60.00	0.00	660.00
A9	5	75.00	0.00	375.00
55-2	20	650.00	0.00	13,000.00
35-4	1	300.00	0.00	300.00
UA1	2	800.00	0.00	1,600.00
UA3				0.00
Meter Loop	3	850.00	0.00	2,550.00
Comm Attach	78	45.00		3,510.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
Total Section WRECK-OUT, distribution				**$146,755.00**

Transmission Construction Units

Section 1 - Pole Units (Wood)

A pole unit consists of one pole in place. It does not include pole-top assembly unit or other parts attached to the pole. The first two digits indicate the length of the pole; the third digit shows the classification per A.S.A. (Example: 45-3 means a pole 45 feet long, class 3)A pole unit also includes labor to haul and transport the pole from its storage area.

Unit Number	Number Of Units	Labor Price	Material Price	Extended Price
30-1	2	2,000.00	500.00	5,000.00
30-2	1	2,000.00	475.00	2,475.00
30-3	1	2,000.00	400.00	2,400.00
35-2	1	2,000.00	500.00	2,500.00
35-3	1	2,000.00	475.00	2,475.00
				0.00
55-1	3	2,500.00	650.00	9,450.00
60-H1	1	3,000.00	2,000.00	$5,000.00
65-1	3	3,250.00	1,700.00	14,850.00
75-1	2	3,700.00	2,250.00	11,900.00
80-1	4	3,750.00	2,400.00	$24,600.00
80-H1	6	3,750.00	2,700.00	38,700.00
80-H2	4	3,750.00	3,200.00	27,800.00
85-1	4	3,850.00	2,650.00	26,000.00
85-H1	6	3,850.00	3,000.00	41,100.00
85-H2	17	3,850.00	3,500.00	124,950.00
85-H3	5	3,850.00	4,000.00	39,250.00
90-1				0.00
90-H1	8	4,100.00	4,500.00	68,800.00
90-H2	5	4,100.00	4,750.00	44,250.00
90-H3	4	4,100.00	5,250.00	37,400.00
95-1	1	4,200.00	3,200.00	7,400.00
95-H1	1	4,200.00	3,500.00	7,700.00
95-H2	2	4,200.00	3,850.00	16,100.00
95-H3	7	4,200.00	4,200.00	58,800.00
95-H4	3	4,200.00	6,000.00	30,600.00
			Total Section 1	continued next page

Transmission Construction Units

Section 1 - Pole Units (Wood)

A pole unit consists of one pole in place. It does not include pole-top assembly unit or other parts attached to the pole. The first two digits indicate the length of the pole; the third digit shows the classification per A.S.A. (Example: 45-3 means a pole 45 feet long, class 3)A pole unit also includes labor to haul and transport the pole from its storage area.

Unit Number	Number Of Units	Labor Price	Material Price	Extended Price
				0.00
				0.00
				0.00
100-H3	1	4,300.00	5,400.00	9,700.00
100-H4	1	4,300.00	5,800.00	10,100.00
105-H1	1	4,500.00	4,800.00	9,300.00
				0.00
105-H3	1	4,500.00	5,500.00	10,000.00
				0.00
				0.00
				0.00
				0.00
Dig 2' at Each Hole for "Artifacts"	110	250.00		27,500.00
Tribe Inspect for Line item above	100 days	750.00		75,000.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
			Total Section 1	**$791,100.00**

Transmission Construction Units

Section 1A - Pole Units (Steel)

A steel pole unit consists of one pole in place. It does not include pole-top assembly unit or other parts attached to the pole. The first two digits indicate the length of the pole; the third digit shows the classification per A.S.A. (Example: 45-3 means a pole 45 feet long, class 3)A pole unit also includes labor to haul and transport the pole from its storage area. Also included: assembly of the steel pole, proper cant if necessary.)

Unit Number	Number Of Units	Labor Price	Material Price	Extended Price
				0.00
				0.00
				0.00
				0.00
				0.00
50-H3	2	2,000.00	5,500.00	15,000.00
				0.00
85-H2	1	2,500.00	7,500.00	$10,000.00
90-H3	2	2,500.00	7,750.00	20,500.00
				0.00
95-H4	4	3,000.00	8,250.00	$45,000.00
100-H5	3	3,500.00	9,500.00	39,000.00
105-H4	1	4,000.00	10,000.00	14,000.00
115-H5	2	5,000.00	13,500.00	37,000.00
				0.00
100 DE (no guys)	2	10,000.00	35,000.00	90,000.00
				0.00
				0.00
				0.00
				0.00
			Total Section 1	$270,500.00

Transmission Construction Units

Section 2 - Pole-Top Assembly Units

A pole-top assembly unit consists of the hardware, insulators, etc., except tie wire, required to support the power conductors and overhead ground wire. It does not include the pole, steel arm assemblies,the downlead, and butt coil, which are separate units.

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
TS-5A	3	1,400.00	3,900.00	$15,900.00
TP-115-Brace	88	750.00	2,250.00	264,000.00
Flat-Tangent DE	2	7,500.00	1,500.00	18,000.00
TS-5A-MOD	1	1,400.00	3,900.00	5,300.00
TS-5A-MOD1	1	1,400.00	3,900.00	5,300.00
TH-15-MOD	2	12,000.00	5,500.00	35,000.00
TS-4A	5	2,000.00	2,500.00	22,500.00
STA-				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
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				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
			Total Section 2	**$366,000.00**

Transmission Construction Units

Section 3 - Conductor Assembly Units

A conductor assembly unit consists of 1,000 feet of a single conductor or overhead ground wire, and includes tie wire, sleeves for splicing, and armor rods with clips or armor wire where necessary. The length of conductor or overhead ground wire shall be determined by taking the sum of all straight horizontal span distances between pole stakes or from center to center of the poles carrying the conductors. The conductor sizes and types listed are the manufacturer's designation. The work includes installation, proper sagging, clipping in, installation of jumper cables, and any incidental work to dead-end the existing conductors into new structures and adjacent structure.

☐ Tension Stringing (Engineer Check when required.)

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
1272	74.7	3,000.00	3,250.00	$466,875.00
OPGW	24.9	2,000.00	1,400.00	84,660.00
3/8"EHS		1,200.00	150.00	0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
			Total Section 3	**$551,535.00**

Transmission Construction Units

Section 4 - Guy Assembly Units

A guy assembly unit consists of the hardware and wire. Guy guards are designated separately.

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
TG-21A	60	$175.00	$80.00	$15,300.00
TG-21C	44	275.00	150.00	18,700.00
TG-21E	32	175.00	80.00	8,160.00
TG-21B	18	250.00	140.00	7,020.00
				0.00
				0.00
				0.00
			Total Section 4	**$49,180.00**

Section 5 - Anchor Assembly Units

An anchor assembly unit consists of the anchor with rod or rods, complete, ready for attaching the guy wire.

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
TA-3H	80	$450.00	$250.00	$56,000.00
TA-4L	15	600.00	325.00	13,875.00
TA-2L	6	600.00	375.00	5,850.00
TA-2P	6	800.00	80.00	5,280.00
				0.00
				0.00
				0.00
			Total Section 5	**$81,005.00**

Transmission Construction Units

Section 6 - Miscellaneous Assembly Units

A miscellaneous assembly unit consists of an additional unit needed in the Project for line construction but not otherwise listed in the Proposal.

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
TM-9B	110	$125.00	$100.00	$24,750.00
M2-11	15	125.00	100.00	3,375.00
TM-1E	3	650.00	800.00	4,350.00
TM-101	110	300.00	100.00	44,000.00
Pacificorp 69kV Mod	1	75,000.00	0.00	75,000.00
TM-60	280	95.00	95.00	53,200.00
TM-Down WD	4	800.00	200.00	4,000.00
TM-Fiber Rack WD	4	2,250.00	1,700.00	15,800.00
TM-Sprial-VD	200	40.00	20.00	12,000.00
				0.00
				0.00
Caisson	2	60,000.00		120,000.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
			Total Section 6	**$356,475.00**

* - Contractor to provide 2" minus crushed rock backfill. Material price to be included in labor price.

Transmission Construction Units

ROCK

(Estimate of Rock Digging)

A miscellaneous assembly unit consists of an additional unit needed in the Project for line construction but not otherwise listed in the Proposal.

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
6'-10' of Rock Drill	20	$16,000.00	$0.00	$320,000.00
3'-5.5' of Rock Drill	25	10,000.00	0.00	250,000.00
1'-2.5' of Rock Drill	25	4,750.00	0.00	118,750.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
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				0.00
				0.00
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				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
			Total Section ROCK	**$688,750.00**

Transmission Construction Units

WRECK-OUT, Transmission

Unit Number	Number of Units	Labor Price	Material Price	Extended Price
1/0	57	$1,250.00	$0.00	$71,250.00
3/8"HSS	19	850.00	0.00	16,150.00
TSZ-1	31	125.00	0.00	3,875.00
TP-1	18	125.00	0.00	2,250.00
TS-5	5	125.00	0.00	625.00
TH-2	1	400.00	0.00	400.00
50-2	15	800.00	0.00	12,000.00
55-2	35	825.00	0.00	28,875.00
60-2	8	850.00	0.00	6,800.00
45-2	10	500.00	0.00	5,000.00
TS-4	3	125.00	0.00	375.00
65-2	1	900.00	0.00	900.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
Total Section WRECK-OUT, Transmission				**$148,500.00**

Total Contract Price

			Primary Route Section Subtotals	West Alternative Route Section Subtotals	East Alternative Route Section Subtotals
Distribution Assemblies		*pg*			
Section	Distribution Assembly Units	B-1	$892,130.00	$764,070.00	$906,670.00
Section	Wreck-Out, Distribution	B-2	$146,755.00	$100,450.00	$108,895.00
		Distribution Total	**$1,038,885.00**	**$864,520.00**	**$1,015,565.00**
Transmission Assemblies		*pg*			
Section 1	Pole Units, Wood	B-3 B-4	$791,100.00	$791,100.00	$974,250.00
Section 1A	Pole Units, Steel	B-4a	$270,500.00	$465,500.00	$510,500.00
Section 2	Pole-Top Assembly Units	B-5	$366,000.00	$393,800.00	$396,200.00
Section 3	Conductor Assembly Units	B-6	$551,535.00	$568,630.00	$708,800.00
Section 4	Guy Assembly Units	B-7	$49,180.00	$49,180.00	$49,180.00
Section 5	Anchor Assembly Units	B-7	$81,005.00	$81,005.00	$81,005.00
Section 6	Miscellaneous Assembly Units	B-8	$356,475.00	$666,475.00	$725,655.00
Section	ROCK	B-9	$688,750.00	$688,750.00	$842,500.00
Section	WRECK-OUT, Transmission	B-10	$148,500.00	$58,400.00	$27,125.00
		Transmission Sub Total	**$3,303,045.00**	**$3,762,840.00**	**$4,315,215.00**
	Engineering Design		$220,000.00	$234,000.00	$270,000.00
	Easement Aquistion Payments		$59,000.00	$119,000.00	$154,000.00
	Easement Aquistions Field Work, including Survey		$220,000.00	$234,000.00	$270,000.00
	Construction Observation/Contract Administration		$180,000.00	$192,000.00	$221,000.00
	UEC Personel Field and Office		$124,000.00	$132,000.00	$152,000.00
	Contingency		$25,000.00	$27,000.00	$31,000.00
		Transmission/Distribution Total	**$5,169,930.00**	**$5,565,360.00**	**$6,428,780.00**
		Rounded	**$5,170,000.00**	**$5,570,000.00**	**$6,430,000.00**
Substation Cost					
	McNary		$100,000.00	$100,000.00	$100,000.00
	Hermiston Butte		$470,000.00	$470,000.00	$470,000.00
		GRAND TOTAL	**$5,740,000.00**	**$6,140,000.00**	**$7,000,000.00**

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/107

August 19, 2016

Butte-McNary Easement Tabulation

Required easements are highlighted and shown with estimated values

PAGE #	TAX LOT #	OWNER	EASEMENT VALUE	ZONING
CU-802	200	SCHELL, JAMES	$ 1,680.17	C-1
CU-803	100	ANACAPA LAND CO., LLC	$ 743.92	F-2
CU-804	3902	POULSON, STEVEN & JONILYN	$ 971.02	R-1
CU-805	3900	RITZER, MICHAEL & TABITHA	$ 788.54	R-1
CU-806	3700	FREDERICKSON, DARYL & JUNE	$ 782.58	R-1
CU-807	3600	FREDERICKSON, DARYL & JUNE	$ 500.00	R-1
CU-808	4090	CHARLO, CLARENCE & GERALDINE	$ 928.63	R-1
CU-809	4091	MORRIS, KENNETH LEON & MARCIA DAWN	$ 500.00	R-1
CU-810	4100	MORRIS, KENNETH LEON & MARCIA DAWN	$ 500.00	R-1
CU-811	1700	BARRETO, GUADALUPE	$ 500.00	R-3
CU-811.1	100	ESTATE OF STUART BONNEY	$ 500.00	M-1
CU-812	1800	ARTEAGA, MANUAL & EVA	$ 500.00	R-3
CU-813	1900	WALLACE, JOHN & BARBARA	$ 500.00	R-3
CU-814	2000	FORDICE, CLINTON	$ 506.02	M-1
CU-815	2003	GARCIA, BUSTILLO SOILO	$ 1,069.56	M-1
CU-816	700	ESTATE OF STUART BONNEY	$ 992.49	M-1
CU-816.1	100	ESTATE OF STUART BONNEY	$ 500.00	M-1
CU-817	1600	ESTATE OF STUART BONNEY	$ 500.00	M-1
CU-817.1	1402	RANNE, DONALD	$ 500.00	R-1
CU-818	1800	WILLIAMS, RONALD	$ 500.00	M-1
CU-819	1900	ESTATE OF STUART BONNEY	$ 671.93	M-1
CU-820	2100	BURNS, PAUL	$ 571.82	M-1
CU-821	2300	UMATILLA COUNTY	$ 500.00	M-1
CU-822	1100	LOGSDON, NORRIS	$ 1,786.70	LI/AR
CU-822.1	100	UNITED STATES OF AMERICA	$ -	LI
CU-823.1	1400	RONALD BUWALDA	$ 500.00	LI
CU-825	110	JACKSON, STEVE	$ 552.69	LI
CU-826	100	SCHNELL, JOHN C	$ 980.13	LI
CU-827	300	DELHUR INDUSTRIES INC	$ 500.00	LI
CU-828	106	LUKENBILL, RICK R & DIANE	$ 1,814.86	LI
CU-829	703	GONLAZEZ , JUAN D SR & ORALIA M	$ 500.00	LI
CU-830	600	NOLAND, RONALD E & CINDY L	$ 1,804.98	LI
CU-831	701	PECK, BURTON H	$ 500.00	LI
CU-832	700	DRISCOLL, JOHN M & CAROLE L	$ 1,593.86	LI
CU-833	705	DRISCOLL, JOHN M & CAROLE L	$ 1,784.03	LI
CU-834	800	MEDELEZ TRUCKING INC	$ 1,875.46	LI
CU-835	405	RAMIREZ, GERARDO	$ 500.00	LI
CU-836	200	RAMIREZ, GERARDO	$ 500.00	LI
CU-837	407	DIAMOND M RANCH	$ 633.39	RR-4
CU-838	601	BAILEY, WENDELL C JR.	$ 1,138.70	RR-4
CU-842	301	UMATILLA COUNTY	$ 500.00	RR-2
CU-843	105	WARD, CHRIS & KATRINA	$ 1,093.67	RR-2
CU-844	302	MELVILLE JR, DAVID K & AMANDA	$ 500.00	RR-2
CU-845	300	COCHELL, WILLIAM L & IDA M	$ 882.65	RR-2
CU-846	110	SHAFFER, TED J & BARBARA	$ 931.95	RR-2
CU-847	1900	GARCIA, JOSE & REBECA	$ 737.28	RR-2
CU-848	1903	KYLE, JAMES C & RACIL M	$ 1,395.93	RR-2
CU-848.1	1905	MARTIN, PAMELA	$ 500.00	RR-2
CU-849	1904	DIRCKSEN, CRAIG A & HEATHER M	$ 1,408.11	RR-2
CU-850	500	NEWMAN & DACK	$ 741.25	R-4
CU-852	7500	MCDOUGAL, NORMAN	$ 500.00	R-4
CU-853	800	DUBOIS, JOEL & GLORIA	$ 500.00	R-4

Butte-McNary Easement Tabulation

Required easements are highlighted and shown with estimated values

PAGE #	TAX LOT #	OWNER	EASEMENT VALUE	ZONING
CU-854	4000	CITY OF HERMISTON	$ 500.00	R-4
CU-855	4100	MCDOUGAL, NORMAN	$ 500.00	R-4
CU-857	4200	JOHNSON, JOHN V JR & PAMELA J	$ 500.00	R-4
CU-858	201	MARK LARSON	$ 500.00	R-4
CU-859	200	COLVIN	$ 500.00	R-4
CU-860	202	WEBB, JEFFREY S & BRENDA	$ 500.00	R-4
CU-861	300	HALL, DONALD & DEBRA	$ 522.71	R-4
CU-862	500	DUMLER, CONRAD & JAIMEE	$ 500.00	R-4
CU-863	600	WERNER, HARLEY & CASON, MATTIE J (TRS)	$ 1,568.58	R-4
CU-864	400	BARLOW, RICK & RALPH & BERTHA (Berta)	$ 500.00	R-4
CU-865	1302	CITY OF HERMISTON	$ 500.00	M-1
CU-866	1401	AUTRY, LINDA R	$ 500.00	M-1
CU-867	1400	BRODERICK, THOMAS R	$ 500.00	M-1
CU-868	1403	ALLEMAN, DONALD & JACQUELINE	$ 535.53	M-1
CU-869	1402	THORPE, LARRY & CAROL	$ 500.00	M-1
CU-871	1309	BUSH, LLC	$ 500.00	M-1
CU-872	1311	HUXOLL, TOMMY L	$ 500.00	M-1
CU-873	2600	HUXOLL, TOMMY L	$ 500.00	M-1
CU-874	902	JUAN & MELBA ALMAGUER, JR.	$ 500.00	M-1
CU-875	1201	KOPACZ, RAYMOND & SHERRIE	$ 500.00	C-2

Total	$	53,489.13
Contingency (10%)	$	5,348.91
Grand Total	$	58,838.04
Rounded Total	$	59,000.00

The value of required easements not yet obtained (highlighted) total $12,589.12. Obtained easement values total $40,900.01.

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

SIGNED EASEMENT

REQUIRED EASEMENT

CENTERLINE

0 250 500

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 500'

DATE	REVISION	#
03/24/16	ISSUED FOR APPLICATION	0

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 03/23/16

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE

LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR

CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: OVERALL ROUTE MAP

SHT NO: CU-950

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 500 1000

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 500'

SIGNED EASEMENT REQUIRED EASEMENT CENTERLINE

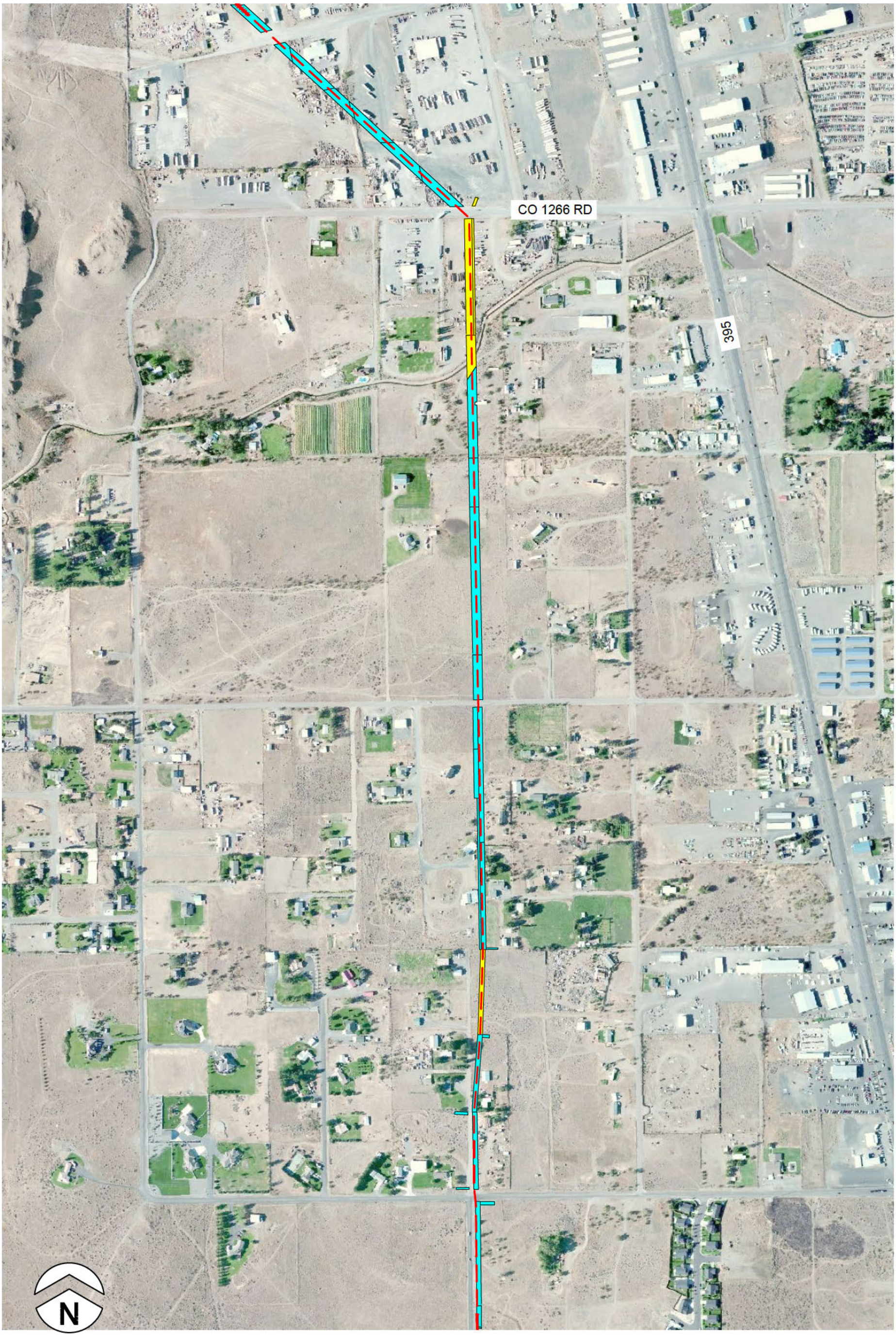
DATE	REVISION	#
03/24/16	ISSUED FOR APPLICATION	0

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 03/23/16

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: OVERALL ROUTE MAP
SHT NO: CU-951



BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 250 500

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 500'

SIGNED EASEMENT REQUIRED EASEMENT CENTERLINE

DATE	REVISION	#
03/24/16	ISSUED FOR APPLICATION	0
04/18/16	REVISED FOR APPLICATION	1
05/04/16	REVISED FOR APPLICATION	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 03/23/16

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE

LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR

CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: OVERALL ROUTE MAP

SHT NO: CU-952

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

SIGNED EASEMENT REQUIRED EASEMENT CENTERLINE

0 250 500

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 500'

DATE	REVISION	#
03/24/16	ISSUED FOR APPLICATION	0

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY: OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 03/23/16

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE

LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR

CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: OVERALL ROUTE MAP

SHT NO: CU-953

~~UEC/107~~
Toth/7

OWNER:
ANACAPA LAND CO., LLC
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2815CB TAX LOT #100

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
THE WEST 25 FEET OF THE REAL PROPERTY DESCRIBED AS TRACT II IN A STATUTORY WARRANTY DEED, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 2003-4450295, DATED AUGUST 19, 2003.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 75 150

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 150'

DATE	REVISION	#
03/23/16	REVISED FOR REFERENCE	1

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

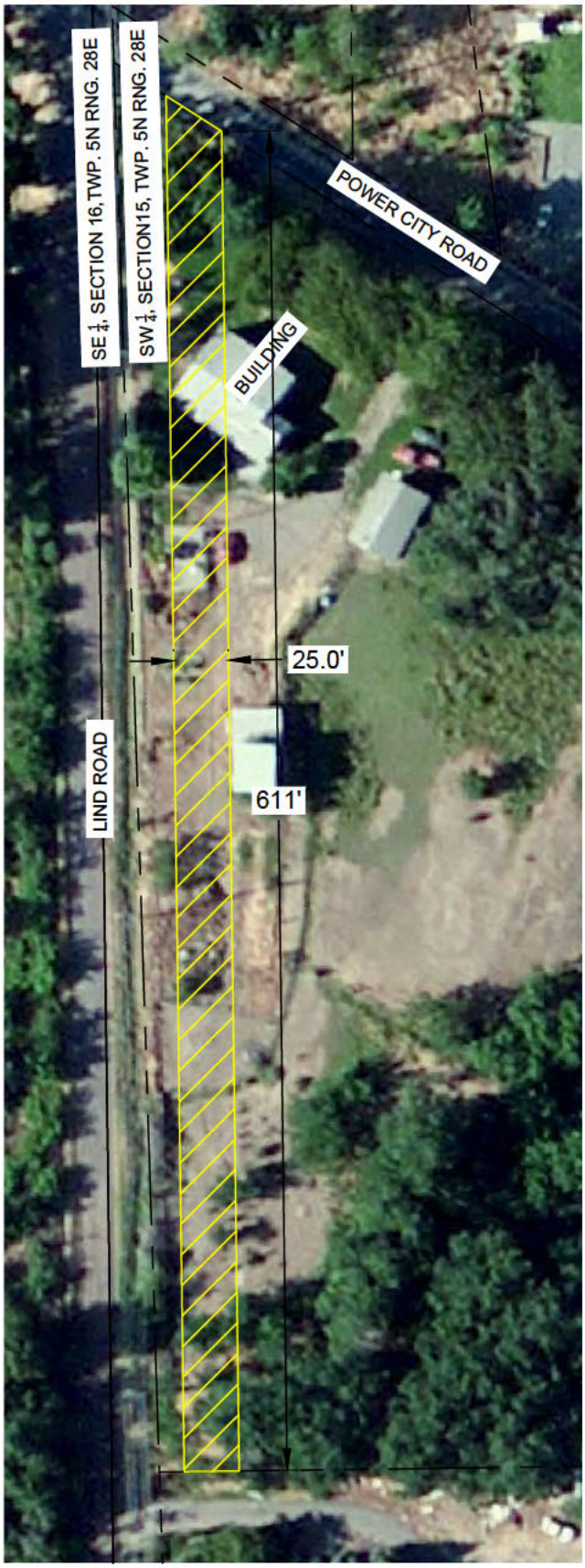
DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
ANACAPA LAND CO., LLC

SHT NO: CU-803

~~UEC/107~~
Toth/8



OWNER:
CLARENCE AND GERALDINE CHARLO
81999 LIND ROAD
UMATILLA, OR 97882
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2815CC TAX LOT #4090

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
THE WEST 25 FEET OF THE REAL PROPERTY DESCRIBED IN A WARRANTY DEED, RECORDED IN UMATILLA COUNTY, OREGON AS INSTRUMENT NUMBER 1977-25927, DATED JUNE 1977.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 40 80

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 80'

DATE	REVISION	#
03/23/16	REVISED FOR REFERENCE	1

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
CLARENCE & GERALDINE CHARLO

SHT NO: CU-808

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NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

THE EASEMENT WILL FACILITATE MOVING THE POWER LINE RUNNING ON THE WEST SIDE OF LIND ROAD TO THE EAST SIDE IN THIS AREA.

OWNER:
ESTATE OF STUART BONNEY
BETTY & AL HIATT C/O BARNETT & MORO
495 E. MAIN, HERMISTON, OR 97838
JANET BONNEY, GEORGE BONNEY, & KEN BONNEY

REQUIRED EASEMENT

EASEMENT DESCRIPTION:
LEGAL DESCRIPTION FOR A GUY ANCHOR EASEMENT LOCATED IN THE NORTHEAST ONE-QUARTER (NE1/4) OF SECTION 21, TOWNSHIP 5 NORTH, RANGE 28 EAST, W.M., UMATILLA COUNTY, OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 21; THENCE SOUTH 41°00'16" WEST A DISTANCE OF 44.47 FEET TO THE TRUE POINT OF BEGINNING OF THIS LEGAL DESCRIPTION; THENCE SOUTH 01°25'08" EAST ALONG THE WEST RIGHT-OF-WAY LINE OF LIND ROAD A DISTANCE OF 21.48 FEET; THENCE SOUTH 89°52'06" WEST A DISTANCE OF 46.66 FEET; THENCE NORTH 01°24'50" WEST A DISTANCE OF 20.70 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF COUNTY ROAD NO. 620; THENCE NORTH 88°54'43" EAST ALONG SAID RIGHT-OF-WAY LINE A DISTANCE OF 46.65 FEET TO THE TRUE POINT OF BEGINNING. CONTAINS 984 SQUARE FEET.

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 50 100

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 100'

DATE	REVISION	#
02/17/16	EASEMENT ADDED	0
03/23/16	REVISED FOR REFERENCE	1
04/01/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
STUART BONNEY

SHT NO: CU-811.1

~~UEC/107~~
Toth/10

REQUIRED EASEMENT

OWNER:
CLINTON AND BECKY FORDICE
81881 & 81883 LIND ROAD
HERMISTON, OR 97838
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2822BB TAX LOT #2000

EASEMENT DESCRIPTION:
THE WEST 25 FEET OF THE REAL PROPERTY DESCRIBED IN A WARRANTY DEED, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 96-218928, DATED MAY 24, 1996.

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

THE EASEMENT WILL FACILITATE MOVING THE POWER LINE RUNNING ON THE WEST SIDE OF LIND ROAD TO THE EAST SIDE IN THIS AREA.

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 35 70

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 70'

DATE	REVISION	#
01/29/15	REVISED ASSESSMENT MAP INFORMATION	1
03/23/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
CLINTON & BECKY FORDICE

SHT NO: CU-814

~~UEC/107~~
~~Toth/11~~

OWNER:
ESTATE OF STUART BONNEY
BETTY & AL HIATT, C/O BARNETT & MORO
495 E. MAIN, HERMISTON, OR 97838
JANET BONNEY, GEORGE BONNEY, & KEN BONNEY
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2822 TAX LOT #700

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

THE EASEMENT WILL FACILITATE MOVING THE POWER LINE RUNNING ON THE WEST SIDE OF LIND ROAD TO THE EAST SIDE IN THIS AREA.

EASEMENT DESCRIPTION:
BEGINNING AT THE NORTHWEST CORNER OF PARCEL 2 OF PARTITION PLAT NO. 1997-25, RECORDS OF UMATILLA COUNTY, OREGON, THENCE NORTH 89°33'06" EAST ALONG THE NORTH LINE OF SAID PARCEL 2 A DISTANCE OF 25.01 FEET; THENCE SOUTH 01°25'06" EAST A DISTANCE OF 72.81 FEET; THENCE SOUTH 15°51'44" EAST A DISTANCE OF 180.41 FEET; THENCE SOUTH 44°47'28" WEST A DISTANCE OF 62.34 FEET; THENCE SOUTH 01°25'06" EAST A DISTANCE OF 65.00 FEET; THENCE SOUTH 88°49'58" WEST A DISTANCE OF 25.00 FEET TO THE WEST LINE OF SAID PARCEL 2; THENCE NORTH 01°25'06" WEST ALONG THE WEST LINE OF SAID PARCEL 2 A DISTANCE OF 356.37 FEET TO THE POINT OF BEGINNING. CONTAINS 13,802 SQUARE FEET.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 100 200

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 200'

DATE	REVISION	#
02/03/16	EASEMENT REVISED	1
03/23/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
STUART BONNEY

SHT NO: CU-816

~~UEC/107~~
Toth/12

OWNER:
ESTATE OF STUART BONNEY
BETTY & AL HIATT, C/O BARNETT & MORO
495 E. MAIN, HERMISTON, OR 97838
JANET BONNEY, GEORGE BONNEY, & KEN BONNEY
NO EASEMENT OF RECORD PROVIDED

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

REQUIRED EASEMENT

EASEMENT DESCRIPTION:
LEGAL DESCRIPTION FOR A POWERLINE AND GUY ANCHOR EASEMENT LOCATED IN THE NORTHEAST ONE-QUARTER (NE1/4) OF SECTION 21, TOWNSHIP 5 NORTH, RANGE 28 EAST, W.M., UMATILLA COUNTY, OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF PARCEL 3 OF PARTITION PLAT NO. 2004-07, RECORDS OF UMATILLA COUNTY, OREGON, THENCE SOUTH 89°50'01" WEST ALONG THE NORTH LINE OF SAID PARCEL 3 A DISTANCE OF 25.00 FEET; THENCE NORTH 01°25'08" WEST A DISTANCE OF 507.75 FEET; THENCE NORTH 44°48'14" WEST A DISTANCE OF 280.59 FEET; THENCE SOUTH 37°54'40" WEST A DISTANCE OF 59.49 FEET; THENCE NORTH 52°05'20" WEST A DISTANCE OF 15.00 FEET; THENCE NORTH 37°54'40" EAST A DISTANCE OF 61.40 FEET; THENCE NORTH 44°48'14" WEST A DISTANCE OF 12.60 FEET; THENCE NORTH 37°54'31" EAST A DISTANCE OF 12.67 FEET; THENCE NORTH 42°48'50" WEST A DISTANCE OF 60.96 FEET; THENCE NORTH 47°11'10" EAST A DISTANCE OF 15.00 FEET; THENCE SOUTH 42°48'50" EAST A DISTANCE OF 58.51 FEET; THENCE NORTH 37°54'31" EAST A DISTANCE OF 345.75 FEET TO THE WEST RIGHT-OF-WAY LINE OF LIND ROAD; THENCE SOUTH 01°25'08" EAST ALONG SAID RIGHT-OF-WAY LINE A DISTANCE OF 174.65 FEET; THENCE SOUTH 29°04'03" WEST A DISTANCE OF 145.20 FEET; THENCE SOUTH 31°29'59" EAST A DISTANCE OF 146.97 FEET TO SAID WEST RIGHT-OF-WAY LINE OF LIND ROAD; THENCE SOUTH 01°25'08" EAST ALONG SAID RIGHT-OF-WAY LINE A DISTANCE OF 594.42 FEET TO THE POINT OF BEGINNING. CONTAINS 68,758 SQUARE FEET.

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 100 200

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 200'

DATE	REVISION	#
02/03/16	EASEMENT REVISED	1
03/23/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY: OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
STUART BONNEY

SHT NO: CU-816.1

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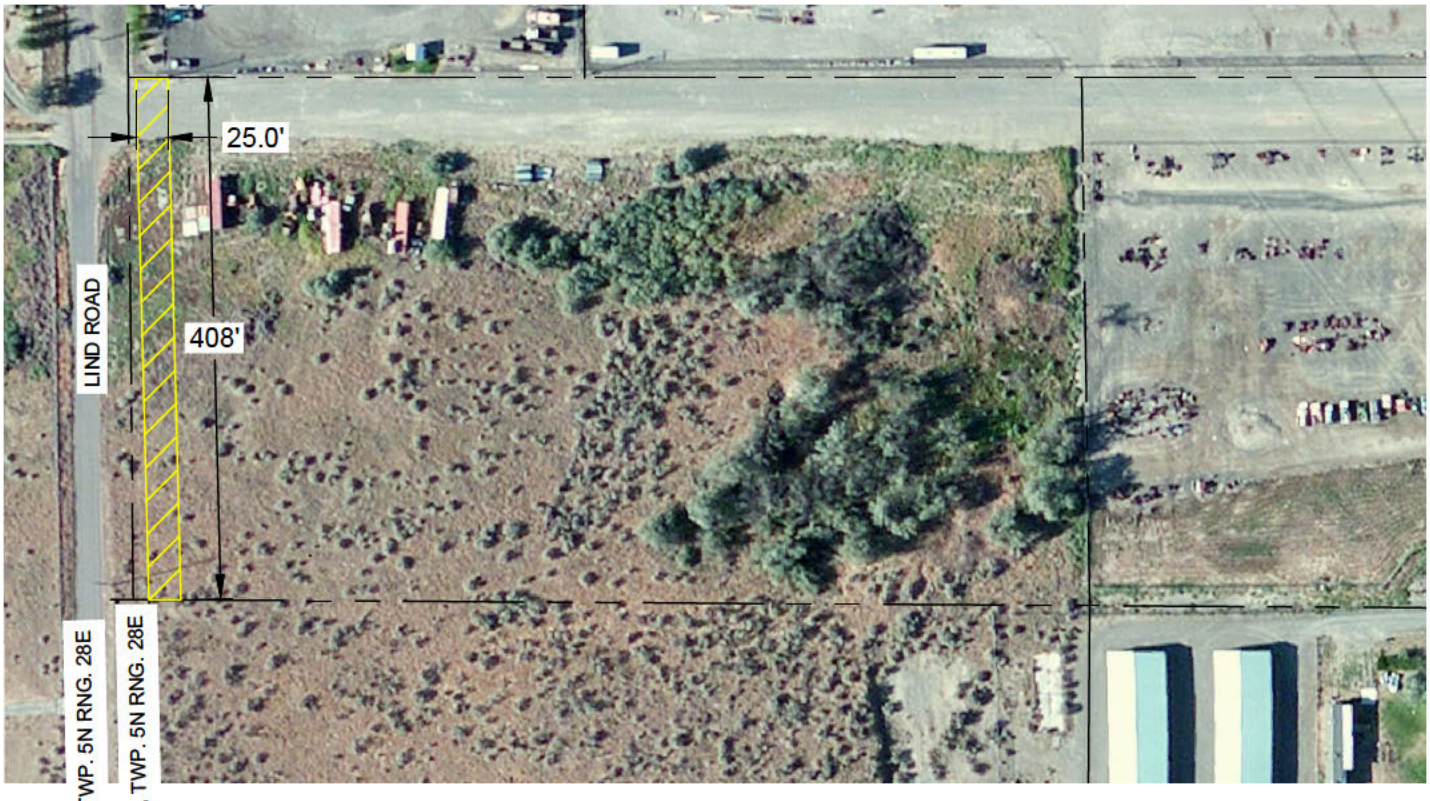
~~UEC/107~~
Toth/13



OWNER:
ESTATE OF STUART BONNEY
BETTY & AL HIATT, C/O BARNETT & MORO
495 E. MAIN, HERMISTON, OR 97838
JANET BONNEY, GEORGE BONNEY, & KEN BONNEY
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2822 TAX LOT #1900

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 75 150

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 150'

EASEMENT DESCRIPTION:
THE WEST 25 FEET OF THE REAL PROPERTY DESCRIBED AS PARCEL 2 OF PARTITION PLAT 2001-17, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 2001-3860258, DATED APRIL 9, 2001.

REQUIRED EASEMENT

DATE	REVISION	#
03/23/16	REVISED FOR REFERENCE	1
06/08/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

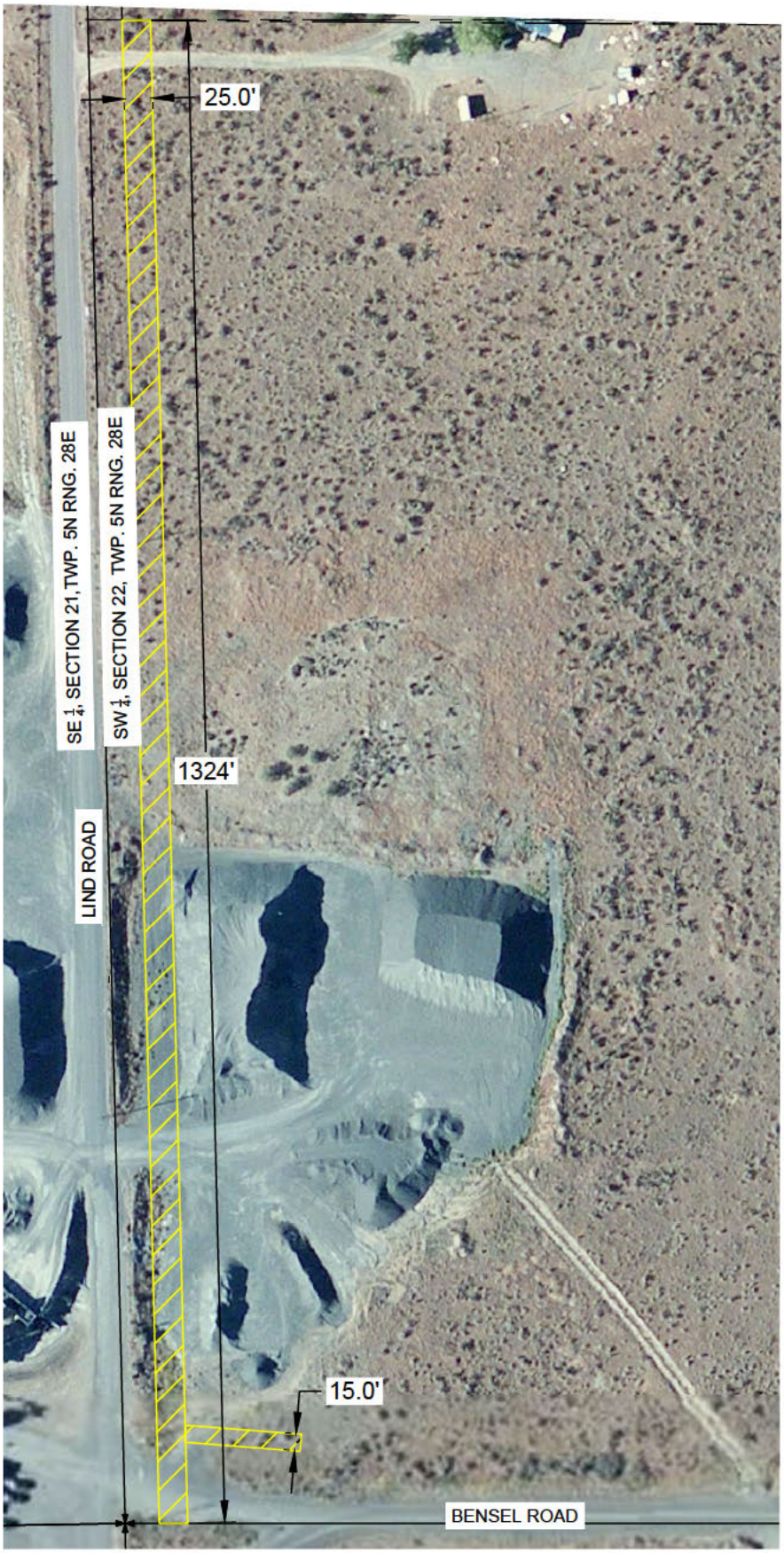
DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
STUART BONNEY

SHT NO: CU-819

~~UEC/107~~
Toth/14



OWNER:
COUNTY OF UMATILLA
216 SE 4TH ST., PENDLETON, OR 97801
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2822 TAX LOT #2300

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
THE WEST 25 FEET OF THE REAL PROPERTY DESCRIBED AS W 1/2, SW 1/4, SW 1/4 IN A SHERIFF'S DEED, RECORDED IN UMATILLA COUNTY, OREGON ON PAGE 479 AND 489, DATED DECEMBER 4, 1935 AND BEGINNING AT THE NORTHEAST INTERSECTION POINT OF THE RIGHT-OF-WAYS OF LIND ROAD AND BENSEL ROAD, THENCE SOUTH 89°36'34" EAST ALONG THE NORTH RIGHT-OF-WAY LINE OF BENSEL ROAD A DISTANCE OF 25.00 FEET; THENCE NORTH 01°25'04" WEST A DISTANCE OF 42.56 FEET TO THE TRUE POINT OF BEGINNING OF THIS LEGAL DESCRIPTION; THENCE NORTH 01°25'04" WEST A DISTANCE OF 15.08 FEET; THENCE SOUTH 85°29'45" EAST A DISTANCE OF 102.65 FEET; THENCE SOUTH 04°30'15" WEST A DISTANCE OF 15.00 FEET; THENCE NORTH 85°29'45" WEST A DISTANCE OF 101.10 FEET TO THE TRUE POINT OF BEGINNING. CONTAINS 1,528 SQUARE FEET.

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 75 150

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 150'

DATE	REVISION	#
02/03/16	REVISED EASEMENT	1
03/23/16	REVISED FOR REFERENCE	2
06/08/16	REVISED FOR REFERENCE	3

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
COUNTY OF UMATILLA

SHT NO: CU-821

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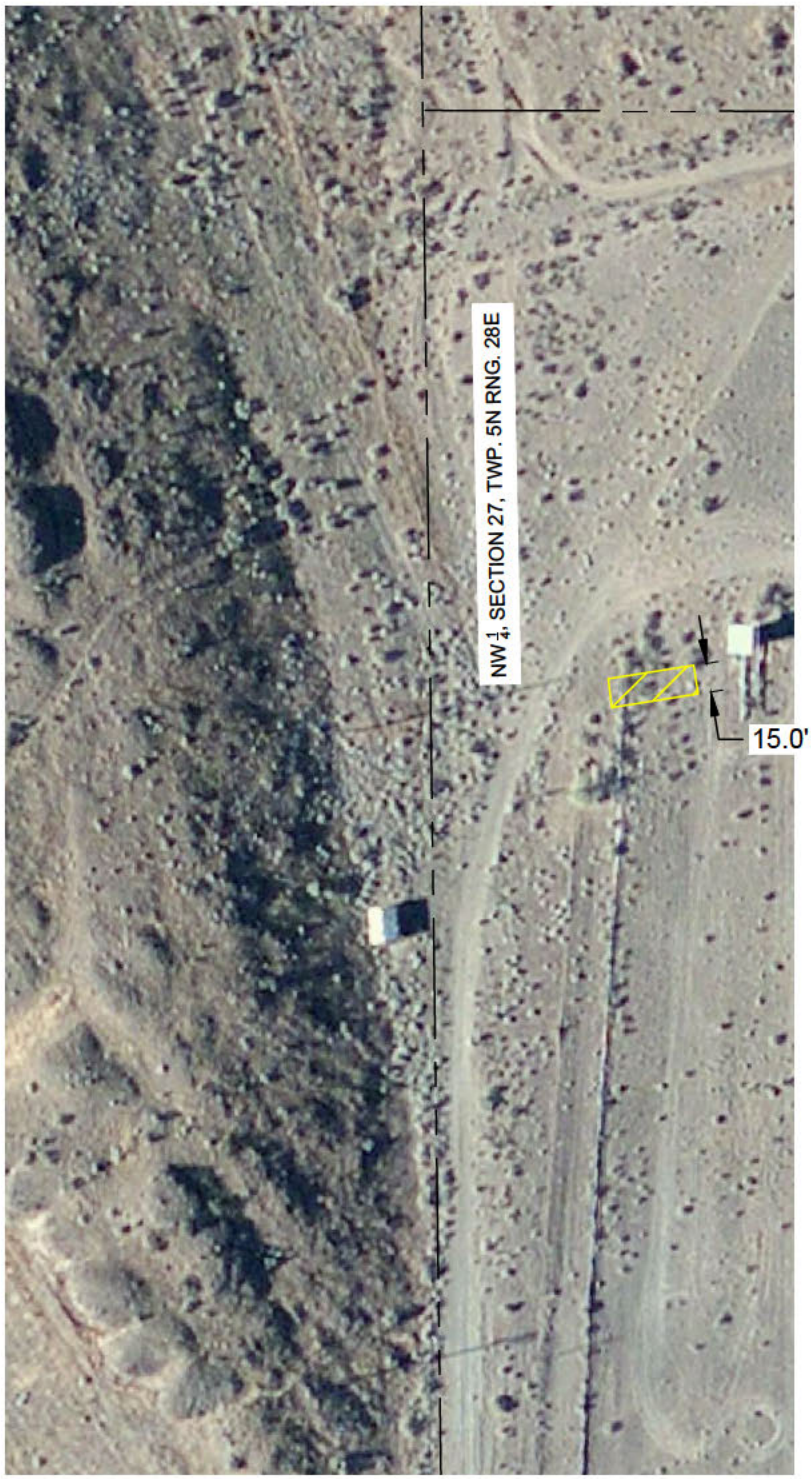
~~UEC/107~~
Toth/15



OWNER:
RONALD BUWALDA
ASSESSMENT MAP 5N2827B TAX LOT #1400

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
BEGINNING AT THE NORTHWEST CORNER OF THE SOUTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER (SW1/4 NW1/4) OF SAID SECTION 27, THENCE SOUTH 28°49'52" EAST A DISTANCE OF 863.62 FEET TO THE TRUE POINT OF BEGINNING OF THIS LEGAL DESCRIPTION; THENCE NORTH 81°02'29" EAST A DISTANCE OF 45.00 FEET; THENCE SOUTH 08°57'31" EAST A DISTANCE OF 15.00 FEET; THENCE SOUTH 81°02'29" WEST A DISTANCE OF 45.52 FEET; THENCE NORTH 06°58'03" WEST A DISTANCE OF 15.01 FEET TO THE TRUE POINT OF BEGINNING. CONTAINS 679 SQUARE FEET.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 100 200

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 200'

DATE	REVISION	#
02/03/16	REVISED EASEMENT	1
03/23/16	REVISED FOR REFERENCE	2
06/08/16	REVISED FOR REFERENCE	3

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
RONALD BUWALDA

SHT NO: CU-823.1

~~UEC/107~~
~~Toth/16~~

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 30 60

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES
H. SCALE: 1" = 60'

OWNER:
MEDELEZ TRUCKING
(BLANKET EASEMENT IN PAT KIK
VOL 185 PAGE 110)
ASSESSMENT MAP 5N2827CD TAX LOT #800

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
GUY ANCHOR EASEMENT LOCATED IN THE SOUTHWEST ONE-QUARTER (SW 1/4) OF SECTION 27, TOWNSHIP 5 NORTH, RANGE 28 EAST, W.M. UMATILLA COUNTY, OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SUBJECT PROPERTY, THENCE NORTH 89°12'36" EAST ALONG THE NORTH LINE OF BAGGETT ROAD A DISTANCE OF 236.44 FEET TO THE TRUE POINT OF BEGINNING OF THIS LEGAL DESCRIPTION; THENCE NORTH 20°45'23" EAST A DISTANCE OF 51.14 FEET; THENCE SOUTH 69°14'37" EAST A DISTANCE OF 15.00 FEET; THENCE SOUTH 20°45'23" WEST A DISTANCE OF 45.19 FEET TO SAID NORTH RIGHT-OF-WAY LINE; THENCE SOUTH 89°12'36" WEST ALONG SAID RIGHT-OF-WAY LINE A DISTANCE OF 16.13 FEET TO THE TRUE POINT OF BEGINNING. CONTAINS 723 SQUARE FEET.

REQUIRED EASEMENT
EXISTING EASEMENT

DATE	REVISION	#
01/29/15	REVISED ASSESSMENT MAP INFORMATION	1
02/03/16	REVISED EASEMENT	2
04/18/16	REVISED FOR REFERENCE	3

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
MEDELEZ TRUCKING

SHT NO: CU-834

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~~UEC/107~~
Toth/17

OWNER:
GERARDO RAMIREZ
32198 E PUNKIN CENTER ROAD
HERMISTON, OR 97838
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2834B TAX LOT #405

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
THE WEST 10 FEET OF THE REAL PROPERTY DESCRIBED AS TRACT I AND THE EAST 40 FEET OF THE REAL PROPERTY DESCRIBED AS TRACT II IN THE BARGAIN AND SALE DEED, STATUTORY FORM, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 2005-4900343, DATED OCTOBER 13, 2005.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 40 80

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 80'

DATE	REVISION	#
03/23/16	REVISED FOR REFERENCE	1
06/08/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
GERARDO RAMIREZ

SHT NO: CU-835

~~UEC/107~~
Toth/18

OWNER:
GERARDO RAMIREZ
32198 E PUNKIN CENTER ROAD
HERMISTON, OR 97838
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2834B TAX LOT #200

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
THE WEST 10 FEET OF THE REAL PROPERTY DESCRIBED AS TRACT I AND THE EAST 40 FEET OF THE REAL PROPERTY DESCRIBED AS TRACT II IN THE BARGAIN AND SALE DEED, STATUTORY FORM, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 2005-4900343, DATED OCTOBER 13, 2005.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 40 80

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 80'

DATE	REVISION	#
02/03/16	REVISED EASEMENT	1
03/23/16	REVISED FOR REFERENCE	2
06/08/16	REVISED FOR REFERENCE	3

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY: OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
GERARDO RAMIREZ

SHT NO: CU-836

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UEC/107
Toth/19

OWNER:
DIAMOND M RANCH
PO BOX 99, LAURIER, WA 99146
NO EASEMENT OF RECORD PROVIDED
ASSESSMENT MAP 5N2834B TAX LOT # 407

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
SAID PROPERTY IS DESCRIBED IN A STATUTORY WARRANTY DEED, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 2013-6120721, DATED DECEMBER 16, 2013.

A STRIP OF LAND 50 FOOT IN WIDTH AS DESCRIBED BELOW.

BEGINNING AT A POINT WHICH LIES SOUTH 89°12'03" WEST 799.55 FEET ALONG SECTION LINE, AND SOUTH 659.99 FEET FROM THE NORTH QUARTER CORNER OF SAID SECTION 34, THE TRUE POINT OF BEGINNING; THENCE SOUTH 01°05'11" EAST 111.13 FEET MORE OR LESS TO THE SOUTHERLY PROPERTY LINE, SAID POINT ALSO BEING A POINT ON A 223.06 FOOT RADIUS CURVE TO THE RIGHT; THENCE SOUTHWESTERLY ALONG SAID LINE AND THE ARC OF SAID CURVE 72.99 FEET (DELTA=18°44'54", CHORD BEARING=S42°23'36"W 72.66 FEET); THENCE NORTH 01°05'11" WEST 164.21 FEET MORE OR LESS TO THE NORTHERLY PROPERTY LINE, THENCE NORTH 89°19'20" EAST 50 FEET ALONG SAID NORTHERLY LINE BACK TO THE POINT OF BEGINNING, ALSO THE POINT OF TERMINATION. LESS AND EXCEPTING ANY PORTION LYING WITHIN THE "R" LINE CANAL.

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 40 80

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 80'

DATE	REVISION	#
01/29/15	REVISED CANAL NAME	1
03/23/16	REVISED FOR REFERENCE	2
06/08/16	REVISED FOR REFERENCE	3

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY: OR# not required

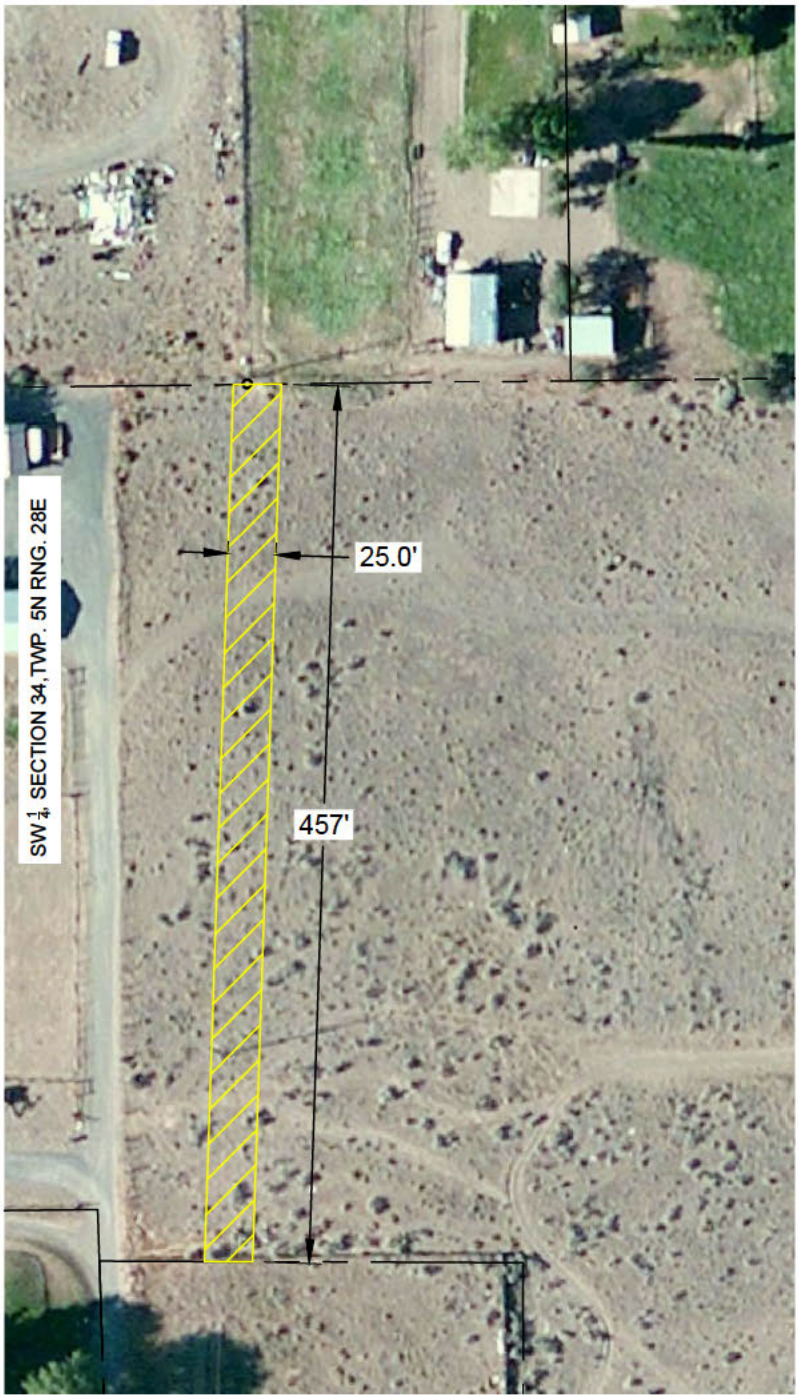
DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
DIAMOND M RANCH

SHT NO: CU-837

~~UEC/107~~
Toth/20



OWNER:
JOSE & REBECA GARCIA
608 W. HERMISTON AVE., HERMISTON, OR 97838
NO EASEMENT OF RECORD PROVIDED.
ASSESSMENT MAP 5N2834C TAX LOT #1900

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
SAID PROPERTY IS DESCRIBED IN A SPECIAL WARRANTY DEED, RECORDED IN UMATILLA COUNTY, OREGON AS INSTRUMENT NUMBER 2012-5980776, DATED NOVEMBER 28, 2012.
BEGINNING AT THE SOUTHWEST CORNER OF SUBJECT PROPERTY, THENCE NORTH 89°40'19" EAST ALONG THE SOUTH LINE OF ABOVE REFERENCED PROPERTY A DISTANCE OF 55.48 FEET TO THE TRUE POINT OF BEGINNING OF THIS LEGAL DESCRIPTION; THENCE NORTH 01°53'35" EAST A DISTANCE OF 456.20 FEET TO THE NORTH LINE OF SUBJECT PROPERTY; THENCE SOUTH 89°47'35" EAST ALONG SAID NORTH LINE A DISTANCE OF 25.00 FEET; THENCE SOUTH 01°53'35" WEST A DISTANCE OF 456.34 FEET TO THE SOUTH LINE OF SUBJECT PROPERTY; THENCE SOUTH 89°40'19" WEST ALONG SAID SOUTH LINE A DISTANCE OF 25.00 FEET TO THE TRUE POINT OF BEGINNING. CONTAINS 11,399 SQUARE FEET.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 50 100

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES
H. SCALE: 1" = 100'

DATE	REVISION	#
02/03/16	REVISED EASEMENT	1
02/17/16	REVISED EASEMENT	2
03/23/16	REVISED FOR REFERENCE	3

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
JOSE & REBBECA GARCIA

SHT NO: CU-847

~~UEC/107~~
Toth/21

OWNER:
MARK & HELEN LARSON
2138 NW GEER ROAD
HERMISTON, OR 97838
NO EASEMENT OF RECORD PROVIDED.
ASSESSMENT MAP 4N2803AC TAX LOT #201

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
THE WEST 25 FEET OF THE REAL PROPERTY DESCRIBED IN AN ASSIGNMENT OF CONTRACT, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 2012-6000122, DATED DECEMBER 31, 2012.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 50 100

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES
H. SCALE: 1" = 100'

DATE	REVISION	#
01/29/15	REVISED ROAD NAME	1
03/23/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
MARK AND HELEN LARSON

SHT NO: CU-858

~~UEC/107~~
Toth/22

OWNER:
BUSH LLC
680 HARPER ROAD
HERMISTON, OR 97838
NO EASEMENT OF RECORD PROVIDED.
ASSESSMENT MAP 4N2803D TAX LOT #1309.

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
THE WEST 25 FEET OF THE REAL PROPERTY DESCRIBED IN A STATUTORY SPECIAL WARRANTY DEED, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 2004-4710262, DATED OCTOBER 22, 2004.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 30 60

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 60'

DATE	REVISION	#
01/29/15	REVISED ROAD NAME	1
03/23/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
BUSH LLC

SHT NO: CU-871

~~UEC/107~~
Toth/23

OWNER:
TOMMY HUXOLL
1060 JUANITA AVE.
HERMISTON, OR 97838
NO EASEMENT OF RECORD PROVIDED.
ASSESSMENT MAP 4N2803D TAX LOT #1311.

REQUIRED EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 20 40

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 40'

EASEMENT DESCRIPTION:
THE WEST 25 FEET OF THE REAL PROPERTY DESCRIBED AS TRACT 1 IN A WARRANTY DEED, RECORDED IN UMATILLA COUNTY, OREGON AS DOCUMENT NUMBER 1998-3280108, DATED APRIL 23, 1998.

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

DATE	REVISION	#
01/29/15	REVISED ROAD NAME	1
03/23/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
TOMMY HUXOLL

SHT NO: CU-872

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~~UEC/107~~
Toth/24

OWNER:
TOMMY HUXOLL
1060 JUANITA AVE.
HERMISTON, OR 97838
NO EASEMENT OF RECORD PROVIDED.
ASSESSMENT MAP 4N2803D TAX LOT #2600.

EASEMENT DESCRIPTION:
BEGINNING AT THE NORTHWEST CORNER OF SUBJECT PROPERTY, THENCE SOUTH 89°36'36" EAST A DISTANCE OF 25.00 FEET; THENCE SOUTH 0°40'36" EAST A DISTANCE OF 47.24 FEET; THENCE SOUTH 87°19'31" EAST A DISTANCE OF 30.44 FEET; THENCE SOUTH 2°40'29" WEST A DISTANCE OF 15.00 FEET; THENCE NORTH 87°19'31" WEST A DISTANCE OF 29.56 FEET; THENCE SOUTH 00°40'36" EAST A DISTANCE OF 58.57 FEET TO THE SOUTH LINE OF SUBJECT PROPERTY; THENCE NORTH 31°35'20" WEST ALONG SAID SOUTH LINE A DISTANCE OF 48.66 FEET; THENCE NORTH 0°40'36" WEST ALONG THE EAST RIGHT-OF-WAY LINE OF GEER ROAD A DISTANCE OF 79.55 FEET TO THE POINT OF BEGINNING. CONTAINS 2,955 SQUARE FEET.

REQUIRED EASEMENT

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 20 40

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 40'

DATE	REVISION	#
01/29/15	REVISED ROAD NAME	1
03/23/16	REVISED FOR REFERENCE	2

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY: OR# not required

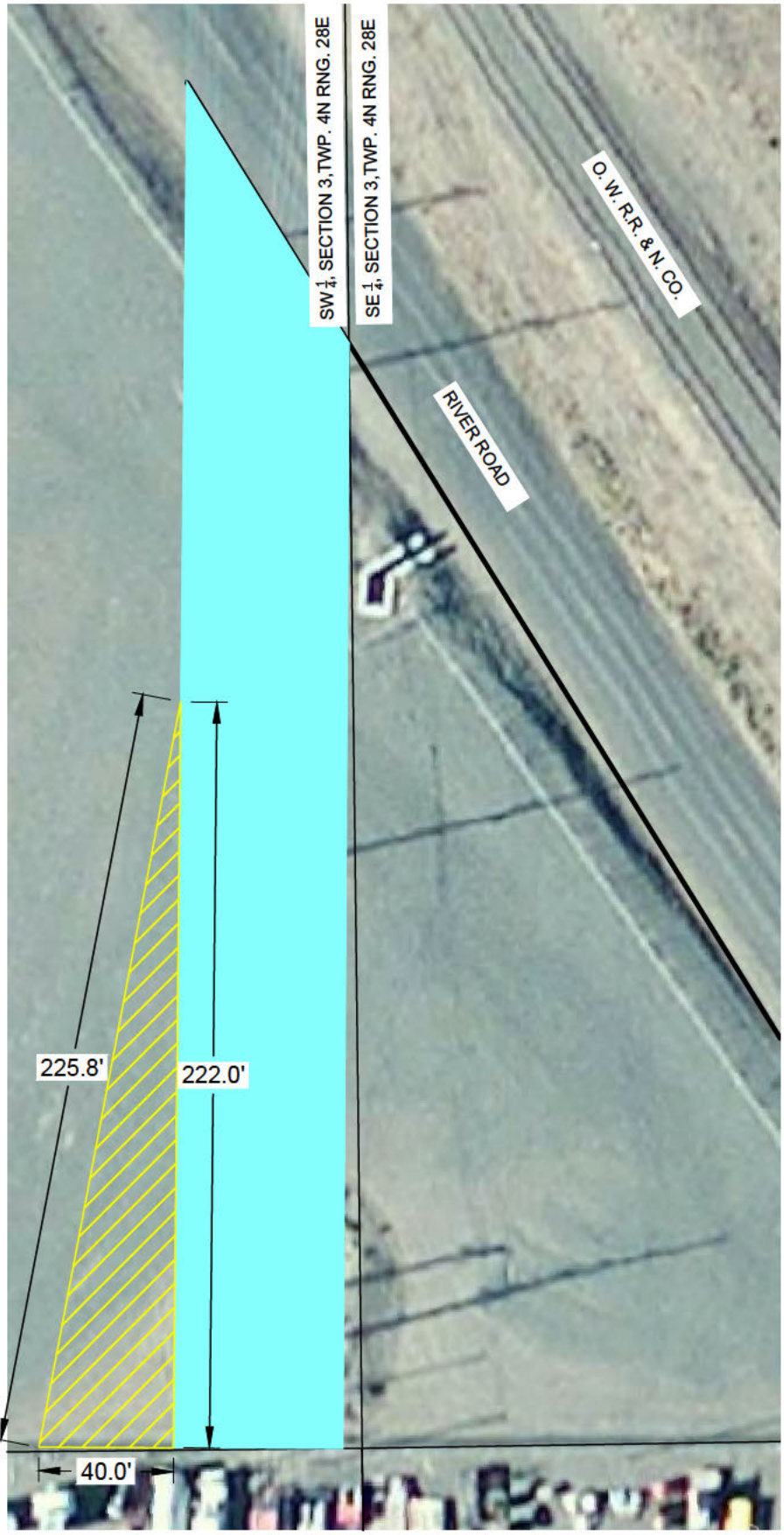
DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE
LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
TOMMY HUXOLL

SHT NO: CU-873

~~UEC/107~~
Toth/25



OWNER:
JUAN & MELBA ALMAGUER, JR.
(EXISTING 50 FOOT EASEMENT RECORDED IN BOOK 2001 PAGE 4020484 UNDER CURTIS & CAROL OTTMAR.)
ASSESSMENT MAP 4N2803C TAX LOT #902.

NOTES:
THE EASEMENT SHALL BE USED FOR THE INSTALLATION AND MAINTENANCE OF POWER POLES, LINES, AND RELATED HARDWARE.

THE NEW INSTALLATION WILL REPLACE EXISTING POWER LINES.

EASEMENT DESCRIPTION:
BEGINNING AT THE SOUTHEAST CORNER OF SUBJECT PROPERTY, THENCE WEST ALONG THE SOUTH LINE OF SUBJECT PROPERTY A DISTANCE OF 50.00 FEET TO THE WEST LINE OF AN EASEMENT CONVEYED IN DEEDS BOOK 2001 AT PAGE 4020484, RECORDS OF UMATILLA COUNTY, OREGON AND THE TRUE POINT OF BEGINNING OF THIS LEGAL DESCRIPTION, THENCE WEST ALONG THE SOUTH LINE OF SUBJECT A DISTANCE OF 40.00 FEET; THENCE NORTH 09°33'29" EAST A DISTANCE OF 225.11 FEET TO THE WEST LINE OF SAID EASEMENT CONVEYED IN DEEDS BOOK 2001 AT PAGE 4020484; THENCE SOUTH 00°40'36" EAST ALONG SAID WEST LINE A DISTANCE OF 222.00 FEET TO THE TRUE POINT OF BEGINNING.
CONTAINS 4,440 SQUARE FEET.

REQUIRED EASEMENT

EXISTING EASEMENT

N

BASIS OF BEARING
OREGON STATE PLANE
NAD 83 NORTH ZONE

0 25 50

NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES

H. SCALE: 1" = 50'

DATE	REVISION	#
03/29/16	ISSUED FOR REFERENCE	0

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY: OR# not required

DWN. BY: DAW
CKD. BY: JLB
APPD. BY: LBW
DATE: 01/23/15

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE

LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR

CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: EASEMENT EXHIBITS
JUAN & MELBA ALMAGUER, JR.

SHT NO: CU-874

o:\oregon\or14\trans\butte-mcnary\cad\sheets\or14015_esmt-exhibit5.dwg|Mar. 31, 16|1:43 PM|dwolfe

AFTER RECORDING, RETURN TO:

Umatilla Electric Cooperative
P.O. Box 1148
Hermiston, Oregon 97838

UEC REFERENCE: Tax Lot #100

UEC/107
Toth/26

EASEMENT

Grantor(s), for good and valuable consideration, receipt of which is hereby acknowledged, grants to **Umatilla Electric Cooperative**, an Oregon cooperative corporation, Grantee, and to its licensees, successors or assigns, a perpetual and exclusive easement and right of way, the purpose of which is to construct, operate, maintain, repair and replace utility lines and facilities, including, but not limited to, lines for the transmission or distribution of electrical power, telephone lines, television and communication lines, or any related system and facilities on, across, over, or under a strip of land in Umatilla County, Oregon, Township 5 North, Range 28 East of the Willamette Meridian, Section 15, and more particularly described as follows:

Grantor(s) further grants the right to inspect and make repairs, changes, alterations, improvements, removals from, substitutions and additions to the facilities as Grantee may from time to time deem advisable, including, by way of example and not by way of limitation, the right to increase or decrease the number of conduits, wires, cables, handholes, manholes, connection boxes, transformers and transformer enclosures; to cut, trim and control the growth by chemical means, machinery or otherwise of trees, shrubbery and vegetation located within the easement area (including any control of the growth of other vegetation in the easement area which may incidentally and necessarily result from the means of control employed); to fell or trim any trees or brush located on Grantor's land adjoining the above described easement area which may pose a hazard to the operation of the facilities within the easement area; to keep the easement clear of all buildings, structures or other obstructions; to license, permit or otherwise agree to the joint use or occupancy of the lines, system or, if any of said system is placed underground, of the trench and related underground facilities, by any other person, association or corporation; and to cross over and to install guys and anchors on Grantor's land adjoining the above described easement area.

Grantor agrees that all poles, wires and other facilities including any equipment, installed in, upon or under the above-described lands at the Grantee's expense shall remain the property of the Grantee, removable at the option of the Grantee.

Because governmental approvals may be necessary from the land owning Grantor(s) for Grantee to use the easement, Grantor(s) appoint Grantee as Grantor(s) attorney in fact, agent, and authorized representative, to make and progress on Grantor(s) behalf, any and all land use and regulatory requests, and to make applications and requests to governmental entities and agencies, so Grantee may make use of this easement and its rights, including but not limited to the following: (1) applying for conditional use permits and progressing those applications through to completion and any modifications thereof, including defending the applications and appealing adverse decisions; and (2) applying for any other necessary governmental and administrative approvals and progressing them through to completion and any modifications thereof, including defending the applications and appealing adverse decisions. Grantor(s) agree not to make any objections to the above applications, or to oppose them in any way at any time. Grantor(s) may not revoke these appointments during the effective period of this easement. All Grantee's applications and work shall be at its sole cost and expense.

Grantor covenants that it is the owner of the above-described lands and that the said lands are free and clear of encumbrances and liens of whatsoever character except those held by the following person(s):

DATED this _____ day of _____, 20_____.

_____
Print Name Here_____
Title of Officer_____
For Anacapa Land Co., LLC

STATE OF _____)
) ss.
County of _____)

THIS CERTIFIES that on this _____day of _____, 20__, before me the undersigned personally appeared the above named _____is the _____ of Anacapa Land Company, LLC, a State of Delaware Limited Liability Company, on behalf of the corporation, known to me to be the identical person(s) described in and who executed the foregoing instrument and acknowledged to me that _____executed the same.

Before me: _____
Notary Public for _____
My Commission Expires: _____

BUTTE-MCNARY: MAILING ADDRESSES FOR UNSECURED EASEMENT LANDOWNERS

PAGE #	TAX LOT #	OWNER	MAILING ADDRESS
CU-803	100	ANACAPA LAND CO., LLC	PO BOX 11749, PLEASANTON CA 94588
CU-808	4090	CHARLO, CLARENCE & GERALDINE	81999 LIND RD, UMATILLA OR 97882
CU-811.1	100	ESTATE OF STUART BONNEY	PO BOX 1287, HERMISTON OR 97838
CU-814	2000	FORDICE, CLINTON	PO BOX 653, HERMISTON OR 97838
CU-816	700	ESTATE OF STUART BONNEY	PO BOX 1287, HERMISTON OR 97838
CU-816.1	100	ESTATE OF STUART BONNEY	PO BOX 1287, HERMISTON OR 97838
CU-819	1900	ESTATE OF STUART BONNEY	PO BOX 1287, HERMISTON OR 97838
CU-821	2300	UMATILLA COUNTY	216 SE 4TH ST, PENDLETON OR 97801
CU-823.1	1400	RONALD BUWALDA	32518 CHRISTLEY LN, HERMISTON OR 97838
CU-834	800	MEDELEZ TRUCKING INC	30522 OLDFIELD ST, HERMISTON OR 97838
CU-835	405	RAMIREZ, GERARDO	32198 E PUNKIN CENTER RD, HERMISTON OR 97838
CU-836	200	RAMIREZ, GERARDO	32198 E PUNKIN CENTER RD, HERMISTON OR 97838
CU-837	407	DIAMOND M RANCH	646 LAKE RD, BURBANK WA 99323
CU-847	1900	GARCIA, JOSE & REBECA	608 W HERMISTON AVE, HERMISTON OR 97838
CU-858	201	MARK LARSON	1385 NW SJOREN LN, HERMISTON OR 97838
CU-871	1309	BUSH, LLC	PO BOX 1283, HERMISTON OR 97838
CU-872	1311	HUXOLL, TOMMY L	1060 JUANITA AVE, HERMISTON OR 97838
CU-873	2600	HUXOLL, TOMMY L	1060 JUANITA AVE, HERMISTON OR 97838
CU-874	902	JUAN & MELBA ALMAGUER, JR.	79479 CANAL RD, STANFIELD OR 97875

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

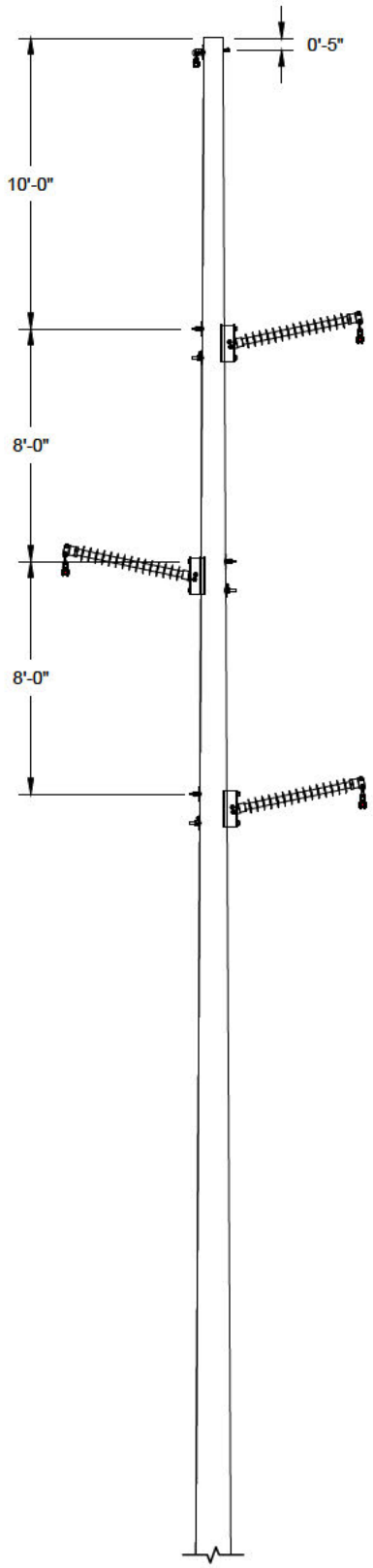
In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/108

August 19, 2016



TP-115

DATE	REVISION	#
03/24/16	ISSUED FOR APPLICATION	0

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
SPRINGFIELD, MO 65807
Ph: 417-888-0645 Fax: 417-888-0657
www.tothassociates.com
CERTIFICATE OF AUTHORITY:
OR# not required

DWN. BY: SRC
CKD. BY: JLB
APPD. BY: LBW
DATE: 03/23/16

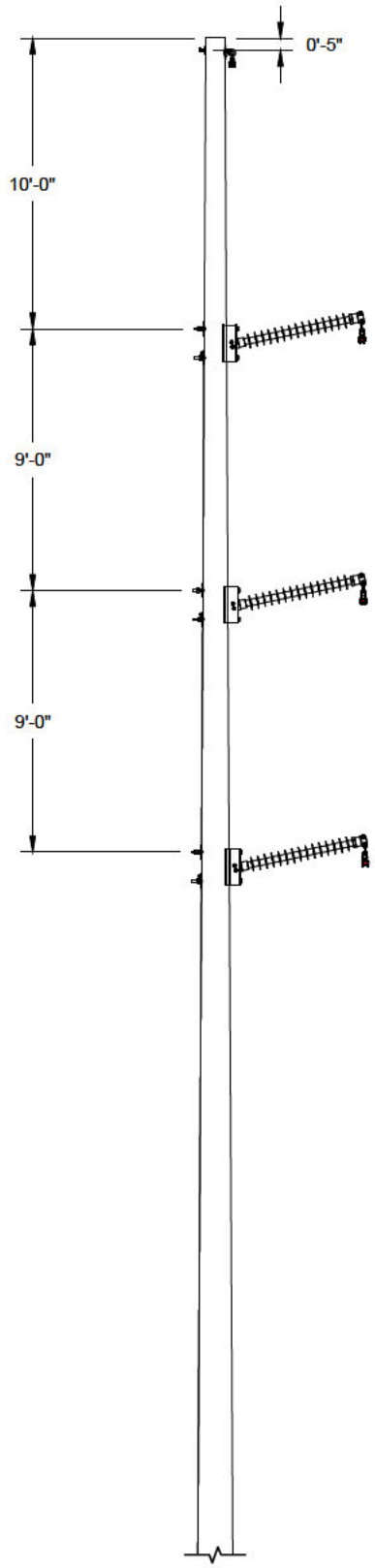
PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE

LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR

CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: TRANSMISSION LINE STRUCTURE
HORIZONTAL LINE POST

SHT NO: TP-115



TP-115-B1

DATE	REVISION	#
05/16/16	ISSUED FOR APPLICATION	0

TOTH & ASSOCIATES
830 E PRIMROSE, SUITE 200
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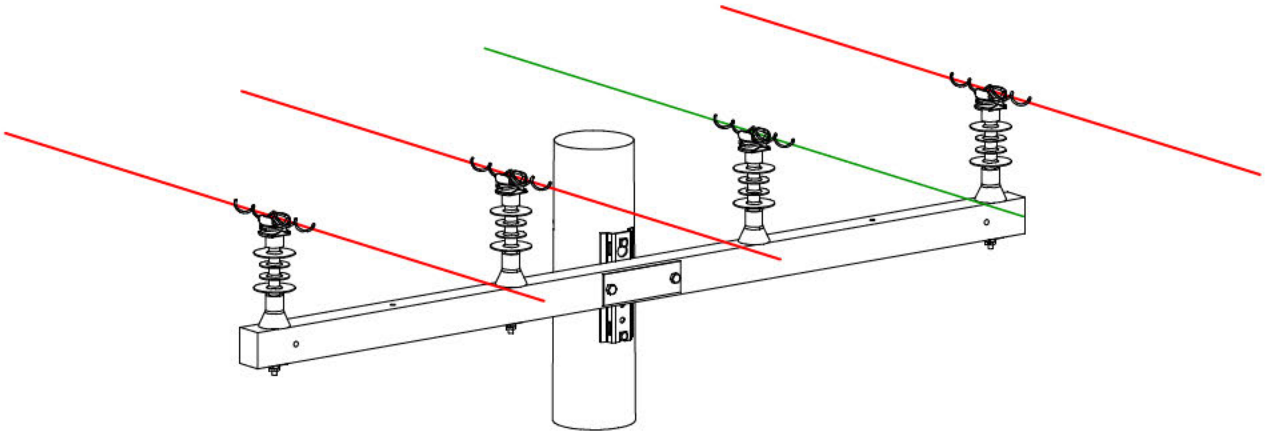
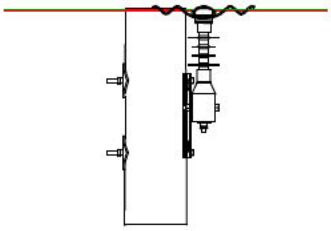
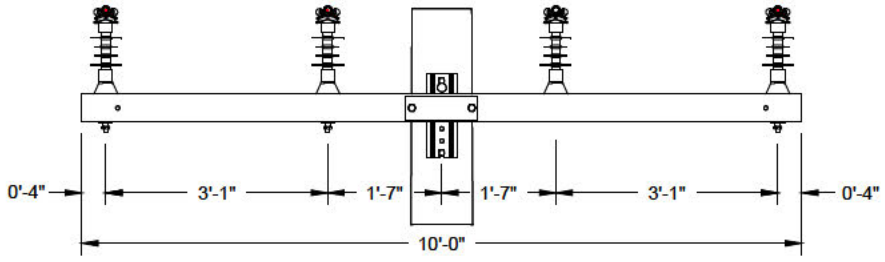
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: TRANSMISSION LINE STRUCTURE
HORIZONTAL LINE POST

SHT NO: TP-115-B1







C1.41P

DATE	REVISION	#
03/24/16	ISSUED FOR APPLICATION	0
07/14/16	REVISED FOR APPLICATION	1

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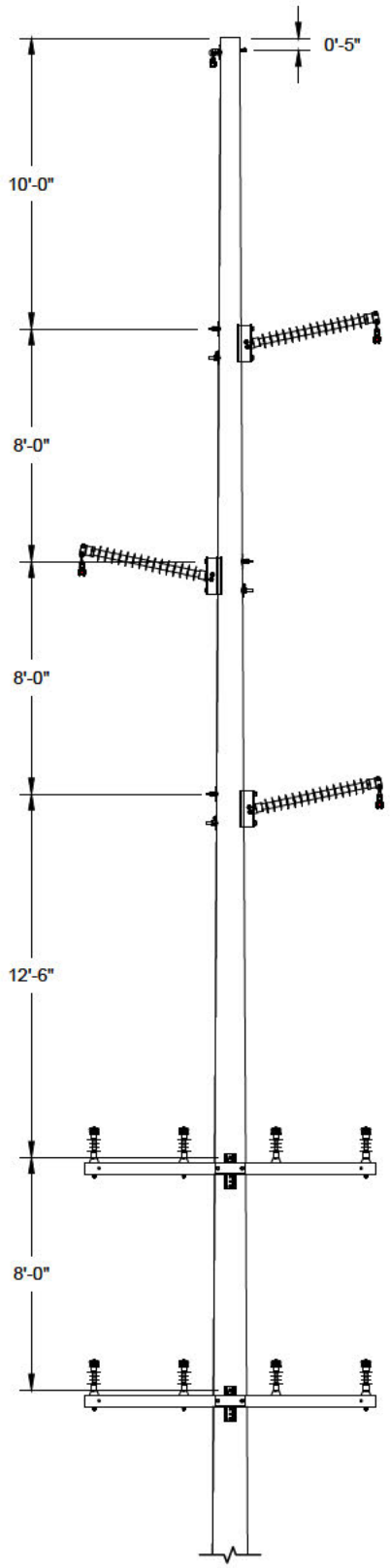
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: 3-PHASE PRIMARY
PUPI CROSSARM W/ NEUTRAL ON ARM

SHT NO: C1.41P



TP-115-UB

DATE	REVISION	#
03/24/16	ISSUED FOR APPLICATION	0
07/14/16	REVISED FOR APPLICATION	1

TOTH & ASSOCIATES
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DWN. BY: SRC
CKD. BY: JLB
APPD. BY: LBW
DATE: 03/23/16

PROJECT: BUTTE - MCNARY 115 KV TRANSMISSION LINE

LOCATION: LA: 45.917091°, LN: -119.307423° TO LA: 45.851743°, LN: -119.299943°, UMATILLA COUNTY, OR

CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: TRANSMISSION LINE STRUCTURE
TANGENT HORIZONTAL LINE POST W/ U.B.

SHT NO: TP-115-UB

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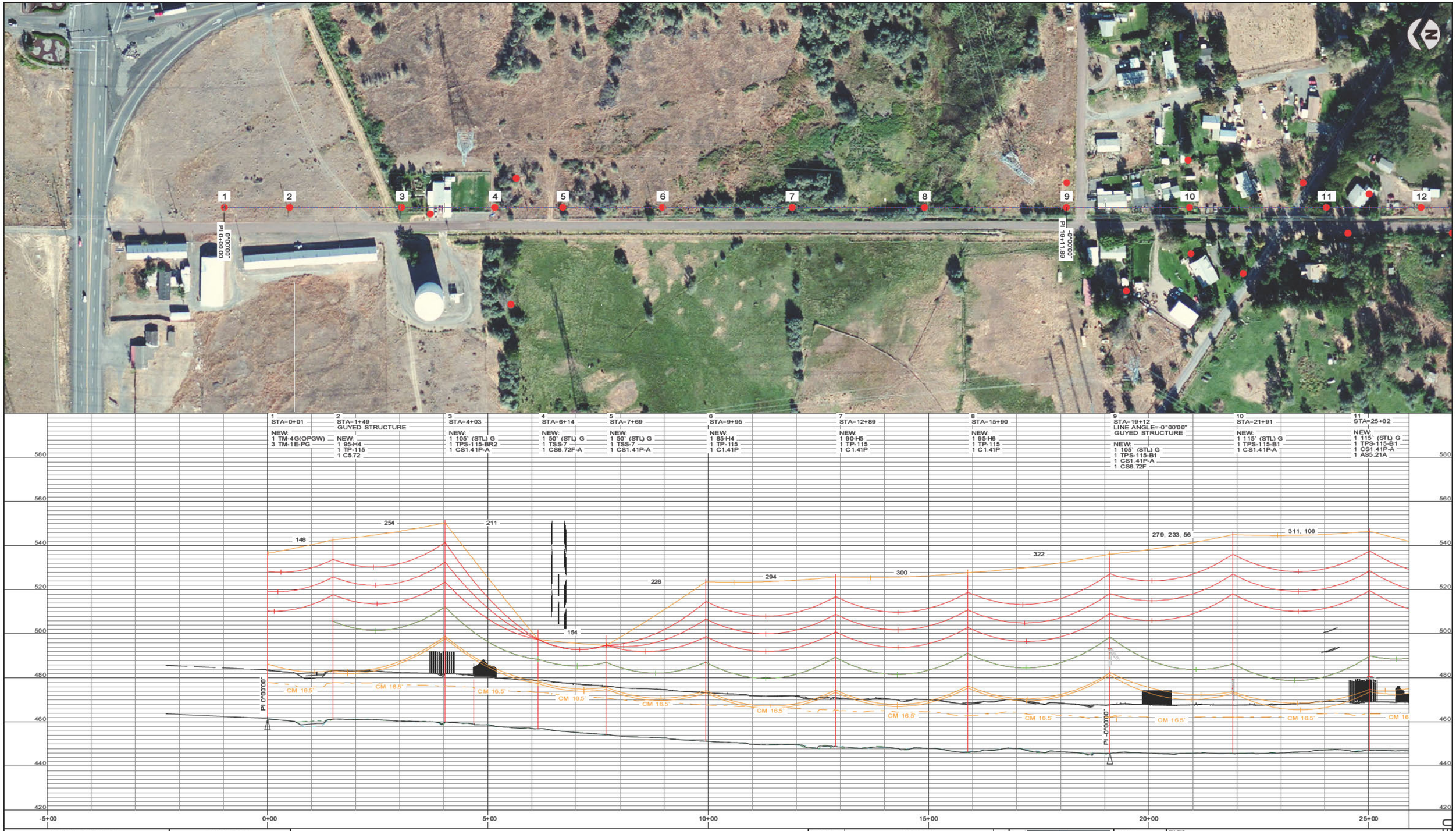
PLS-CADD DRAWING



DESIGN INFORMATION
RULING SPAN = 300-FT
TRANSMISSION CONDUCTOR: SIZE = 1272 ACSR (PHEASANT) D. T. = 7,800-LBS (NESC MEDIUM-INITIAL) CURVE SHOWN AT 212° F (FINAL)
STATIC WIRE: SIZE = AFL, CC-75-528-48F, (OPGW) D. T. = 3,500-LBS (NESC MEDIUM-INITIAL) CURVE SHOWN AT EXTREME COLD (-20° F)
DISTRIBUTION: SIZE = 556 AAC (DAHLIA) D. T. = 3,400-LBS (NESC MEDIUM-INITIAL) CURVE SHOWN AT 167° F (FINAL)

CLEARANCES			
GROUND	ROAD	RAILROAD	WATER
22'	22'	32'	22'

LOADING			
STD = NESC MEDIUM LOADING			
WIND	ICE	K	F
4-PSF	1/4-IN	0.2	.15-DEG

R.O.W. WIDTH: 25-FT

OREGON UTILITY NOTIFICATION CENTER

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WWW.DIGSAFELYOREGON.COM

100.0 FT. HORIZ. SCALE

20.0 FT. VERT. SCALE

ISSUED FOR REFERENCE 7/14/16

DATE	REVISION

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630 E PRIMROSE, SUITE 220
SPRINGFIELD, MO 65807
PH: 417-885-0645 FAX: 417-888-0657
WWW.TOTHASSOCIATES.COM
CERTIFICATE OF AUTHORITY
OR# NOT REQUIRED

DWN. BY:	JLB
CKD. BY:	LBW
APPD. BY:	LBW
DATE:	3/9/2015
SCALE:	AS NOTED

GRAPHIC SCALE MAY CHANGE DUE TO DRAWING REPRODUCTION

PROJECT: BUTTE-MCNARY 115 KV TRANSMISSION LINE

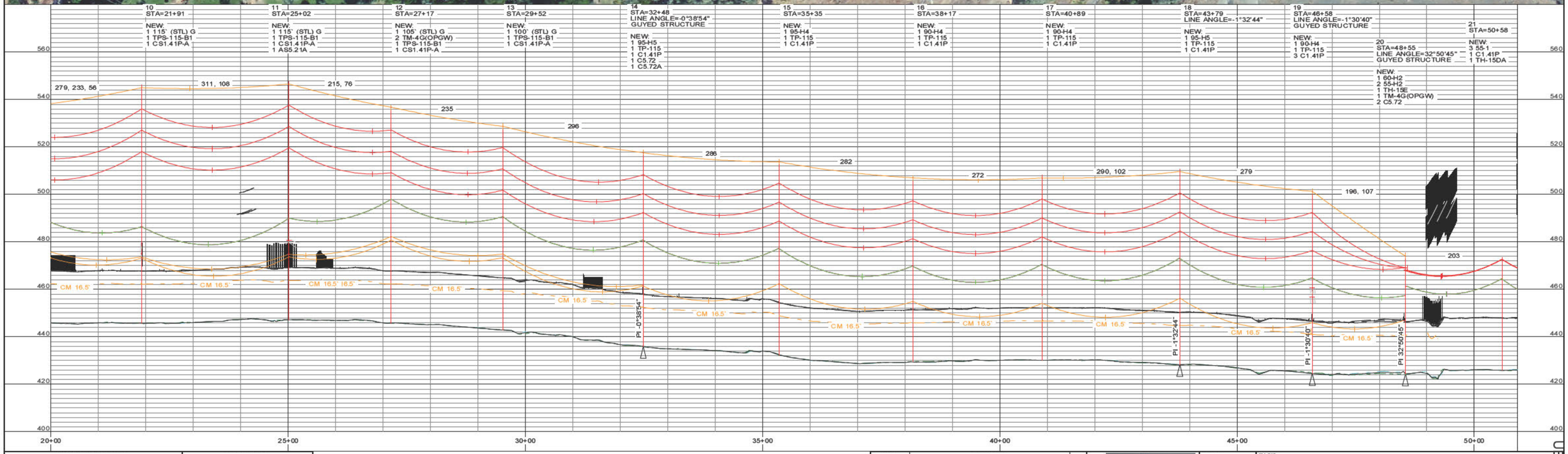
LOCATION: LAT: 45.917202, LON: -119.307364 TO LAT: 45.851252, LON: -119.300948 UMATILLA COUNTY, OR

CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: PLAN AND PROFILE
STA. -5+00 TO 25+91

SHT NO: CU-101

UEC/108 Toth/5



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WIND	ICE	K	F
4-PSF	1/4-IN	0.2	15-DEG

R.O.W. WIDTH: 25-FT

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SPRINGFIELD, MO 65807
PH: 417-888-0645 FAX: 417-888-0657
WWW.TOTHASSOCIATES.COM
CERTIFICATE OF AUTHORITY
OR# NOT REQUIRED

DWN. BY: JLB
CKD. BY: LBW
APPD. BY: LBW
DATE: 3/9/2015
SCALE: AS NOTED
GRAPHIC SCALE MAY CHANGE DUE TO DRAWING REPRODUCTION

PROJECT: BUTTE-MCNARY 115 KV TRANSMISSION LINE

LOCATION: LAT: 45.917202, LON: -119.307364 TO LAT: 45.851252, LON: -119.300948 UMATILLA COUNTY, OR

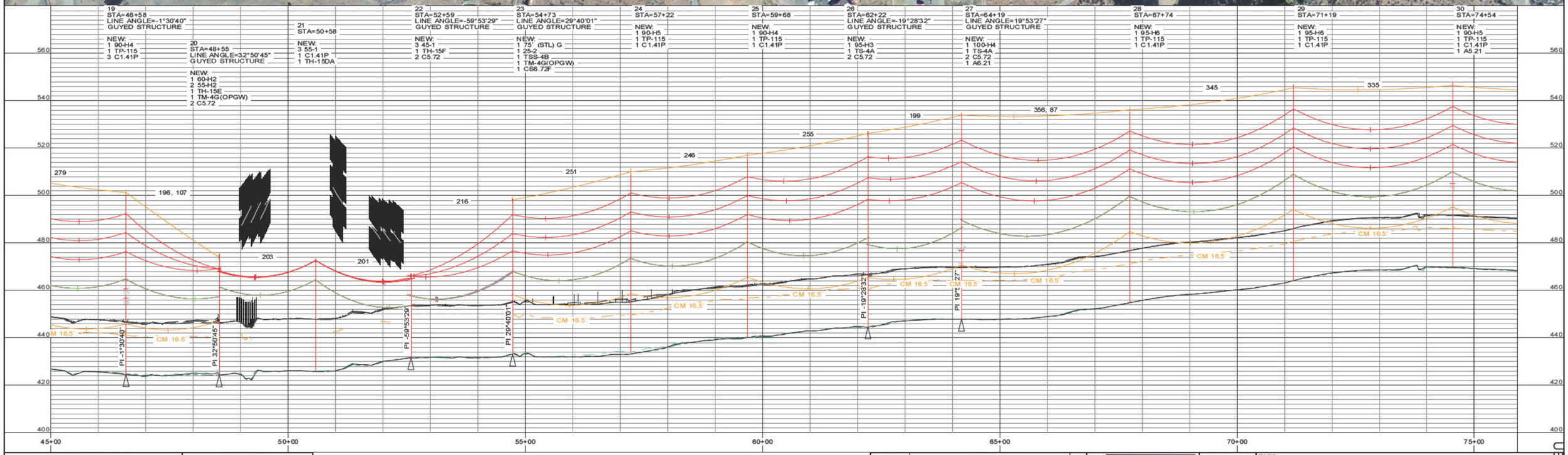
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: PLAN AND PROFILE
STA. 20+00 TO 50+91

SHT NO: CU-102

UEC/108 Toth/6

PLS-CADD DRAWING



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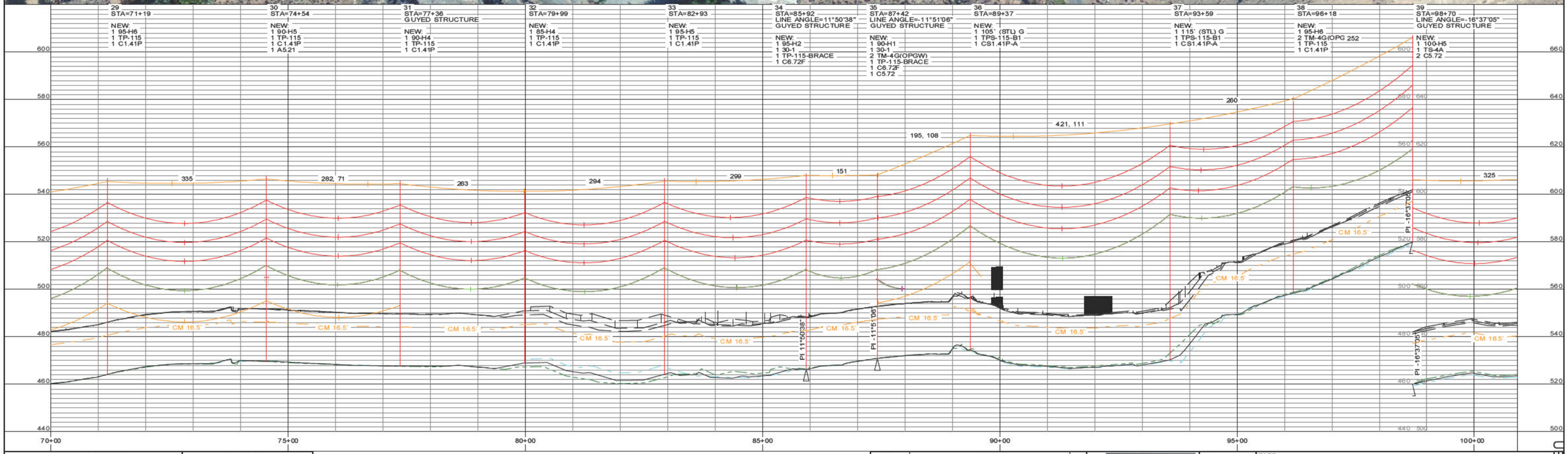
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: PLAN AND PROFILE
STA. 45+00 TO 75+91

SHT NO: CU-103

UEC/108 Toth/76

PLS-CADD DRAWING



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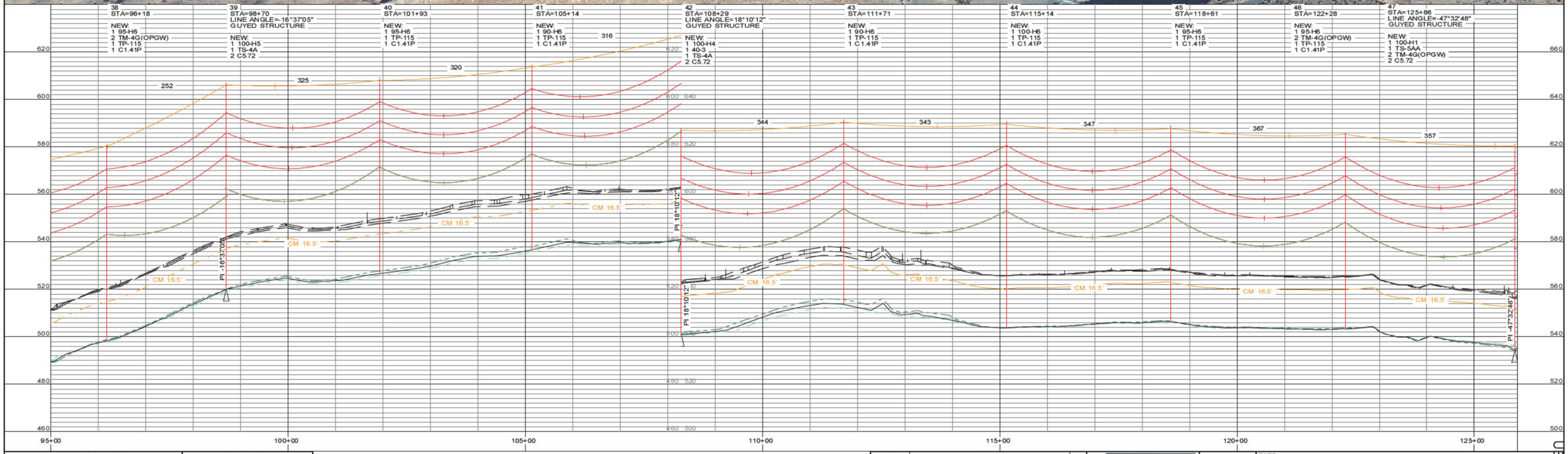
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: PLAN AND PROFILE
STA. 70+00 TO 100+91

SHT NO: CU-104

UEC/108 Toth/8

PLS-CADD DRAWING



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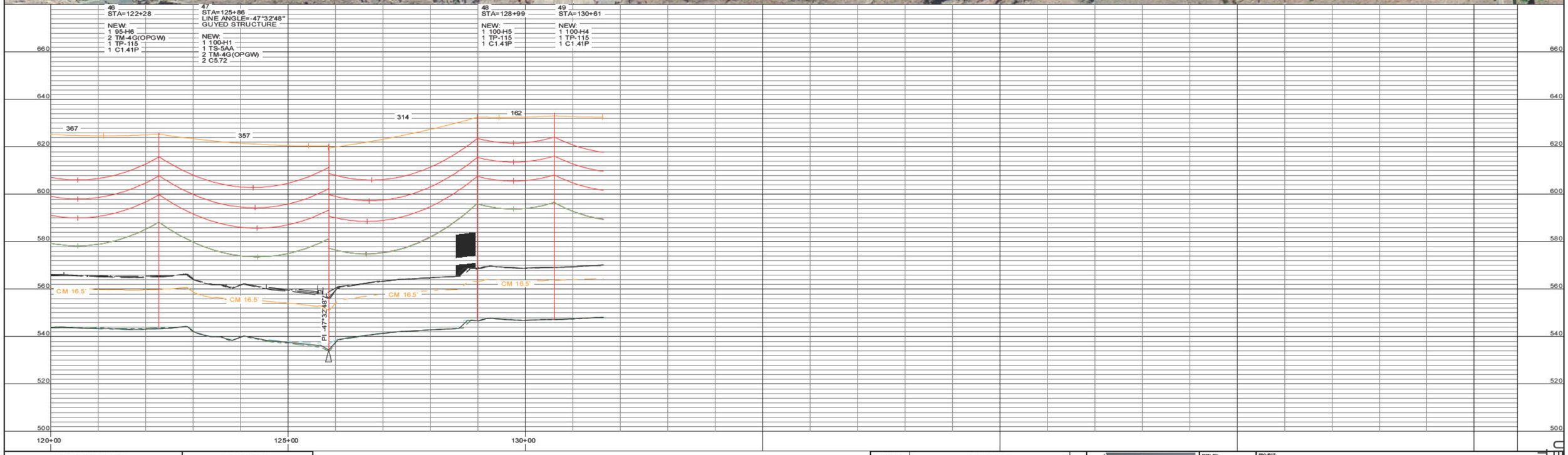
CLIENT:
UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE:
PLAN AND PROFILE
STA. 95+00 TO 125+91

SHT NO:
CU-105

UEC/108 Toth/gs



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CLEARANCES			
GROUND	ROAD	RAILROAD	WATER
22'	22'	32'	22'
LOADING			
STD = NESC MEDIUM LOADING			
WIND	ICE	K	F
4-PSF	1/4-IN	0.2	.15-DEG
R.O.W. WIDTH: 25-FT			

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DATE: 3/9/2015
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PROJECT: BUTTE-MCNARY 115 KV TRANSMISSION LINE

LOCATION: LAT: 45.917202, LON: -119.307364 TO LAT: 45.851252, LON: -119.300948 UMATILLA COUNTY, OR

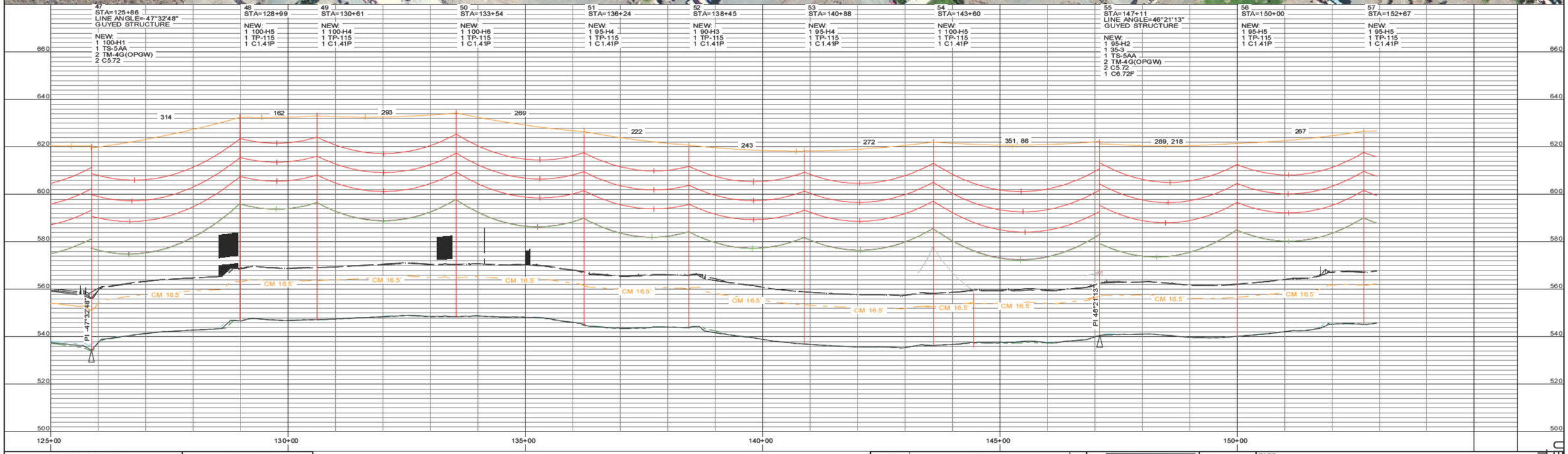
CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: PLAN AND PROFILE
STA. 120+00 TO 131+64

SHT NO: CU-106

UEC/108 Toth/10

PLS-CADD DRAWIN



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R.O.W. WIDTH: 25-FT			

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CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: PLAN AND PROFILE
STA. 125+00 TO 152+95

SHT NO: CU-107

UEC/108
Toth/1

56	57	58	59	60	61	62	63	64	65	66	67	68
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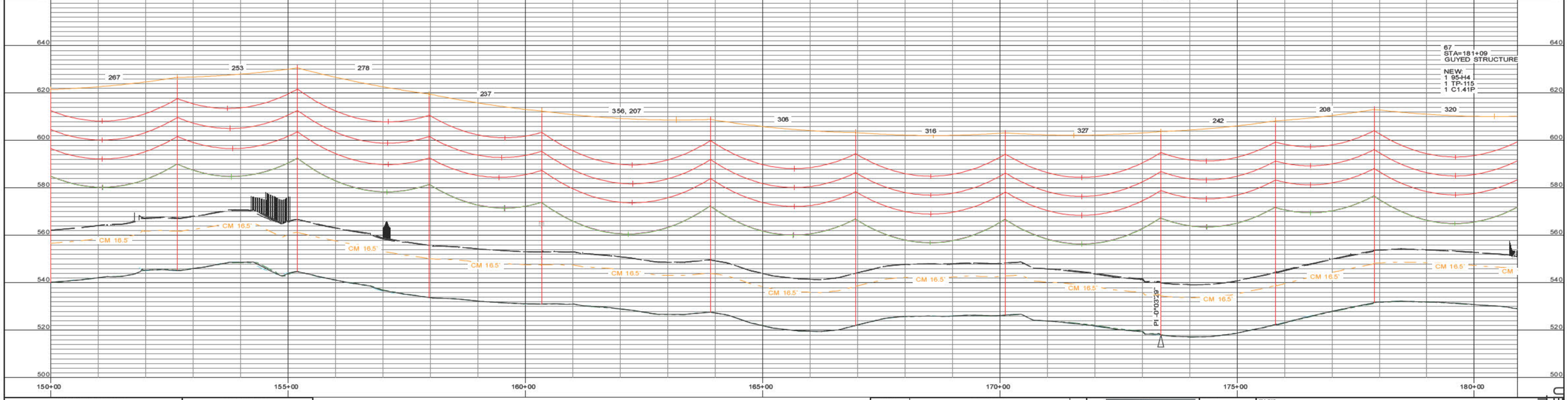
NEW: 1 95-H5 1 TP-115 1 C1.41P	NEW: 1 95-H5 1 TP-115 1 C1.41P	NEW: 1 100` (STL) G 1 TPS-115-B1 1 CS1.41P-A	NEW: 1 100` (STL) G 1 TPS-115-B1 1 CS1.41P-A	NEW: 1 95-H5 1 TP-115 2 C1.41P	NEW: 1 95-H5 1 TP-115 1 C1.41P	NEW: 1 95-H5 1 TP-115 1 C1.41P	NEW: 1 90-H5 1 TP-115 1 C1.41P	NEW: 1 100-H5 1 TP-115 1 C1.41P	NEW: 1 100-H4 1 TP-115 1 C1.41P	NEW: 1 95-H5 1 TP-115 1 C1.41P	NEW: 1 95-H4 1 TP-115 1 C1.41P	



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STD = NESC MEDIUM LOADING			
WIND	ICE	K	F
4-PSF	1/4-IN	0.2	15-DEG

R.O.W. WIDTH: 25-FT

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DATE:	3/9/2015
SCALE:	AS NOTED

PROJECT:
BUTTE-MCNARY 115 KV TRANSMISSION LINE

LOCATION:
LAT: 45.917202, LON: -119.307364 TO LAT: 45.851252, LON: -119.300948 UMATILLA COUNTY, OR

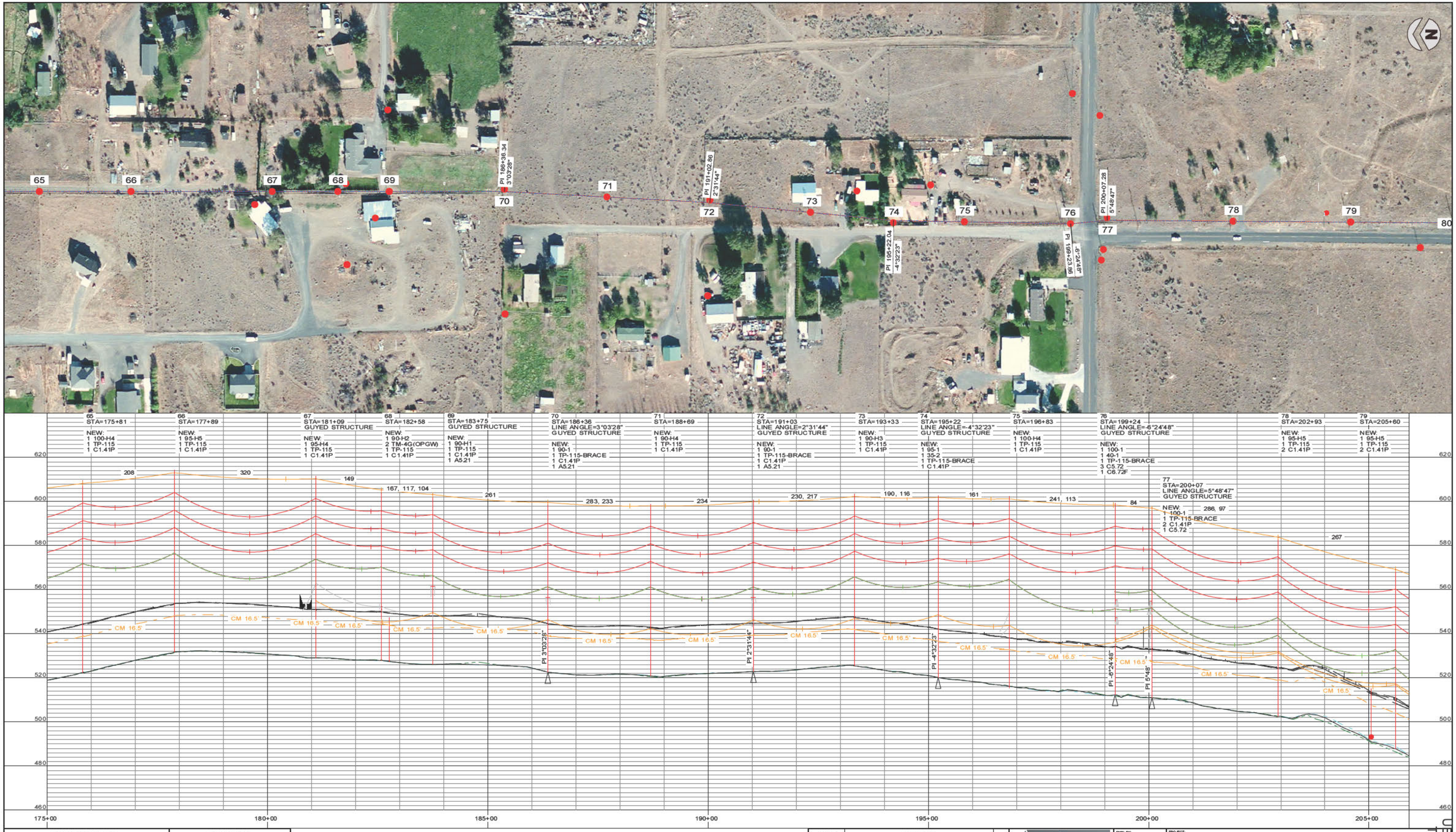
CLIENT:
UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE:
PLAN AND PROFILE
STA. 150+00 TO 180+91

SHT NO:
CU-108

UEC/108
Toth/125

PLS-CADD DRAWING



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4-PSF	1/4-IN	0.2	15-DEG

R.O.W. WIDTH: 25-FT

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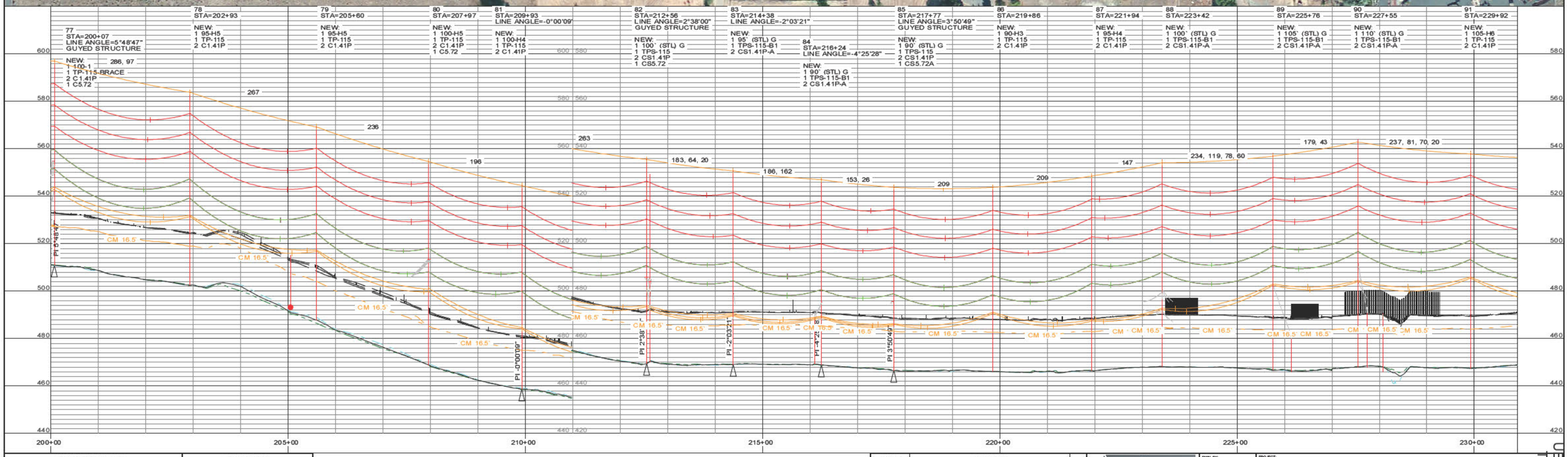
CLIENT: UMATILLA ELECTRIC COOPERATIVE HERMISTON, OREGON OREGON-14-UMATILLA
TITLE: PLAN AND PROFILE STA. 175+00 TO 205+91
SHT NO: CU-109

UEC/108 Toth/13



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CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: PLAN AND PROFILE
STA. 200+00 TO 230+91

SHT NO: CU-110

UEC108 Toth/14

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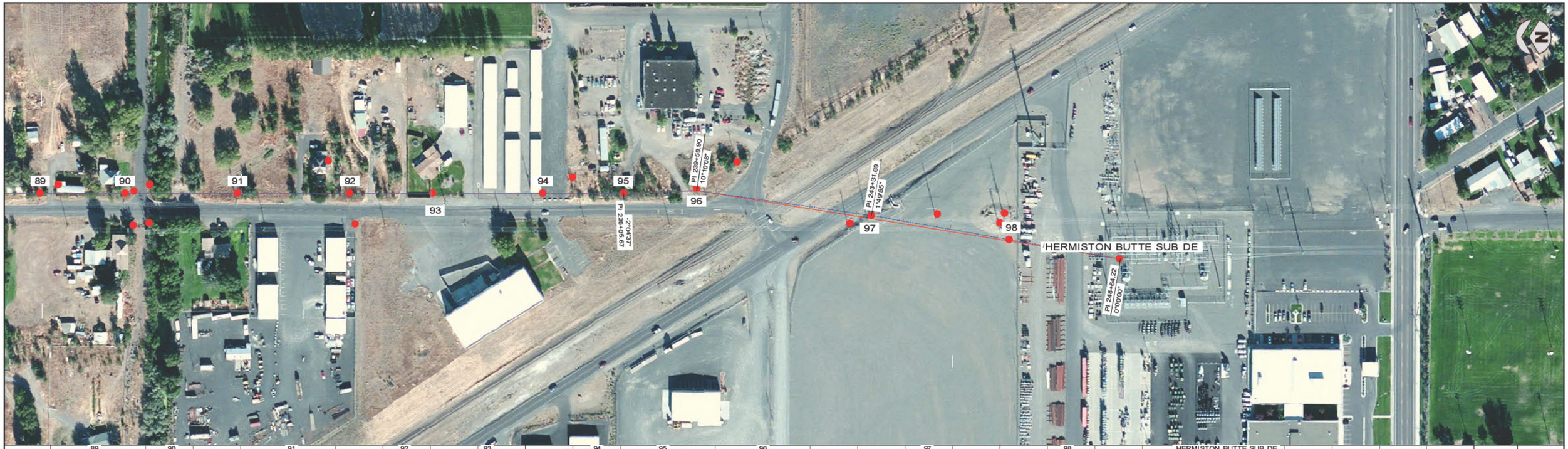

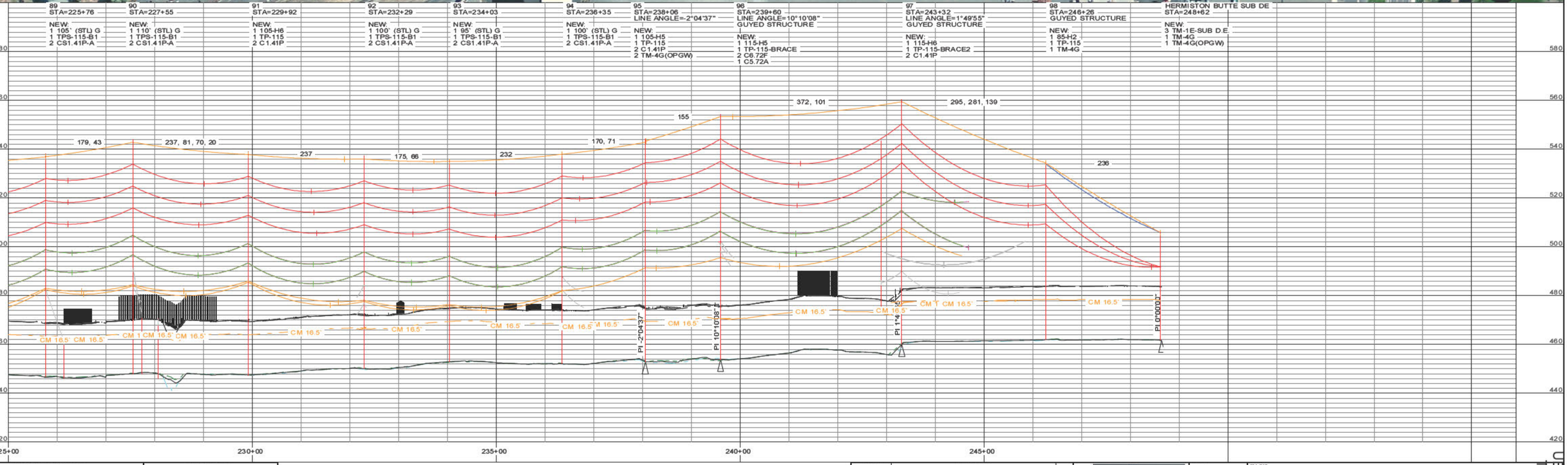

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4-PSF	1/4-IN	0.2	15-DEG
R.O.W. WIDTH: 25-FT			

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CLIENT: UMATILLA ELECTRIC COOPERATIVE
HERMISTON, OREGON
OREGON-14-UMATILLA

TITLE: PLAN AND PROFILE
STA. 225+00 TO 248+68

SHT NO: CU-111

UEC/108 Toth/15

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/109

August 19, 2016

215 E. Gladys Ave
Hermiston, OR 97838

T 541-667-5035
M 541-314-1374

nrivera@hermiston.or.us
www.hermiston.or.us

Public Utility Commission of Oregon
201 High St SE, Suite 100
Salem, Oregon 97301

Dear Commission,

From the Desk of The
Superintendent
Hermiston Energy Services
July 1, 2016

215 E. Gladys Ave
Hermiston, OR 97838

Hermiston Energy Services (HES) is planning a series of reliability and services upgrades to our system to accommodate ongoing and future growth in and around our community. Umatilla Electric Cooperative's proposed McNary-to-Hermiston Butte 115-kilovolt transmission line is a critical part of those planned improvements.

Specifically, this project will provide a new, high-capacity source of power that runs directly from Bonneville Power Administration's McNary Substation to the Hermiston Butte Substation, which provides distribution to both Umatilla Electric and HES customers.

Today, the transmission line that currently serves the Hermiston Butte Substation serves other loads as it travels a circuitous route into Hermiston. Further, our current backup for transmission into Hermiston Butte (from BPA's Hat Rock Substation) serves heavy irrigation loads, which limits how much power it can deliver during a widespread outage.

By reducing the load on our feeds, the new transmission line will help shorten the duration of outages. Because loads will be better distributed, fewer customers will be affected in the event of an outage. On a day-to-day basis, the Operations Department will have more options to transfer loads for maintenance purposes. On a long-term basis, our community will be better positioned for growth.

In addition to the increased reliability and capacity it would bring to the City of Hermiston and community, it would provide a non-duplication of services, common advantages and shared planning with a neighboring public utility.

Sincerely,

Nate A. Rivera
Superintendent
Hermiston Energy Services

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of	)
	)
In the Matter of the Petition of	)
	)
UMATILLA ELECTRIC COOPERATIVE	)
	)
PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY	)

TESTIMONY OF ROBERT ECHENRODE

ON BEHALF OF UMATILLA ELECTRIC COOPERATIVE

August 19, 2016

Q. PLEASE STATE YOUR NAME AND YOUR EMPLOYER.

A. My name is Robert Echenrode, General Manager and Chief Executive Officer ("CEO") of Umatilla Electric Cooperative ("UEC").

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I hold a Bachelor's Degree in Electrical Engineering from Ohio State University and an MBA from Oklahoma State University. I have over 25 years' experience working in the energy industry, and was previously the general manager of Northeast Oklahoma Electric Cooperative at Vinita, Oklahoma.

Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A. I am appearing on behalf of UEC.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to: (a) generally describe UEC's need to develop a five (5) mile overhead 115 kV transmission line ("Transmission Line") from a breaker in Bonneville Power Administration's ("BPA") McNary Substation to UEC's existing Hermiston Butte Substation; (b) describe the rate impact from the Transmission Line on existing UEC members; and (c) describe UEC's compliance with land use regulations for the siting and development of the Transmission Line.

Q. PLEASE GENERALLY DESCRIBE THE UEC SYSTEM.

A. UEC is a cooperative utility providing electric service to Oregon customers in Morrow, Umatilla, Union and Wallowa counties. Exhibit UEC/101 attached to the testimony of Lou Toth includes maps showing UEC's service territory. UEC serves more than 14,000

members and has more than 2,200 miles of power lines. UEC is not subject to the Oregon Public Utility Commission's ("PUC") jurisdiction over rates and terms and conditions of service, but does fall within the PUC's jurisdiction with respect to statutes and rules implementing the state's policies aimed at avoiding duplication of facilities.

Q. WHY DOES UEC NEED THE TRANSMISSION LINE?

A. UEC is growing rapidly. As of the end of 2015, power sales were up approximately 17 percent over the prior year, and more than 70 percent over the last 5 years. UEC is now the largest electric cooperative in the 10 western states in terms of power sales. As a result, UEC is expanding, replacing and adding infrastructure to accommodate this growth and to reliably serve existing members. In particular, the 115 kV point of delivery at McNary has been interrupted several times in the last 10 years. With the growth on the UEC system, this trend is expected to increase, which would translate into outages for our members. The Transmission Line will address this concern by increasing capacity and system reliability for existing members and accommodating the expected growth on the UEC system. The proposed Transmission Line will also benefit Hermiston Energy Services, a neighboring municipal electric utility, through increased reliability.

Included with my testimony as Exhibit UEC/201 are relevant portions of UEC's Construction Work Plan. This Construction Work Plan (CWP) is UEC's Engineer's report analyzing past and projected performance of UEC's system. The CWP process is used to determine construction that will be required in order to provide adequate and reliable electric service to new and existing members. This report reviews ongoing needs

of the electric system and also includes a summary of the estimated expenditures required each year for routine construction. These items are developed to aid in determining capital requirements for the plan period as well as establishing a basis for needed financing. The proposed Transmission Line is identified in the CWP as one of the projects UEC must undertake to provide adequate and reliable service.

Q. HAS UEC's BOARD DETERMINED WHETHER THE TRANSMISSION LINE IS NECESSARY?

A. Yes, on two occasions. First, on February 26, 2015, UEC's Board adopted the CWP, which identifies the proposed Transmission Line as a part of UEC's overall construction needs. A copy of that resolution is included with the CWP as part of Exhibit UEC/201. The Board later addressed the proposed Transmission Line specifically and, on July 29, 2015, concluded the line is necessary for the continued public health, safety, and economic welfare of UEC to construct the proposed Transmission Line. That resolution is included with my testimony as Exhibit UEC/203.

Q. HAS UEC DETERMINED HOW THE TRANSMISSION LINE WILL IMPACT RATES FOR EXISTING MEMBERS?

A. Yes. As described in the testimony of Lou Toth, the Transmission Line is estimated to cost $5,740,000. Using this estimate, UEC calculated the average impact on a residential member's bill to be $0.37 per month. This impact is expected to decrease over time, as new load is added to the system. The average monthly residential bill in 2015 was

$109.25. Included with my testimony as Exhibit UEC/202 is a calculation of the initial rate impact.

Q. HOW DID UEC DETERMINE WHERE TO LOCATE THE LINE?

A. As described in more detail in the testimony of Lou Toth, UEC chose the best, least cost location for the Transmission Line. The Transmission Line will use an existing utility corridor, which will minimize the impact to the community and the environment. The starting and ending points for the line are fixed at the McNary Substation and Hermiston Butte Substation, which limits the number of reasonable options to consider. UEC considered and rejected two alternatives that were more expensive and had a greater impact to the community and the environment.

Q. WHICH LOCAL JURISDICTIONS HAVE LAND USE AUTHORITY OVER THE PROPOSED TRANSMISSION LINE?

A. The proposed line is located in two different planning jurisdictions. Beginning on the north end coming from the McNary Substation, and for a majority of the proposed route, the line is in the unincorporated areas of Umatilla County. At the extreme southern end of the line, it passes into the territorial boundaries of the City of Hermiston. On the extreme north end, the line is within the City of Umatilla's urban growth boundary, but the area is unincorporated and Umatilla County remains the jurisdiction with planning authority there.

Q. HAS UEC WORKED WITH THE CITY OF HERMISTON AND UMATILLA COUNTY TO DETERMINE IF THE PROPOSED TRANSMISSION LINE IS COMPATIBLE WITH LOCAL COMPREHENSIVE PLANS AND LAND USE REGULATIONS?

A. Yes. UEC's land use team has analyzed land use regulations and the need for land use permits along the entirety of the proposed transmission line, and has also reviewed land use requirements along the alternative routes. As part of that analysis, UEC's consultants contacted the City and the County to help determine whether the proposed transmission line will be compatible with local comprehensive plans and land use regulations.

Q. IS THE PROPOSED TRANSMISSION LINE COMPATIBLE WITH THE CITY'S COMPREHENSIVE PLAN AND LAND USE REGULATIONS?

A. Yes. The City of Hermiston has an acknowledged comprehensive plan that implements Oregon's Statewide Planning Goals. The City's development code, in turn, implements its comprehensive plan. Thus, as long as the proposed transmission line does not violate the City's development code, the line will be consistent with, and compatible with, the City's comprehensive plan.

Q. HOW IS THE PROPOSED TRANSMISSION LINE CONSISTENT WITH THE CITY'S DEVELOPMENT CODE?

A. Like all jurisdictions in Oregon, land is regulated according to its zoning designation. Within the City of Hermiston, the proposed transmission line would pass through areas of the City zoned R-4 (Multi Structure Residential) and M-1 (Light Industrial). In both of those zones, a transmission line is permitted outright, the City does not directly regulate the use, and no additional land use approval is required.

/ / /

Q. DOES THE CITY OF HERMISTON AGREE WITH THAT CONCLUSION?

A. Yes. Attached to my testimony as Exhibit UEC/204 is a letter from the City's Planning Department, which arrives at the same conclusion and identifies the specific City codes on which that conclusion is based.

Q. IS THE PROPOSED TRANSMISSION LINE COMPATIBLE WITH THE COUNTY'S COMPREHENSIVE PLAN AND LAND USE REGULATIONS?

A. It is, but UEC will have to obtain from the County a conditional use permit prior to construction of the line. Like the City, the County has an acknowledged comprehensive plan which it implements through a development code and a zoning ordinance. Those regulations similarly apply zoning designations to property in the County and regulate specific uses within those zones. The proposed transmission line will pass through several zones in the County, each of which allows transmission lines, but only after obtaining a conditional use permit. The conditional use permit allows the County to review the development and to impose conditions to reduce any potential impacts on nearby properties.

Q. CAN UEC OBTAIN THE APPROPRIATE CONDITIONAL USE PERMIT FROM THE COUNTY?

A. Yes. As I just noted, the proposed transmission line is an allowed use in each of the applicable County zones. The purpose of the conditional use permit is to ensure that the proposed use is designed in an appropriate manner with respect to its compatibility with surrounding properties, not to determine if the use is allowed at all. We know that it is

possible to satisfy the County's conditional use standards because PacifiCorp obtained a conditional use permit from the County for a transmission line in these same zones.

Q. WHY HAS UEC NOT YET OBTAINED A CONDITIONAL USE PERMIT FOR THE PROPOSED TRANSMISSION LINE?

A. UEC cannot apply for a conditional use permit from the County until it actually has a property interest in the properties on which the line will be constructed, or permission from the property owner. Under the County's land use regulations, only the property owner can apply for the conditional use permit. This puts UEC in a unique situation because if it already owned property along the entire route, or had the permission of all property owners, it would no longer need a Certificate of Public Convenience and Necessity. It is only because UEC has not yet been able to obtain permission from all property owners, through easements, that it must seek the Certificate of Public Convenience and Necessity from the Commission, which will then provide UEC with the appropriate standing to seek a conditional use permit from the County.

Q. DOES UEC HAVE A PROPERTY INTEREST IN SOME OF THE PROPERTIES ALONG THE TRANSMISSION LINE ROUTE?

A. Yes. UEC has obtained easements from a majority of the property owners along the Transmission Line Route.

Q. WHAT ABOUT THE REMAINDER OF THE PROPERTIES ALONG THE TRANSMISSION LINE ROUTE?

A. UEC will continue to negotiate with land owners along the Transmission Line route and will only resort to condemnation as a last resort.

Q. DOES UMATILLA COUNTY AGREE WITH YOUR CONCLUSION THAT, IF UEC OBTAINS A CONDITIONAL USE PERMIT, THE TRANSMISSION LINE WILL BE COMPATIBLE WITH ITS LAND USE REGULATIONS?

A. Yes. Attached to my testimony as Exhibit UEC/205 is a letter from the County's Planning Department, which arrives at that same conclusion and identifies the specific County regulations on which that conclusion is based. The letter from the County also confirms that UEC cannot yet apply for a conditional use permit until it has the appropriate property interest, but that a conditional use permit is obtainable once that occurs. The County, of course, cannot authorize the conditional use permit until an application is made.

Q. HOW DO THE COUNTY'S LAND USE REGULATIONS APPLICABLE TO THE PROPOSED TRANSMISSION LINE DIFFER FROM THOSE APPLICABLE TO THE ALTERNATIVE ROUTES?

A. As I noted earlier, UEC's land use team analyzed land use requirements along the alternative routes. I have been advised that the major difference between the preferred route and the alternative routes is that either of the alternative routes would require development in the County's Exclusive Farm Use ("EFU") zones. I have been further advised that, while there is a process for permitting transmission lines in the EFU zone, the approval criteria for doing so limit development in that zone where there are alternatives available in non-EFU zones. Because UEC has an available alternative in non-EFU zones (the proposed route), it is less certain that UEC could even obtain land use approval for the alternative routes. This is one more factor that demonstrates why the preferred route was chosen.

/ / /

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/201

August 19, 2016

MAY 1 3 2015

Mr. M. Stephen Eldridge
General Manager
Umatilla Electric Cooperative
P.O. Box 1148
Hermiston, Oregon 97838

Dear Mr. Eldridge:

The Rural Utilities Service has reviewed the Environmental Report (ER) covering all the facilities recommended in your 2015-2016 Construction Work Plan (CWP). The ER is complete and complies with all requirements of 7 CFR Part 1794, Environmental Policies and Procedures. We have determined that the projects proposed in your CWP are categorical exclusions and no further environmental documentation is required unless the projects change from those described in the ER. Your CWP was approved by Rodney Peach on May 7, 2015, contingent on approval of the ER. You now have written environmental approval of all of the CWP projects.

Umatilla Electric Cooperative is responsible for acquiring the necessary permits and adhering to any environmental commitments made in the ER regarding construction and maintenance of the proposed projects. Umatilla Electric Cooperative should also continue consulting with the Confederated Tribes of the Umatilla Indian Reservation for project codes 205, 374, 409 and 1001. It should be noted that in the event that any buried archaeological resources and/or human remains are encountered during construction activities, construction will halt immediately and RUS will be contacted. Work will not resume until the consultations are completed.

Thank you for your assistance and cooperation in helping us fulfill our environmental review requirements. If you have any questions, please contact Dennis Rankin, Environmental Protection Specialist, at (202) 720-1953.

Sincerely,

CHARLES M. PHILPOTT

CHARLES M. PHILPOTT
Chief, Engineering Branch
Office of Loan Origination and Approval
Rural Utilities Service

cc:
Official File:OR-14/Rankin:EES/GFR:Peach/Engineer:OlOA
RUS:EES:DRankin:720-1953:5/13/15:OR-14CWP.doc

2015-2016 CONSTRUCTION WORK PLAN

For

UMATILLA ELECTRIC COOPERATIVE

Project Engineer

Louis S. Toth, PE

REGISTERED PROFESSIONAL ENGINEER
88373PE
OREGON
SEPT. 10, 2013
LOUIS S. TOTH

EXPIRES: 06/30/2016

Toth & Associates, Inc.
CONSULTING ENGINEERS

Phone:
417-888-0645

830 E. Primrose
Suite 200
Springfield, MO 65807

Fax:
417-888-0657

2015 02 022
UMATILLA ELECTRIC COOPERATIVE, INC
BOARD RESOLUTION
FOR APPROVAL OF THE 2015-2016 CONSTRUCTION WORK PLAN

WHEREAS, The 2015-2016 Construction Work Plan (2015-2016 CWP) as prepared by Toth & Associates, Inc., Springfield, MO, has been presented to the Board of Directors of Umatilla Electric Cooperative, Inc. (UEC); and

WHEREAS, the Board considers the 2015-2016 CWP to be a reasonable estimate of UEC's short range construction needs.

NOW, THEREFORE BE IT RESOLVED, that the Board of Directors of Umatilla Electric Cooperative, Inc., does hereby approve and accept the 2015-2016 CWP; and

BE IT FURTHER RESOLVED, that a copy of the 2015-2016 CWP be submitted to the Rural Utilities Service for review and acceptance; and

BE IT FURTHER RESOLVED, that the Board of Directors authorizes the General Manager and CEO on behalf of UEC to sign all associated documents containing terms and conditions that are acceptable to UEC and consistent with this Resolution regarding the 2015-2016 CWP.

CERTIFICATION OF SECRETARY

I, Robert H. MacPherson, Secretary of Umatilla Electric Cooperative do hereby certify that the above is a true and correct excerpt from the Minutes of the meeting of the Board of Directors of Umatilla Electric Cooperative held on February 26, 2015, at which meeting a quorum was present.

Robert H. MacPherson, Secretary/Treasurer

(SEAL)

2015-2016 Construction Work Plan

For

Umatilla Electric Cooperative

Hermiston, Oregon

Certification

This report was developed using standard engineering practices. The preparation and recommendations related to this Construction Work Plan are consistent with applicable RUS bulletins and industry standards.

Upon completion of construction of the facilities proposed, the system will have capacity to provide adequate and dependable service to 14,773 consumers for the projected 2016 peak of 353,068 kW. Average annual consumer usage for the system is forecast to be 116,126 kWh in 2016 (9,677 kWh per month). Average annual residential consumer usage for the system is forecast to be 15,299 kWh in 2016 (1,275 kWh per month). Said loads are in conformance with the Electric Load Forecast Study 2014 through 2026.

I certify that this four year Construction Work Plan for UMATILLA ELECTRIC COOPERATIVE was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the State of Oregon.

February 17, 2015
Date

Louis S. Toth, PE
Toth and Associates, Inc.

EXPIRES: 06/30/2016

Umatilla Electric Cooperative
Hermiston, Oregon

2015 - 2016 CONSTRUCTION WORK PLAN

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Hermiston, Oregon

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OREGON-14-UMATILLA
Umatilla Electric Cooperative
Hermiston, Oregon

2015 – 2016 CONSTRUCTION WORK PLAN

I. EXECUTIVE SUMMARY

A. Purpose, Results and General Basis of Study

1. Purpose

This Construction Work Plan (CWP) is the Engineer's report analyzing past and projected performance of the system in order to provide for expansion of the system during the 2015-2016 periods. "The CWP process is used to determine and document construction that will be required during the planning period in order to provide adequate and reliable electric service to the system's new and existing members" (per RUS stated guidelines) while considering environmental compatibility and system economics.

This report reviews ongoing needs of the electric system and also includes a summary of the estimated expenditures required each year for routine construction such as member service extensions, increased service capacities and other miscellaneous improvements. These items are developed to aid in determining capital requirements for the plan period as well as establishing a basis for needed financing.

This report is part of an ongoing program that includes the Electric Load Forecast Study, the Long Range Plan and the Construction Work Plan to insure economic expansion of the system. Basic data utilized in preparation of this plan was provided by Cooperative personnel.

2. Recommendations and General Basis of Study

Recommendations developed and listed in this work plan are based on RUS and general industry standards. Summary of Service Area, Conclusions and Recommendations are included in Sections I.B. and I.C. as follows. RUS guidelines and industry standards used in design are discussed in section IV and V of this report.

B. Service Area and Power Supply

Umatilla Electric Cooperative (UEC) serves approximately 14,500 consumers in Morrow, Umatilla, Union, and Wallowa Counties in north-central Oregon. UEC purchases all of its wholesale requirements from PNGC Power, of which it is a member. Diagrams of the system's service area are included at the back of this section.

C. Conclusions and Recommendations

1. System Loading

UEC continues to experience a steady increase in consumers and constructed 168 new services in 2013 and 209 in 2014. Average usages for these consumers should continue to grow as described in the "Load Forecast Study 2014 through 2026".

The system had its most recent noncoincident peak demand of 286,863 kW during 2014 and is forecast to reach 353,068 kW in 2016.

2. Service Extensions

Based on historic consumer growth described in paragraph C1 above and historic construction of 23.33 new line miles in 2012 and 23.91 new line miles in 2013, the system is forecast to add an average of 240 new consumers per year plus construct approximately 24.00 new miles of line per year for service extensions during the period of 2015-2016. Charts of consumers and average residential usages are included on pages VI-1 and VI-2.

The cost for construction to new consumers including new line for service extensions plus transformers and meters is $3,238,000 for the two year period.

3. Primary System (12.47 kV)

System review indicates that improvements are needed throughout the Cooperative's service territory (as described in Sections II and III of this report). Locations of these improvements can be found on circuit diagrams found in the back of this report.

The value of recommended primary system improvements less miscellaneous equipment is $11,749,750 (detailed in section II).

4. Substation Improvements

Hermiston East Substation is recommended to be constructed to relieve loading on Hermiston Butte, Feedville, and Columbia Substations and improve area reliability. Analysis is provided in Appendix II.

Tumbleweed is currently under construction to increase capacity in the industrial park. Substation upgrades are recommended at Port of Morrow, Chemical, and Hermiston Butte Substations.

Cost of two stations and upgrades to three other substations is estimated at $11,430,000 (as detailed in Section II.)

5. Transmission Improvements

Four new transmission lines are recommended to provide additional capacity to UEC's 115kV transmission system. Analysis is provided in Appendix III.

The value of recommended Transmission system improvements are $14,013,000 (detailed in section II).

6. Miscellaneous Distribution Construction

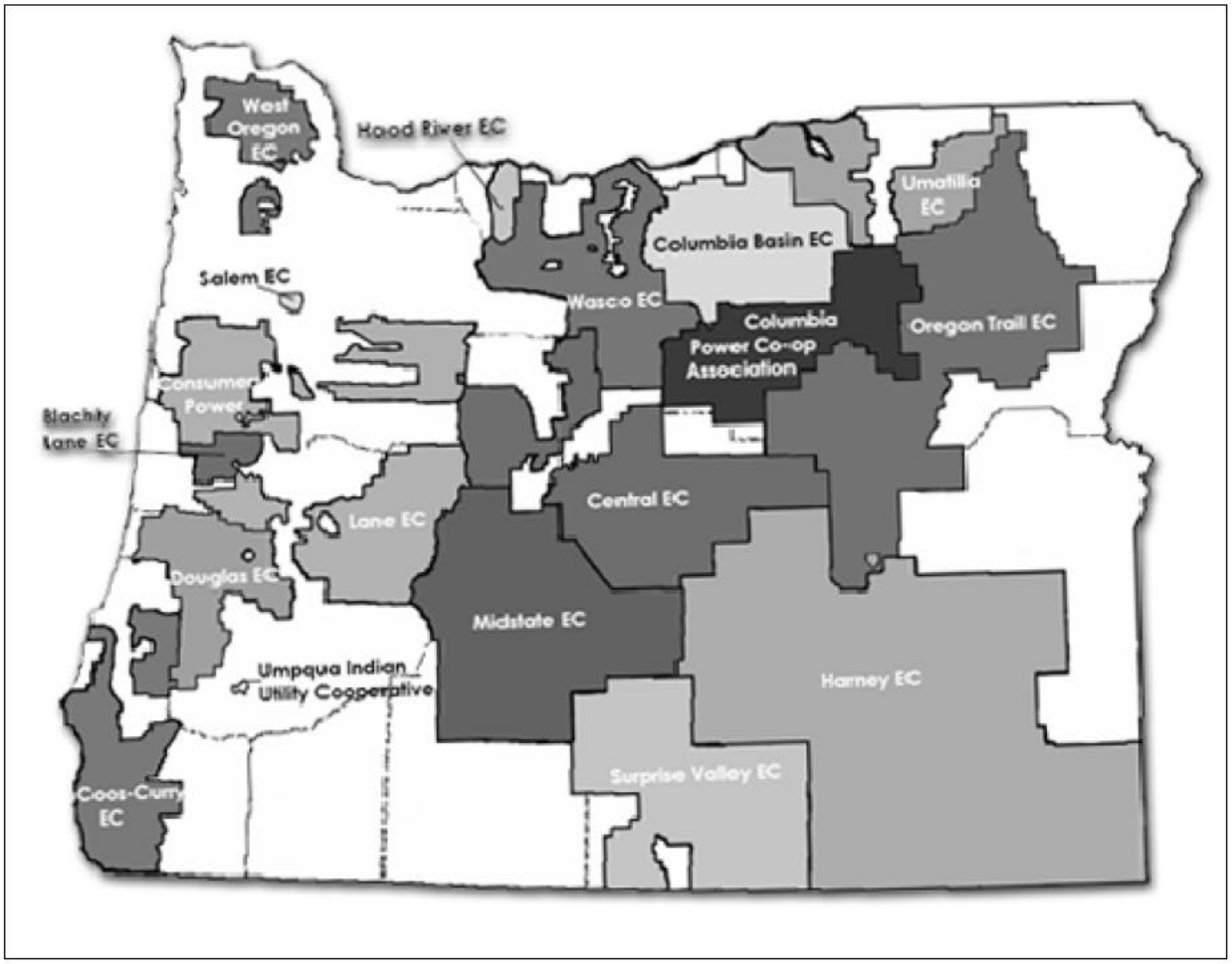
In addition to the improvements described above, UEC will continue its other programs such as upgrading line equipment including sectionalizing, capacitors, regulators plus its annual replacement program which includes pole replacements and replacement of other line units as needed due to the aging of said units, the increasing of service capacity for the changing needs of existing consumers, the annual additions of new security lights plus other miscellaneous additions.

The value of miscellaneous improvements is $2,628,000. These are further detailed in section II and appendix sheet VI-30.

7. Estimated Capital Expenditures

Estimated capital requirements are summarized below:

2015	$20,762,500
2016	$22,296,250
Total	$43,058,750



ADAPTED FROM

www.oreca.org

Rural Electric Cooperatives of Oregon

III. DISCUSSION OF SYSTEM IMPROVEMENTS

A. General:

The system will need improvements in most areas to meet industry and RUS standards as system loads continue to grow. Primary System and other improvements are discussed below.

B. Transmission Improvements:

823*	0.8 miles of DC 115kV 1272 MCM transmission line construction is recommended south and along Lewis and Clark Drive to tie the new BPA Morrow Flat 115 kV Source into UEC's 115kV transmission system. Analysis is provided in Section VIII of this report.
824	5.0 miles of 3 phase to 115kV 1272 MCM transmission line conversion is recommended along Feedville – Desplain Road to provide backfeeding ability to Feedville substation and Westland substation. Analysis is provided in Section VIII of this report.
825	0.3 miles of 115kV 1272 MCM transmission line construction with underbuild is recommended between Cottonwood Bend Road and Feedville-Despain Road to provide backfeeding ability to Feedville substation and Westland substation. Analysis is provided in Section VIII of this report.
1001*	The rebuild 4.7 miles of 69 kV to 115 kV with 1272 MCM is needed to provide a third source to Hermiston Butte and to provide an additional feed from BPA McNary. Analysis is provided in Section VIII of this report.
1016*	It is needed to upgrade 1.8 miles of 115 kV from 397.5 MCM to 1272 MCM to meet loop capacity of 200 MVA from Port of Morrow to Boardman. This job is currently under construction.

V. BASIS OF STUDY AND PROPOSED CONSTRUCTION.

A. Design Criteria

Construction proposed herein is in conformance with the following minimum standards of adequacy for voltages, thermal loading, safety and reliability on the system.

1. The minimum steady state voltage drop on primary distribution lines is not to exceed 8 volts, (120 volts base), after re-regulation. One regulator is generally permitted on a feeder. A cascaded regulator will be permitted where analysis justifies it from a cost and performance basis.

2. The following equipment is not to be thermally loaded by more than the percentage shown of its nameplate rating:
   100% Base Rating Power Transformers
   95% Substation and Line Voltage Regulators
   95% Oil Circuit Reclosers

3. Primary conductors are not to be loaded over 75% of their thermal rating.

4. Distribution power factor at each meter point is not to drop below 97% during the coincident peak.

5. Poles and/or crossarms are to be replaced if found to be physically deteriorated by visual inspection and/or tests.

6. Conductors are to be replaced if found to contain an excessive number of splice(s) per phase per span in one mile increments or if conductor is old, in poor condition and has excessive sag.

7. Primary distribution lines are to be rebuilt and/or relocated if they are found to be unsafe or in violation of the National Electrical Safe Code or other applicable code clearances.

8. System improvements are to be considered, and made if necessary, in specific areas where consumers have experienced more than three outage hours per year, excluding outages caused by major events or the power supplier, for the last two consecutive years. The system objective is to have a maximum level of 200 minutes/consumer/year or less for the “All Other” category.

9. New lines and line conversions are to be built according to the standard primary voltage levels as recommended in the current Long Range Plan.

10. New primary conductor sizes are to be determined on a case by case basis using “Economic Conductor Sizing.” The final proposed conductor size may be modified to conform to the cooperative’s standard sizes and recommendations of the Long Range Plan.

11. All new primary construction is to be overhead except where underground is required to comply with governmental or environmental regulations, local restrictions or favorable economics.

12. All new transmission and distribution lines are to be designed and built according to current RUS standard construction specifications and guidelines. The current RUS distribution drawings and specifications are 1728-F803 and 1728-F804.

Oregon-14-Hermiston
UMATILLA ELECTRIC COOPERATIVE
Hermiston, Oregon

2015-2016 Construction Work Plan

Transmission System Load Flow Analysis

A. INTRODUCTION

Analysis of the transmission system within the service area of Umatilla Electric Cooperative (UEC) is provided herein. The 115kV transmission system is evaluated for the following three cases: 2016 loads existing system, 2016 loads with CWP system improvements, and 2026 loads with CWP system improvements. The load flow analysis evaluates the voltage performance and capacity of the transmission system during normal operating conditions and during single contingency conditions.

B. Transmission Design and Criteria

a.	Maximum voltage	105%
b.	Minimum voltage for normal operation	95%
c.	Minimum voltage for single contingency	92% (temporary)
d.	Transmission Power Factor	95%

e. Regulation @ 230 kV
   1.05 pu at BPA McNary
f. Line load limits per Umatilla Electric Cooperative NERC equipment ratings for operational purposes.

C. Single Contingency Cases

Loss of BPA sources presents the most serious single contingency cases. The 2016 and 2026 load levels are reviewed for the following contingencies. Each contingency has three maps detailing the load flow analysis for the following three cases: 2016 loads existing system, 2016 loads with CWP system improvements, and 2026 loads with CWP system improvements. A map of the base case existing system with 2016 loading is on sheet VIII-3.

Contingency 1. 115 kV line out between BPA Boardman Source and Rippee Road (Sheets VIII-4 to VIII-6)

Contingency 2. 115 kV line out between BPA Boardman Source and Coyote Springs (Sheets VIII-7 to VIII-9)

Contingency 3. 115 kV line out between Pond GOAB and Hermiston Butte (Sheets VIII-10 to VIII-12)

Contingency 4. 115 kV line out between BPA McNary Source and Umatilla GOAB (Sheets VIII-13 to VIII-15)

Contingency 5. 115 kV line out between BPA Hat Rock Source and Sandpoint GOAB (Sheets VIII-16 to VIII-18)

D. 2016 Transmission System

Transmission system upgrades are recommended for the forecast 2016 load level to provide for meeting design criteria during single contingency conditions. The following is a list of transmission improvements through 2016:

1. It is recommended to construct a Double Circuit 115 kV 1272 MCM transmission line between BPA 230/115 kV Morrow Flat and Lewis and Clark (Project 823*), which will provide another source into UEC's 115 kV system. Morrow Flat is needed to allow the system to meet voltage performance requirements during single contingency conditions. Without this source during Contingency 1, voltages reach 0.935 pu at Rippe Road substation, current on the 600 amp switches at Port GOAB reach 877 amps which is 146% overloaded, transmission line from Port GOAB to Coyote Springs reach 877amps which exceeds its Normal rating of 809 but not its Emergency rating of 1092 amps, transmission line from Coyote Springs to Riverview reach 709 amps which is 110% overloaded its Emergency rating, and 600 amp switches at Blalock GOAB reach 709 amps which is 118% overloaded, as detailed on sheet VIII-4. Sheets VIII-5 and VIII-6 detail that the addition of the Morrow Flat source eliminates these overload conditions during Contingency 1 for both 2016 and 2026 load levels.

2. It is recommended to construct a 115 kV transmission line from BPA McNary to Hermiston Butte and add additional 115 kV breakers positions at McNary (Project 1001*). The additional transmission line feeding Hermiston Butte is needed for Contingencies 3, an outage of the Hermiston Butte to Pond GOAB transmission line, and Contingency 4, an outage of the BPA McNary to Umatilla GOAB transmission line. During Contingency 3, current on the Juniper Canyon to Columbia GOAB reaches 405 amps which is over its Normal rating of 374 amps but below its Emergency rating of 497 amps, as detailed on sheet VIII-10. Sheets VIII-11 and VIII-12 detail that the addition of a transmission line between McNary and Hermiston Butte eliminates this overload condition during Contingency 3 for both 2016 and 2026 load levels. During Contingency 4, current on the Juniper Canyon to Columbia GOAB reaches 432 amps which is over its Normal rating of 374 amps but below its Emergency rating of 497 amps, as detailed on sheet VIII-13. Sheets VIII-14 and VIII-15 detail that the addition of a transmission line between McNary and Hermiston Butte eliminates this overload condition during Contingency 4 for both 2016 and 2026 load levels.

3. It is recommended to construct a 115 kV transmission line from Feedville to Westland (Project 824) to provide backfeeding ability to both Westland and Feedville Substations and to address overload during Contingency 5 at the 2026 load level, as detailed on sheet VIII-18.

E. 2026 Transmission System

The Construction Work Plan transmission system upgrades are recommended for the forecast 2016 load level to provide for meeting design criteria during single contingency conditions. The recommended CWP transmission system improvements further provide for system voltages to stay above 0.95 pu and have no equipment reach its emergency rating during single contingency conditions at the 2026 load level. A reliable loop concept should be explored moving forward to maximize the Morrow Flat source and additional McNary feeds from BPA and utilize them as a self-healing transmission system.

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/202

August 19, 2016

Umatilla Electric Cooperative Corporation
Calculation of Incremental Transmission Expense Per Average Residential Per Month
Test Period 12/31/2015

Section I. Calculation of Annual Transmission Expense (Based on 2015 Form 7 Data):

Item	Amount	Reference	Item	Amount	Source
Annual Transmission Expense - Operations and Maintanence	$173,051	*RUS7, Part A, Item 4*	Annual General and Administrative	$4,476,066	*RUS7, Part A, Item 11*
Annual Transmission Expense - General and Administrative	$357,261	Annual G & A * (Trans Plt / Op. Plt)	Annual Tax Expense - Property	$1,441,280	*RUS7, Part A, Item 14*
Annual Depreciation and Amortization Expense	$271,662	Trial Balance - Account 403.5	Annual Interest on Long-Term Debt	$2,402,252	*RUS7, Part A, Item 16*
Annual Tax Expense - Property & Gross Receipts	$115,037	Annual Tax Exp. * (Trans Plt / Op. Plt)			
Annual Interest on Long-Term Debt	$191,738	Annual LTD Exp. * (Trans Plt / Op. Plt)			
Total Transmission Expense	$1,108,750	A	Transmission Plant	$10,255,356	*RUS7, Part E. Item 5*
			Distribution Plant	$118,232,267	*RUS7, Part E. Item 1*
Total kWh Sold	1,580,305,898	*RUS7, Part O, Item 11*	Operations Plant	$128,487,623	
Total Transmission Expense / Total kWh Sold	$0.0007016	D / Total kWh Sold	Trans. Plt. / Operations Plt	7.98159%	

Section II. 2015 Residential Usage Data (Based on Form 7 Data):

Residential kWh Sold	153,061,353	*RUS7, Part O, Item 1b*
Average No. Residential Consumers Served	9,582	*RUS7, Part O, Item 1a*
Annual No. Residential Consumers Served	114,984	=9,582 * 12
Average Monthly Residential kWh Sold	1,331	=153,061,353 / 114,984

Section III. Revenue Requirement (O&M, A&G, and Tax Expense):

Total Transmission Expense	$1,108,750	A
Less: Transmission Depreciation and Amortization	$271,662	
Less: Transmission Interest on Long-Term Debt	$191,738	
Total O & M, G & A, and Taxes	$645,349	
Total kWh Sold	1,580,305,898	*RUS7, Part O, Item 11*
Total Total O&M, G&A, and Tax Expense / Total kWh Sold	$0.0004084	E / Total kWh Sold

Section IV. Incremental Transmission Expense Calculation (Based on $5,740,000 Transmission Investment @ 3.5% Note for 35 Years):

Calculation of Percent Increase of Miles of Transmission Line:		
Incremental Increase in Miles of Transmission Line	5.00	
Miles of Transmission Line	129.58	*RUS7, Part B, Item 5*
Percent Increase	3.859%	
Incremental Amortization and Interest	$286,991	=$5,740,000 Transmission Investment @ 3.5% note for 35 years
Margin Requirements (Based on TIER 2.00)	$122,991	
Incremental O&M,G&A, and Tax Expense Increase	$24,902	=3.859% * $645,349
Total Incremental Transmission Expense	$434,883	
Total Incremental Transmission Expense / Total kWh Sold	$0.0002752	

Average Increase to Residential Member (Based on 1,331 kWh Usage)= $0.37 =$0.0002752 * 1,331

UEC/202
Echenrode/1

McNary to Hermiston Butte 115 kV Transmission Line

Derivation and Discussion of Average Residential Thirty-Seven Cent

Cost Addition Figure for Use in Testimony

Attached is a spreadsheet showing derivation of the $.37 (thirty-seven cent) cost addition to average monthly residential bills resulting from the construction of the 5-mile Hermiston Butte line upgrade/addition. The sheet utilizes cost figures from the 2015 fiscal year. This discussion provides explanation of calculations and brief discussion of the conservative nature of calculations.

The spreadsheet shows an incremental increase in composite system costs to be $434,883 per year (due to the added 5 miles of transmission line, compared to existing transmission line miles totaling 129.58). Inherent in the $434,883 calculation is inclusion of Interest and depreciation for the line based on forecast interest rate of 3.5% on the total $5,740,000 new line addition investment with a loan period or life expectancy of 35 years. (Note average system FFB rate to UEC is 3.45%). Also included is a value for allocated O&M expenses, plus allocated G&A expenses plus allocated Tax expenses. Additionally, a component was added for a "times interest earned coverage ratio" equal to 2 (two). This is the same ratio used historically for establishing the Open Access Transmission Tariff. Total annual sales for the UEC system are 1,580,305,898 kWh per year. Average sales to residential consumers (during 2015) equaled 1,331 kWh per month per consumer.

Extrapolation of incremental cost of the proposed 5-mile transmission line for an average UEC residential consumer yields the following based on average residential usage:

Unit increase in system costs = ($434,883 per year/1,580,305,898 kWh system sales per year)
=$.0002752/kwh

Monthly Increase for Avg. Res. Consumer = $.0002752/kwh X 1331 kWh/mo. per Res. Cons
= $0.37 per month increase per residential consumer

We acknowledge that there are many ways of slicing a pie or allocating a complex set of expenses and variables. It can be argued that from both an accounting and an engineering standpoint, the above costing approach is reasonably based. The approach is also relatively straight forward. It can be argued that the above incremental cost of thirty-seven cents per residential consumer figure is actually conservative or high since it allocates the total $5,740,000 of investment to the to the transmission line alone. However, the line route improvements also result in upgrade of the existing distribution line/system in the 5-mile easement area; with savings that will actually accrue to the existing distribution system already in place; since the line would need upgrades in the future regardless of whether or not the proposed transmission

line were incorporated. Age of much of the existing poles and equipment are well over 50 years old. Said plant would have needed upgrades in the future due to the age of the line, poles and equipment. These forecast savings are not reflected in the above calculation of the $.37 (thirty-seven cents) per month average cost addition estimate for residential users with the result that the figure is conservative. Additionally, the expected loan period as noted above is for 35 years which probably understates the actual life expectancy of poles and equipment thus also adding to the conservative nature of the thirty-seven cent increase per month figure.

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/203

August 19, 2016

RESOLUTION 2015 07 034
A RESOLUTION DECLARING PUBLIC NEED TO ACQUIRE EASEMENTS FOR TRANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS AND AUTHORIZING THE ACQUISITION OF EASEMENTS

WHEREAS, the above-entitled matter came before the Board of Directors (Board) of the Umatilla Electric Cooperative (UEC) at its regular meeting on July 29, 2015; and

WHEREAS, UEC, through retained engineering consultants, is preparing to proceed with the project generally referred to as the McNary to Hermiston Butte 115kV Transmission Line Project (hereinafter "Project"); and

WHEREAS, the Board, after having reviewed and considered the Project finds it necessary to acquire easements for the location, construction, operation, maintenance, repair, replacement and upgrade of the Project and for future UEC facilities. The easements will be acquired on, over, under and through certain properties located within a corridor 500 feet on either side of a line generally extending south from the intersection of Hwy 730 and Lind Road in Umatilla, Oregon to UEC's Hermiston Butte substation located adjacent to UEC's offices at 750 West Elm Ave. in Hermiston, Oregon (hereinafter referred to as "Easement Properties"). The easements will typically be 80 feet in width plus additional easements for guying, anchors and other facilities necessary to construct the Project; and

WHEREAS, it appears to the Board that, after investigation of alternatives regarding the provision of the most economic and efficient method of service delivery, the greatest public benefit is achieved through acquisition of easements in the Easement Properties; and

WHEREAS, in order for UEC to efficiently provide service to its members, it is necessary and in the public's interest to construct the Project and to acquire easements in the Easement Properties; and

WHEREAS, UEC has authority under Oregon law to acquire easements in the Easement Properties by negotiated purchase or condemnation proceedings; and

WHEREAS, UEC finds that the proposed acquisition is planned to be accomplished in a manner which is most compatible with the greatest public good and causes the least private injury,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UMATILLA ELECTRIC COOPERATIVE:

1. That the above recitals shall form an integral part of this resolution and shall have the same force and effect as if they were adopted as resolutions; and

2. UEC declares it is necessary for the continued public health, safety, and economic welfare of UEC to construct the Project and that easements in the Easement Properties be acquired by UEC; and

3. That UEC and its attorneys are authorized to retain appraisers, negotiators, and other consultants and attempt to agree with the owners and other persons of interest in the Easement

Properties as to the compensation to be paid for the acquisition of easements in such property and in the event no satisfactory agreement can be reached, then the attorneys for UEC are directed and authorized to commence and prosecute to final determination such proceedings as may be necessary for UEC to acquire easements in the Easement Properties.

4. That upon the trial of any suit or action instituted to acquire easements in the Easement Properties, the attorneys acting for and on behalf of UEC are authorized to make such stipulation, agreement or admission as in their judgment may be for the best interest of UEC and to take possession of the easements in the Easement Properties at such time as appropriate in their judgment without necessity of further Board approval.

CERTIFICATION OF SECRETARY

I, Robert H. MacPherson, Secretary of Umatilla Electric Cooperative do hereby certify that the above is a true and correct excerpt from the Minutes of the meeting of the Board of Directors of Umatilla Electric Cooperative held on July 29, 2015 at which meeting a quorum was present.

Robert H. MacPherson, Secretary/Treasurer

(SEAL)

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/204

August 19, 2016

Planning Department
180 NE 2nd Street
Hermiston, OR 97838
Phone: (541)567-5521
Fax: (541)567-5530
planning@hermiston.or.us

Where Life is Sweet

June 24, 2016

Mr. Robert Echenrode
General Manager
Umatilla Electric Cooperative
750 W. Elm
PO Box 1148
Hermiston, OR 97838

Dear Mr. Echenrode:

The City Planning Department has reviewed Umatilla Electric Cooperative's ("UEC") proposed route for construction of a transmission line. Based on the information provided, the proposed line route is from West Punkin Center Road running south along the east side of Geer Road and continuing south to the Hermiston Butte. This route would pass through areas of the City zoned R-4 (Multi Structure Residential) and M-1 (Light Industrial).

Within the R-4 zone, transmission lines are permitted outright pursuant to Hermiston City Code §157.025(A)(7). Within the M-1 zone, transmission lines are permitted outright pursuant to Hermiston City Code §157.055(A)(20). As outright permitted uses, no land use approval is required and the City does not directly regulate this use.

Please reference Hermiston City Code §157.143, which states allowed zones for power transmission lines.

Please let me know if you require any additional information.

Sincerely,

Clinton F. Spencer
City Planner

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PCN-1

In the Matter of the Petition of

UMATILLA ELECTRIC COOPERATIVE

PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

EXHIBIT UEC/205

August 19, 2016

Umatilla County

Department of Land Use Planning

DIRECTOR
TAMRA MABBOTT

LAND USE PLANNING, ZONING AND PERMITTING

CODE ENFORCEMENT

SOLID WASTE COMMITTEE

SMOKE MANAGEMENT

GIS AND MAPPING

RURAL ADDRESSING

LIAISON, NATURAL RESOURCES & ENVIRONMENT

June 27, 2016

Robert Echenrode
Umatilla Electric Cooperative, General Manager
PO Box 1148
Hermiston, OR 97838

Re: Proposed Butte-McNary Transmission Line

Dear Mr. Echenrode:

The County Planning Department has reviewed Umatilla Electric Cooperative's (UEC) proposed route for construction of the Butte-McNary transmission line. The proposed route is shown on the enclosed map provided by UEC. This letter serves to describe the approval process for a transmission line within the County's jurisdiction. This letter is not an approval of UEC's proposal and UEC must make a formal application to the County and have that application approved before the transmission line may be constructed.

It is the Planning Departments understanding that UEC will use this letter as part of its application to the Oregon Public Utility Commission for a Certificate of Public Convenience and Necessity (CPCN). Specifically, it is our understanding that UEC is required to demonstrate that the CPCN is compatible with local land use regulations. Issuance of the permits described below would be consistent with the County's acknowledged Comprehensive Plan and land use regulations.

As an initial matter, this letter will confirm that UEC cannot apply for land use approval of the proposed transmission line unless it either owns the property on which the line will be developed, or has the consent of the property owner.

Based on the information we have reviewed, the line will pass through the City of Hermiston's and Umatilla's City Limits and Urban Growth Areas (UGA). The County does not have Planning jurisdiction within City Limits or in certain zones within Hermiston's UGA. UEC will need to contact the appropriate planning authority for permitting within those areas.

Umatilla Electric Cooperative
Proposed Transmission Line
June 27, 2016

The proposed transmission line crosses the following zones under the County's planning jurisdiction. The zoning can be found in the Umatilla County Development Code (UCDC) and the 1972 Umatilla County Zoning Ordinance (UCZO). In the zones listed below a Utility facility may be allowed with a Conditional Use Permit except in an F-1 zone, then a Utility facility is allowed upon issuance of a Zoning Permit.

Unincorporated areas:

- RLI, Rural Light Industrial (UCDC); Section 152.309 (A)(11).
- LI, Light Industrial (UCDC); Section 152.303 (A)(16).
- RR-4, Rural Residential 4 acre minimum (UCDC); Section 152.132 (G).
- RR-2, Rural Residential 2 acre minimum (UCDC); Section 152.157 (G).

City of Umatilla's UGA:

- M-1, Light Industrial (UMZO); Section 3.135 (28).
- F-2, General Rural (UMZO); Section 3.024 (14).
- F-1, Exclusive Farm Use (UMZO); Section 3.012 (5).
- R-1, Agricultural Residential (UMZO); Section 3.072 (6).
- R-3, Urban Residential (UMZO); Section 3.094 (11).
- C-1, General Commercial (UMZO); Section 3.113 (7).

City of Hermiston UGA:

- FU-10, Future Urban (UCDC); Section 152.337 (F).

If UEC applies for a conditional use permit and satisfies all of the applicable approval standards, the proposed transmission line could be approved as a Conditional Use Permit, and would be in compliance with the County's land use regulations.

If you have further questions, or need additional information I can be contacted at 541-278-6249 or via email at brandon.seitz@umatillacounty.net.

Cordially,

Brandon Seitz
Assistant Planner

enclosure: Proposed Transmission Line Map

cc: Tamra Mabbott, Planning Director
Sally Anderson-Hansell, Anderson Hansel PC

UEC/205
Echenrode/3

MAP DISCLAIMER: Zoning data obtained from Umatilla County Dept of Land Use Planning on 6/21/16. No warranty is made by Toth or Umatilla County as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources. This information may not meet National Map Accuracy Standards. This produce was developed through digital means and may be updated without notifications. GIS data used by Umatilla County is not survey grade. Coordinate and spatial locations of parcel data should be used for reference purposed only. Coordinates have an error factor of a minimum of + or - 50 feet. Subsequently there are many factors that contribute to the inaccuracy.

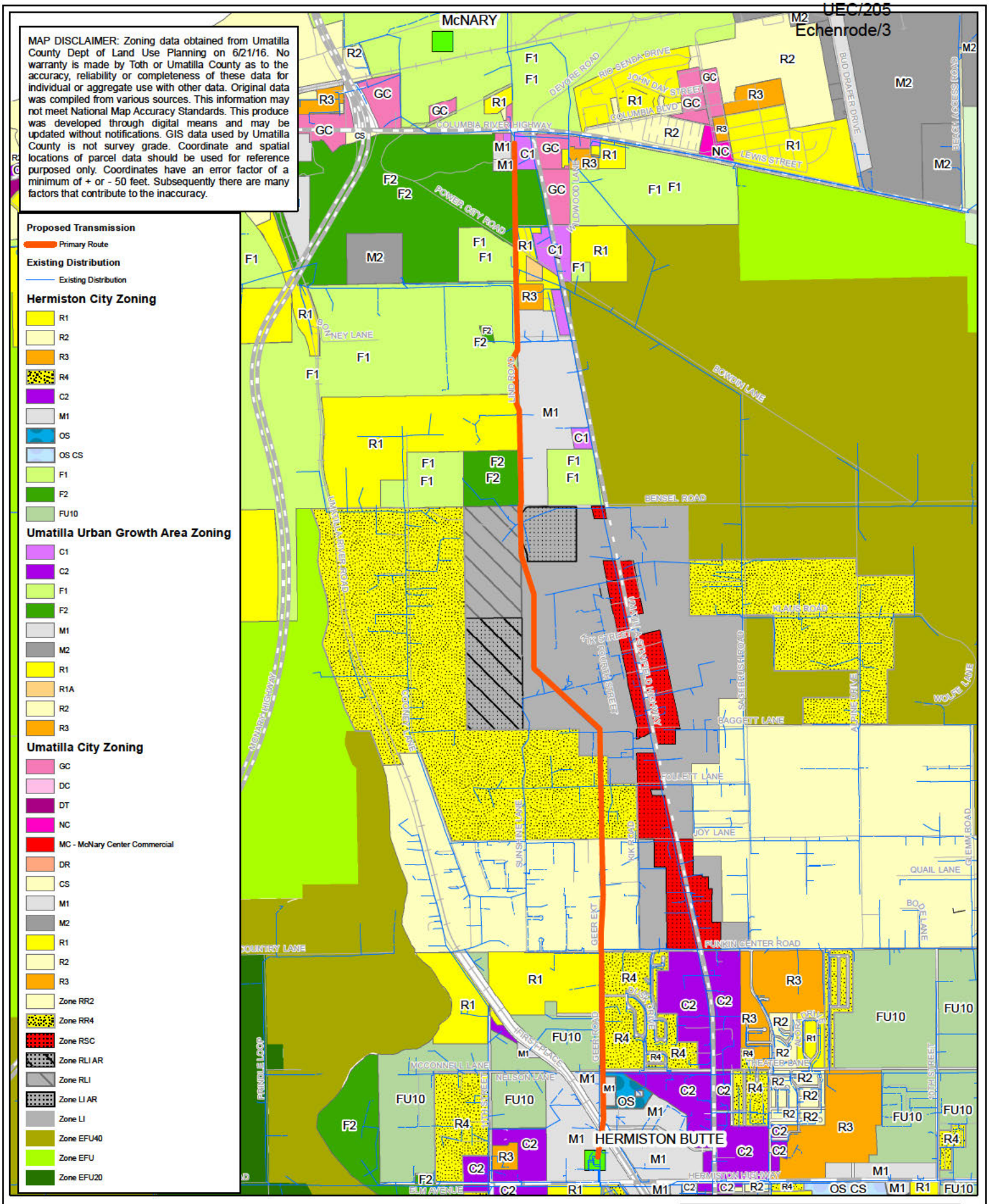
Proposed Transmission
- Primary Route

Existing Distribution
- Existing Distribution

Hermiston City Zoning
- R1
- R2
- R3
- R4
- C2
- M1
- OS
- OS CS
- F1
- F2
- FU10

Umatilla Urban Growth Area Zoning
- C1
- C2
- F1
- F2
- M1
- M2
- R1
- R1A
- R2
- R3

Umatilla City Zoning
- GC
- DC
- DT
- NC
- MC - McNary Center Commercial
- DR
- CS
- M1
- M2
- R1
- R2
- R3
- Zone RR2
- Zone RR4
- Zone RSC
- Zone RLI AR
- Zone RLI
- Zone LI AR
- Zone LI
- Zone EFU40
- Zone EFU
- Zone EFU20



TOTH & ASSOCIATES

T5N, R28E, Sections, 15, 22, 27, 34
T4N, R28E, Section 3
County: Umatilla

N W E S

0 0.25 0.5 1 Miles

O:\Oregon\OR14\GIS\mxds_pmfs\Zoning_Butte_McNaryLine_trans.mxd
Map By: abohn Date: 6/23/2016