ITTA BENA, MISSISSIPPI

STRATEGIC PLAN
2024-2029

PRODUCED BY
The Delta Design Build Workshop for Itta Bena, Mississippi with support from Hope Enterprise Corporation.

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COVER IMAGE:
Photo credit The Greenwood Commonwealth
February 4, 2020
From left, Mississippi Valley State University art students Jamarkus McCall, Parrishana Sanders, Jalecia Clark, Jalin Walker and their professor, Spence Townsend, celebrate the Saturday installation of the murals they painted and designed to be displayed on Itta Bena's old City Hall building.

ABOUT THE CITY OF ITTA BENA

Itta Bena, Mississippi, is a city in Leflore County. The City has been a partner of Hope Enterprise Corporation for many years, and is extensively documented throughout this report.

ABOUT HOPE ENTERPRISE CORPORATION

Hope Enterprise Corporation and Hope Credit Union are focused on strengthening communities, building assets, and improving lives across five states: Alabama, Arkansas, Louisiana, Mississippi, and Tennessee. HOPE is providing access to high-quality financial services, leveraging private and public resources, and shaping policies that have benefited more than 1-million residents in one of the nation’s most persistently poor regions.

ABOUT THE DELTA DESIGN BUILD WORKSHOP

The Delta Design Build Workshop positions itself at the intersection of market forces and public interest. The organization values process as much as product, believes that waste is a social construct, and prioritizes sensitive translation between unique local challenges and design in all projects. Through affordable housing, public spaces, and workforce training, Delta DB builds equity through the built environment in the Mississippi Delta region.

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EXECUTIVE SUMMARY

Itta Bena, Mississippi is a rural community located in Leflore County in the Delta region of the State of Mississippi. This region, rich in culture, continues to be challenged by some of the most persistent poverty and racial inequity in the United States. Despite this, throughout the strategic planning process, residents continually emphasized their love of their home community and commitment to remaining in Itta Bena.

Assets such as a Mayor and Board of Alderpeople committed to positioning the City to seek new funding opportunities, new businesses and community programs that have opened in recent years, and the community's relationship with Mississippi Valley State University all create opportunities. Pathways to realizing these opportunities are detailed throughout this plan. Avenues to respond to ongoing challenges, such as much needed physical and administrative infrastructure upgrades, are also detailed on the following pages.

The purpose of this strategic plan is to identify the challenges and aspirations present in Itta Bena, and define plans to respond to those needs and goals. In order to develop a strategic plan that accurately reflects local conditions and sentiments, the planning process engaged community members through a range of methods, seeking to be inclusive of as broad an audience as possible. One primary goal of this document is to identify pathways and next steps towards realizing the goals articulated by Itta Bena residents throughout this process.

Secondarily, it is the intention of the project team to position the community to pursue partnerships, funding, and other resources with this document serving as a toolkit for presenting priorities, introducing the community context, and documenting past successes. Finally, the project team sought to complete a community planning process that catalyzed action beyond the creation of a written plan. To that end, first steps toward realizing the strategic goals were undertaken even as the document was being finalized.

STRATEGIC PLAN DEVELOPMENT LEADERS

Municipal Leadership
Mayor Reginald Freeman, Sr.
Jennifer Walker, Alderwoman Ward 1
Kim Dawson, Alderwoman Ward 2
Darrick Hart, Alderman Ward 3
Jerry Crockett, Alderman Ward 4
Willie Williams, Alderman at Large

Community Members
Numerous Itta Bena residents and MVSU faculty and students who participated in the various events throughout this planning process.

Strategic Partners
Hope Credit Union
Hope Enterprise Corporation
The Delta Design Build Workshop
Mississippi Valley State University

HISTORY & CONTEXT

Itta Bena City Seal https://www.cityofittabena.com/

Itta Bena, Mississippi, was founded in 1846 by Benjamin Grubb Humphreys on land historically occupied by the indigenous Choctaw and Quapaw Indigenous Peoples.[1] A detailed history from the City of Itta Bena's website covering the founding of the community, development of the downtown, and Civil Right events, is included here.

In 1846, several families from Claiborne County in South Mississippi traveled up the Yazoo River in a fervent quest to locate rich and fertile farm land. These families which included Benjamin Grubb Humphreys (who later became the 26th governor of Mississippi from 1865 -1868), T.Y. McNeil, Eli Waites, Frank and John Hawkins, and others arrived at a place called Roebuck Landing, a name thought to mean "nearby farm."

The family members and their laborers cut through the densely wooded habitat to find the property alongside a small area of the 19 mile Roebuck Lake as prime for constructing their lob cabins. Hence, the group named the area of land, Itta Bena, an Indian Choctaw phrase for "home in the woods" or "camp together." The families developed a viable lifestyle on their plantations, with cotton and corn serving as their chief crops. Their successful production of quality products and abundant water sources became noticed by others, thus making their quaint little discovery more and more appealing to other settlers, especially those interested in agriculture....

Civil War and Beyond: 1860s – 1890s

With the village rapidly growing, the Georgia Pacific Railroad purchased a right of way that traveled directly through the plantation in 1888. In that same year, the first school was constructed with Miss Emma Cross serving as the first teacher. The construction of the railway, Old Southern Railroad (later the Columbus & Greenville Railroad) was completed with the first train traveling through Itta Bena in 1889. As a result of the influx of Deltans and other visitors to the area, J.B. Humphreys, P. Cohen, and Uriah Ray built the first stores to serve the booming center

1 Native Land Digital https://native-land.ca/

for trading, processing, and shipping crop. The first police station was established and the first house was erected directly in front of the Humphreys' home in 1891. Within one year, streets were constructed and eight stores were erected.

In 1897, the entire village was in flames with many locals suffering great losses. Nevertheless, the residents rebuilt and the Town of Itta Bena was officially incorporated by a charter on August 1, 1898. Within seven short years, in 1905, another unexplained fire threatened the success of Itta Bena, and again this set-back did not impede the desires of the Itta Bena citizens to rebuild and maintain a successful agricultural town.

20th Century: 1900s

The downtown district of Itta Bena was carefully crafted by civil engineers to convey a distinct and unique character, similar to its citizens. With a brick streetscape bordered by sets of adjoined buildings facing the street, and the picturesque Roebuck Lake background, Itta Bena's downtown began to tell the story of its "Old Town" neighboring community. Several restaurants, movie theatres, cafés, shopping marts, and boutiques encompassed the town plaza. The town even produced its own newspaper entitled "The Itta Bena Times" published by the Delta Publishing Company and formulated the Itta Bena Business League in 1912.

It was thought that probably more Black [households] purchased and paid for homes and plantations within a ten mile radius of Itta Bena than in any other Southern settlement. Itta Bena's location made it a perfect locality for the growing business community. The town was situated less than 10 miles from Greenwood, MS and was right at the crossroads of Highway 7 which ran directly through the city and into Highway 82. During this period, Itta Bena was indisputably the center of the richest agricultural section of the fertile Yazoo and Mississippi Delta.

The centrally located train depot and eventually bus station transported many Deltans in and out of the area and allowed visitors a chance to explore this "home in the woods" often commenting on the aesthetically noticeable arches, columns, and brick designs.

Civil Rights: 1950's - 1960's

During the 1950s and 1960s, the civil rights movement mobilized gaining collective national attention on issues surrounding racial equality in Mississippi and other southern states. The small rural community of Itta Bena was not impervious to these struggles for freedom, equality, and fair treatment insisted by its Black residents. Although ordinary citizens have struggled to fulfill the American promises of equality under the law for numerous years, the documented history of the civil rights *movement in Itta Bena is tracked to April 1963. Local residents and community organizers met at the only place that was open for civil rights activities, Hopewell Missionary Baptist Church located in the "Balance Due" section of town. The primary focus of the meetings was voter registration.*

Since a requirement to vote included understanding the constitution and interpretation of the amendments, citizenship and adult literacy classes were held. Northern supporters provided food, water and clothing to meeting attendees. Community organizers received numerous threats and requested police protection from local law enforcement. On May 11th and then again on June 18, 1963, the threats became a reality as tear gas bombs were thrown into the church. After this last incident, the residents engaged in a peaceful procession to speak with the police chief. Along their route to the police station, angry onlookers tossed bottles and tear gas to the group in their protest of the meeting. Upon arriving at the police department at least 60 men, women and children were arrested and taken to the Itta Bena jail (which was not larger than a bedroom) and were eventually taken to the county jail in Greenwood. The next day attendees were found guilty of disturbing the peace and disorderly conduct and were sentenced to six months in jail and a $500 fine. Only a few of the youngsters were released, but approximately 45 remained in prison and had to work at the Leflore County Penal Farm performing manual labor. While being detained, the group still carried on peaceful demonstrations and were finally released on August 16th.

Itta Bena residents and volunteer groups continued conducting voter registration campaigns and adult literacy education. They attended meetings and training sessions throughout Mississippi and other states and consistently visited local restaurants to try to get the same service as the other patrons. Dr. Martin Luther King, Jr. and other civil rights leaders observed some of the brutal experiences that voter registration workers suffered in Mississippi. Stating that "despite the ever-present problems in the Mississippi Delta region . . . there is a ray of hope." These were his sentiments on his tour of Mississippi with workers of the Council of Federal Organizations and students of the Summer Project on behalf of the Mississippi Freedom Democratic Party.

On July 20, 1964, Dr. King arrived in Greenwood, MS to encourage and teach the people about freedom. It is believed that on this city touring, the group traveled through Itta Bena. Over the next few years, voter registration drives and education classes continued in the Delta and throughout Mississippi. James Meredith organized a 220 mile march entitled

“March against Fear” from Memphis, TN to Jackson, MS to encourage black voting in Mississippi. On June 5, 1966 Meredith was shot. Two days later, Dr. King (SCLC), Floyd McKissick (CORE), and Stokely Carmichael (SNCC) decided to unite to continue the march, renaming it the “Meredith Mississippi Freedom March.” Upon arriving in Greenwood, MS on June 16, 1966 (Dr. King left the march for a few days to travel to Chicago), Stokely Carmichael was arrested for trespassing. He later rejoined the group in a nighttime rally and shouted the words “Black Power”. Dr. King joined the group the next day to continue the march. It is believed that during this period on their way to Jackson, the marchers traveled through Itta Bena again, but this time Dr. King stopped and made a speech in the middle of the downtown square. Rev. James Bevel, a former citizen of Itta Bena, worked closely with Dr. King.

As the word spread of the marchers’ arrival, the entire square was filled with supporters. As Dr. King spoke, onlookers recant his soft demeanor, powerful spirit, and simple request “Help Me. Follow me. Follow me.” It was noted that many people did get in line to join the march. Those that did not, lined up in a single file line to shake the civil rights leader’s hands. Other residents recalled running back to their homes to fill up jugs of water to give Dr. King and the others since all of the local stores had closed early. Most of those that were left behind stated that they followed the caravan through the city and watched them depart the city down Highway 7 until they were completely out of sight.

In many civil rights meeting locations, signs were posted that read: “There’s a street in Itta Bena called Freedom, There’s a town in Mississippi called Liberty, There’s a department in Washington called Justice.

Despite any obstacles, Itta Bena residents remained committed to freedom and promoting education. In 1965, the support and development of a Project Head Start Program was in the workings as a pilot program. Once the program was implemented, it was such as that it was extended and continues to this day. By the end of the 1960s the Leflore County Voter’s League and other local based organizations were formed and continued to support the specific needs of the community through economic development, voter registration and adult literacy.

***Present Day Itta Bena** [2013]*

The train depot no longer stands as a central post for the city, but the train still travels directly through the downtown district. Itta Bena is still known as a primarily agricultural area, but over the years a community with diverse interests and broad tableau of opportunity has emerged.

The City of Itta Bena is working towards becoming a "College Town" with Mississippi Valley State University, a Historically Black University located within one mile of the city limits. Itta Bena is proud to have bred famous Blues musician B.B. King, who makes an annual trip to the university. Itta Bena is interested in providing sound opportunities for businesses and economic development in the community. The city has worked on several projects with administrators and students from Mississippi. The residents of Itta Bena are always eager to welcome visitors and family members to their little corner of the State of Mississippi where beautiful sunsets, open fields, friendly faces and educational opportunities surround them.[2]

In addition to the mention in the above text of B.B. King (who was born in Berclair, less than 5 miles away from Itta Bena[3]), the town was also home to "music dealer, promoter and talent scout Ralph Lembo." According to the Mississippi Blues Trail marker on Highway 7 between Humphreys and Front Street in Itta Bena, "Lembo has been internationally acclaimed among music historians for his seminal role in recording Mississippi blues and gospel artists, and locally he was also noted for his community involvement and varied business interests." The marker describes Lembo as the first Mississippi Deltan to make phonograph

Ralph Lembo Mississippi Blues Trail Marker
Suzassippi's Lottabusha County Chronicles https://suzassippi.wordpress.com/2021/05/28/ralph-lembos-home-in-the-woods-itta-bena-and-the-blues/

records. Lembo worked with many local talents including, but not limited to, Rubin Lacy, Booker T. Washington ("Bukka") White, and the Mississippi Sheiks. In addition to his work with Blues musicians, Lembo was praised for his business acumen and community involvement. Also of note, "Mississippi Vocational College, the historically black college now known as Mississippi Valley State University, was built in 1950 primarily on a tract of plantation land Lembo sold in 1948."[4]

2 The Official Website of Itta Bena Mississippi. https://ittabenams.homestead.com/historypage.html

3 B.B. King Birthplace https://msbluestrail.org/blues-trail-markers/b-b-king-birthplace

4 Ralph Lembo. https://msbluestrail.org/blues-trail-markers/ralph-lembo

A brief history of MVSU, drawn from MVSU's website is provided below.

- *Legislation authorizing the establishment of the institution under the name Mississippi Vocational College was enacted by the Mississippi Legislature in 1946. The express purpose for the new college was to train teachers for rural and elementary schools and to provide vocational training.*
- *The groundbreaking ceremony was held February 19, 1950, with the late Honorable Governor Fielding Wright, the Board of Trustees of State Institutions of Higher Learning, the first president of the University, Dr. James Herbert White, and interested friends participating.*
- *The college opened in the summer of 1950 with enrollment of 205 in-service teachers.*
- *The first academic year, 1950-51, opens with 14 regular students and seven faculty members. The college offered the bachelor of science degree in 14 areas and provided Extension Services.*
- *The name of the institution was changed to Mississippi Valley State College in 1964. The college was authorized to offer the liberal arts degree as well as the science and education degrees.*
- *In 1964, the name changed to Mississippi Valley State College, and in 1974, Mississippi Valley State University. The name changes reflect the expanding mission and program offerings of the University.*
- *The Honorable Governor William A. Waller signs into law the bill granting university status to the institution on March 15, 1974. The institution name has since been known as Mississippi Valley State University.*
- *The University began offering its first master's degree in 1976. The University now offers the master's degree in environmental health, elementary education, criminal justice, business administration, special education, rural public policy and the master of arts in teaching.*
- *The Greenwood Center, an off-campus site of MVSU, opens in January 1996.*
- *The Greenville Higher Learning Center, an off-campus site of MVSU, opens January 2001.*
- *Dr. Jerryl Briggs, Sr., [became] the eighth president of MVSU on October 19, 2017. Building upon the foundation laid by his predecessors, Dr. Briggs has enhanced the mantra "ONE GOAL. ONE TEAM. ONE VALLEY" with the addition of the phrase "...IN MOTION", which exemplifies the University's commitment to putting into practice its values as it continues moving onward to obtain preeminence as a premier institution of higher learning.*[5]

On the following pages, more recent history is presented via statistics and demographic information. This contextual data is presented to provide insights and also as a resource for future funding applications.

5 MVSU History https://www.mvsu.edu/university/history#:~:text=The%20college%20opened%20in%20the,areas%20and%20provided%20Extension%20Services.

HISTORY & CONTEXT

POPULATION

AGE

As of 2021, Itta Bena had a population of 1,614 people, a decrease of nearly 33% since the 2010 census. The population has been trending down for several decades. The median age as of 2021 was approximately 37 years old with the highest number of individuals coming from the "20 to 24 Years" age range with the "30 to 34 Years" age range following closely behind (Fig. 1). In addition to the permanent local population is the enrollment of students in the local college, Mississippi Valley State University. MVSU provides educational options for many people in the surrounding towns and counties.[6] MVSU, as of 2022, had 1,914 students, a decrease of 7.27% from the Fall of 2021.[7]

6 US Census Data https://data.census.gov/
7 Spring 2022 Enrollment Profile. https://www.mvsu.edu/sites/default/files/spring_2022_enrollment_profile.pdf

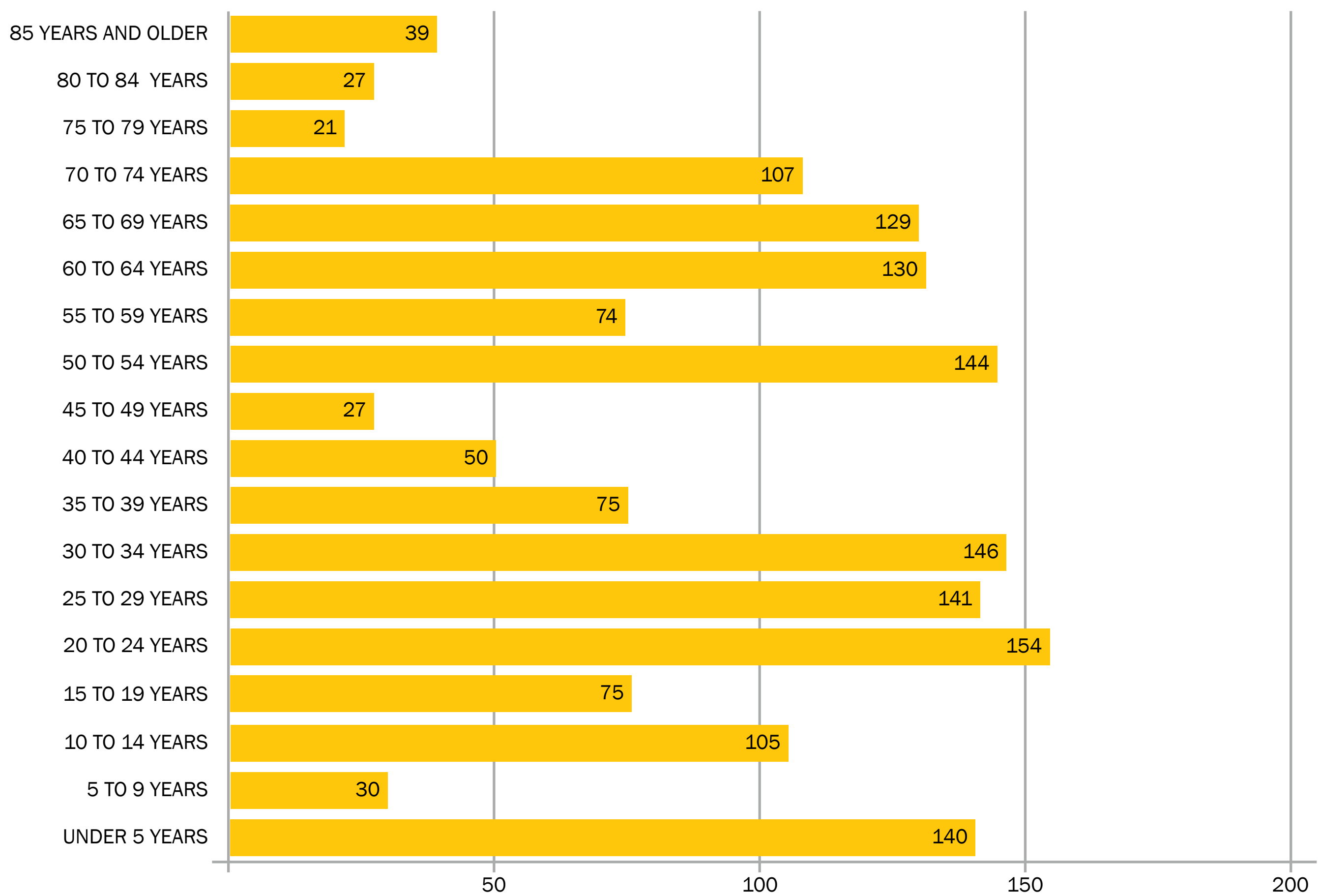


FIGURE 1: POPULATION IN RELATION TO AGE RANGES, 2021

RACE AND ETHNICITY

Itta Bena is a predominately African American community with 1,461 individuals who identify as Black or African American while 123 individuals identify as white. This ratio is substantially different from that of Mississippi as a whole (Fig. 2). 12 individuals identify as Hispanic or Latino. Those who identify as Asian, Native Hawaiian and Other Pacific Islander, or multiple races total 18 people.[8]

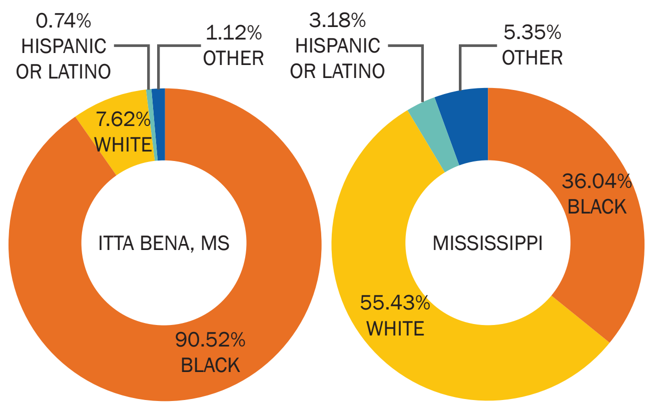


FIGURE 2: RESIDENT RACE AND ETHNICITY OF ITTA BENA, MS, COMPARED TO MISSISSIPPI, 2021

EDUCATION

As of the 2021-2022 school year, Leflore County is served by three private schools and 13 public schools which make up the Greenwood Leflore Consolidated School District (GLCSD). Two public schools are located in Itta Bena - Leflore County Elementary School (grades Pre-K - 6th) and Leflore County High School (grades 7th - 12th). These two facilities have a combined total of 631 students. According to the U.S. Department of Education, more than 90% of students enrolled in these two schools are eligible for free lunch, while approximately 477 students qualify for free lunch through Direct Certification.[9]

The GLCSD has an approximate total of 4,173 Pre-K - 12 students with an average student to teacher ratio of 13:1. With a 90% graduation rate, GLCSD averages a “C” on its Mississippi Department of Education Report Card that

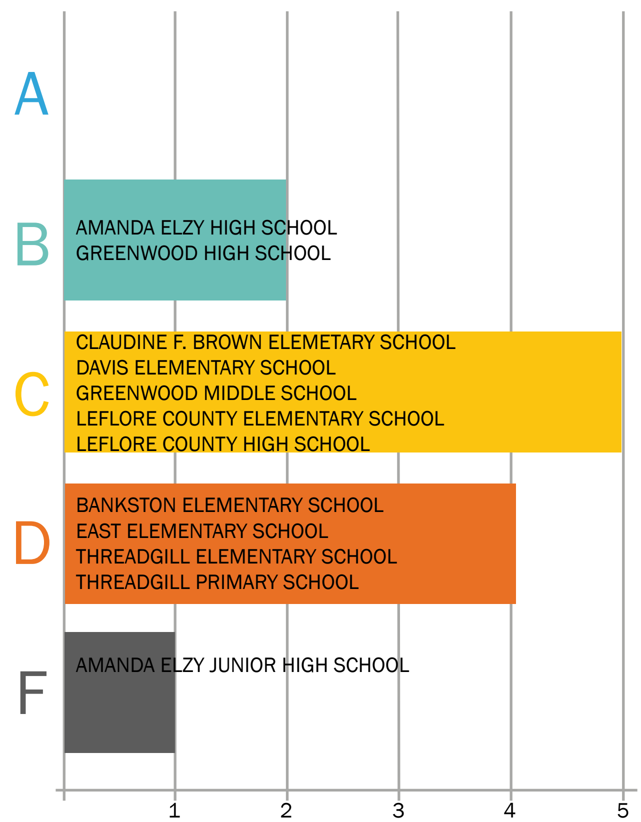


FIGURE 3: MDE REPORT CARD GRADE PER SCHOOL OF THE GREENWOOD - LEFLORE CONSOLIDATED SCHOOL DISTRICT

8 US Census Data https://data.census.gov/

9 National Center for Educational Statistics. https://nces.ed.gov/ccd/schoolsearch/school_detail.asp?Search=1&Miles=10&Zip=38952&ID=280019801519

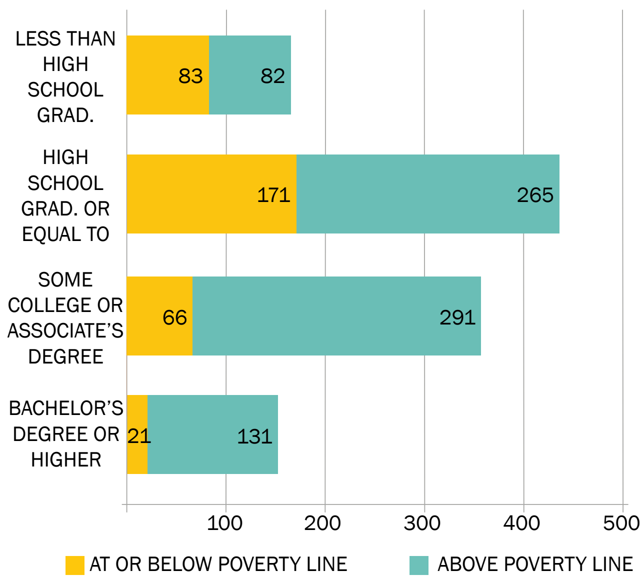


FIGURE 4: ITTA BENA POPULATION 25 YEARS AND OVER POVERTY STATUS IN RELATION TO LEVEL OF EDUCATIONAL ATTAINMENT AS OF 2021

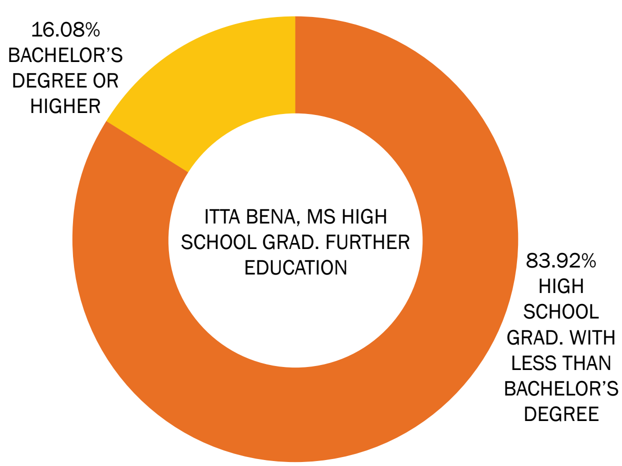


FIGURE 5: COMPARISON OF ITTA BENA RESIDENTS THAT GRADUATED HIGH SCHOOL WITH LESS THAN A BACHELOR'S DEGREE TO THOSE THAT WENT ON TO RECEIVE BACHELOR'S DEGREE OR HIGHER AS OF 2021

evaluates students' achievements, growth, participation in testing, and other academic measures (with the exclusion of Leflore Legacy Academy which is its own district)(Fig. 3). This is an improvement over the years that immediately preceded consolidation of the Greenwood Public School District and the Leflore County School District into the GLCSD.[10]

Almost 40% of the residents of Itta Bena that are over 25 years of age have obtained their high school diploma or its equivalent, while 14.9% obtained less than that. Of those that received less than a high school diploma, more than half live in poverty (Fig. 4).

Mississippi Valley State University (MVSU), is a significant asset to Itta Bena and the surrounding areas. MVSU offers a broad range of curriculum. The annual cost of tuition is $7,414 for in-state and out-of-state students, while the Mississippi college average is $5,121 for in-state and $12,513 for out-of-state students. As of 2020, the top 3 Bachelor's Degrees awarded at MVSU were General Business Administration & Management, Social Work, and General Studies (Fig. 6).[11]

10 Mississippi Department of Education. https://msrc.mdek12.org/entity?EntityID=4211-000&SchoolYear=2022
11 Mississippi Valley State University. https://datausa.io/profile/university/mississippi-valley-state-university?de

FIGURE 6: PERCENTAGE MAKE-UP OF TOTAL BACHELOR'S DEGREE GRADUATES IN SPECIFIC STUDIES
https://datausa.io/profile/university/mississippi-valley-state-university?degree-majors=degree5

HEALTH

As of 2021, 15.3% of the Itta Bena population is considered disabled, the largest subset having ambulatory difficulties (Fig. 7). Approximately 20% of the population does not have health insurance coverage. Itta Bena makes up almost 32% of the census tract it is included in. This tract is in the 93rd percentile for incidence of diabetes, 96th percentile for asthma, 72nd percentile for heart disease, and 86th percentile for low-life expectancy. Although some of its data is above the 90th percentile for negative health outcomes, this tract has not been classified by the census as disadvantaged in health.[12]

12 American Community Survey 5-Year Data (2009-2021). https://www.census.gov/data/developers/data-sets/acs-5year.html

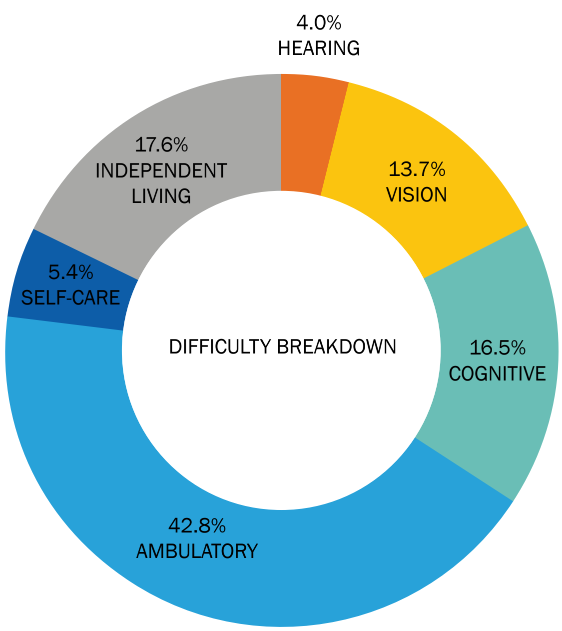


FIGURE 7: BREAKDOWN OF THE DIFFICULTIES OF THE 15.3% OF PEOPLE IN ITTA BENA, MS WITH DISABILITIES

INCOME & EMPLOYMENT

EMPLOYMENT

Like most of the United States, Leflore County's unemployment rate is historically low. As of October 2023, only 4.3% of County residents are unemployed[13]. Of employed people, 73.7% are private company workers and 21.6% are government employees. The top 3 industries in Itta Bena are:

1. Education Services; and Health Care and Social Assistance - 32.2%
2. Manufacturing - 19.6%
3. Arts, Entertainment, and Recreation; and Accommodation and Food Services - 14.3%

Mean commute time to work is 22.3 minutes. This travel time indicates that many Itta Bena residents are employed in nearby cities like Greenwood and Indianola.[14]

INCOME

The median household income in Itta Bena is $25,104 which is less than Leflore County's $41,800. Both of these are significantly lower than Mississippi's median household income of $48,716. As of 2021, 41.8% of the total population of Itta Bena lives at or below the poverty line. This is much higher than the rate in the state of Mississippi (19.4%) and that of Leflore County (31.6%).[15]

13 Leflore Jobless Rate Still Low. *The Greenwood Commonwealth.* Nov 24, 2023. https://www.gwcommonwealth.com/leflore-jobless-rate-still-low-43-october

14 American Community Survey 5-Year Data (2009-2021). https://www.census.gov/data/developers/data-sets/acs-5year.html

15 Mississippi Demographics. https://www.mississippi-demographics.com/itta-bena-demographics

HOUSING

There are a total of 825 housing units in Itta Bena, 252 of which are vacant. Of the total number of housing units, 58 were built before 1950. Renters occupy 346 of the 573 occupied houses, with a median rent payment of $611 (Fig. 9). Over 29% of Itta Bena homeowners are housing cost burdened, meaning they spend 30% or more of their household income on housing costs.

Most of the households are considered "family" households with a single parent as the head. This is significantly higher in comparison to Leflore County's household status rates as well as Mississippi's in general (Fig. 10).[16]

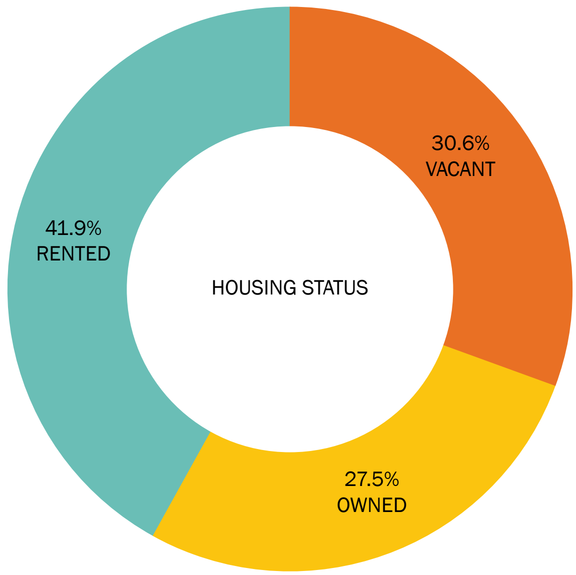


FIGURE 9: ITTA BENA TOTAL HOUSING CLASSIFICATION

16 American Community Survey 5-Year Data (2009-2021). https://www.census.gov/data/developers/data-sets/acs-5year.html

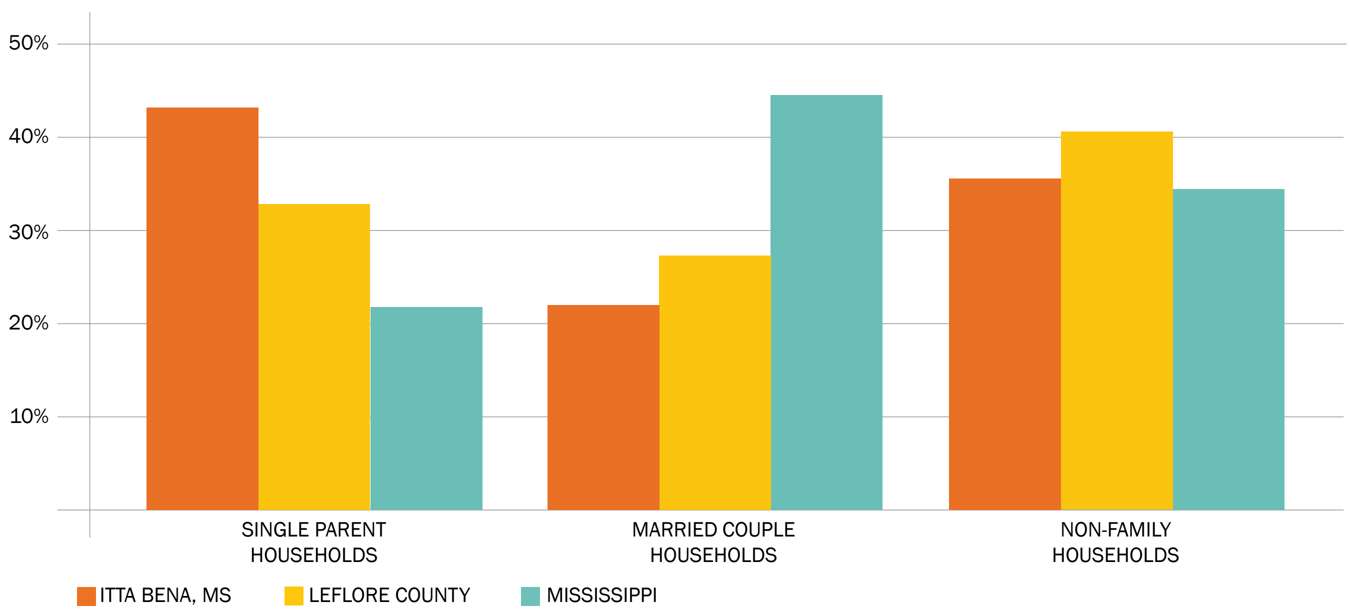


FIGURE 10: HEAD OF HOUSEHOLD CLASSIFICATION PERCENTAGE COMPARISON BETWEEN ITTA BENA, LEFLORE COUNTY, AND MISSISSIPPI

2023 PLANNING PROCESS

OVERVIEW

Development of the Strategic Plan included three phases spanning 2023. In the first phase, the 2018 plan was reviewed and a small group of community leaders and engaged stakeholders met at the LCT Brazil Center in Itta Bena in June of 2023. In September, the second engagement event gathered community input during a back to school pep rally and youth conference, also held at the LCT Brazil Center.

Moving beyond engagement and planning, in the third phase, the project team took action toward realizing some of the SMART goals laid out in the Strategic Goals section of this document. Simultaneously, a draft version of the document was circulated in Itta Bena in order to continue to solicit input and feedback from the community at large.

This document was prepared by the Delta Design Build Workshop (Delta DB), and throughout the process the organization sought to be a conduit for information and perspectives that are the unique expertise of local residents. Delta DB seeks to elevate the voices of others through their work and to provide creative and broadly inclusive opportunities for individuals to be met, heard and represented in this plan.

The final stage of the strategic planning process is adoption by community government. This action took place by a unanimous vote on January 22, 2024.

INITIAL GATHERING

The first engagement activity conducted as a part of the Itta Bena Strategic Plan update was held on Friday, June 21st at 5:30 PM. This event was open to the public with invitations extended to those who participated heavily in the 2018 planning efforts and known community leaders. Eight individuals attended including three Alderpeople, Hope Credit Union leadership, business owners, and others.

This traditionally formatted engagement event included a presentation by Delta DB and collaborative discussion. In order to utilize the previous strategic plan as a starting point, the presentation recapped the 2018 plan and three questions were asked around each of the goals that were identified at that time:

- What progress is ready to be celebrated?
- What strategic goals need further attention?
- What's new?

Input on these questions provided insights into significant progress that has been made on some topics, continued challenges, and opportunities that have arisen in recent years.

INFRASTRUCTURE

High points among the progress to celebrate included various infrastructure efforts. Following completion of the 2018 Strategic Plan, Hope Enterprise Corporation funded technical assistance that allowed the City to hire specialists to study and make recommendations regarding the electrical grid. See the Appendix for copies of these studies. More recently, Utility Maintenance, a Louisiana based company, has been hired to service the electrical grid which had not previously been serviced since the 1950's or 1960's, according to meeting attendees. Utility Maintenance's scope of services included replacing burned out wires and trimming trees.

The water and sewer infrastructure also have made progress since the 2018 planning process. In 2022, the City was awarded a Municipality and County Water Infrastructure (MCWI) Program Engineering Services grant to improve and upgrade the effluent lagoon. Construction is scheduled to begin in late 2023. Also in 2023, the City hired a backhoe operator who has been actively responding to sewer leaks. Ward 3 Alderman, Darrick Hart shared:

> *With the new backhoe operator we have been able to address about 80% of the leaks. We still have some problems with older collapsed sewers and clay pipes. We are looking at grants to locate and remove obsolete clay pipes.*

Despite these successes, infrastructure (including water, sewer, road and electrical systems as well as the administration of these systems) remains a top priority for Itta Bena residents and leaders. Toward that end, a Delta Regional Authority grant application was recently submitted regarding additional sewer improvements. Alderwoman Kim Dawson shared that talks with Entergy are ongoing regarding the power grid, and automated meter reading services are being considered in collaboration with companies that offer these services.

Looking to the future, City leadership and various partners are continuing to explore funding opportunities, partnerships and pathways to individual and/or community scale solar energy solutions. The Greenhouse Gas Emissions Reduction Fund is likely to contribute to any future solar project.

Street lighting and sidewalks are elements of infrastructure that residents want to prioritize but that have not progressed since the last strategic planning process. Routes from residential areas to schools are especially important. Attendees admired a street lighting project that Moorhead has completed. Dee Jones of Hope Credit Union described the funding and partnerships that made the project possible:

> *That was a majority MDOT funded project. It required a match so MDCC and the County contributed. The North Central Planning and Development District wrote the grant. HOPE played a small role, but it was mostly an effort of the City, County and community college. That is something Itta Bena could replicate.*

ENTREPRENEURSHIP AND DEVELOPMENT

Business and economic development successes in recent years include the opening of 5 new businesses, the opening of the Dollar General

Market with fresh fruits and vegetables and the renovation of the former Big Star Grocery into the William's Educational Solutions and Multipurpose Engagements. A new health clinic has also recently opened in downtown Itta Bena.

> *It's easy to see all the negatives that you forget to stop and celebrate the things that are happening,* - Jennifer Walker, Alderwoman Ward 1

Within the vein of economic activity, the City has completed some annexation on US Highway 82 and Sunflower Road. The City plans additional annexation in the near future. Aspirational economic development goals discussed during the initial meeting included developing a facade grant program for existing buildings and opportunities for developing pocket parks in place of collapsed structures.

MVSU CONNECTIVITY

Though the 2018 strategic plan does not list the relationship between Itta Bena and MVSU as a top priority, a "town and gown" relationship was discussed as an ongoing priority among meeting attendees. Dee Jones of Hope Enterprise Corporation shared that HOPE is, "constantly working on ways to connect Itta Bena and Valley."

Currently, health and fitness programming is connecting the community and the university. Attendees shared that Itta Bena residents can utilized the MVSU gymnasium at no charge. A summer program was offered this year including free swimming lessons at the MVSU pool. Past programming, such as Upward Bound, was remembered fondly, including a currently unused bowling alley on campus that was also discussed as a future opportunity for community and university shared gatherings.

An economic and agricultural studies related opportunity was shared by one attendee:

> *There is a group that is creating a value chain of pork that is going to be grown here, processed here and marketed here. I am talking with the Mayor, [Greenwood-Leflore-Carroll Economic Development Foundation Director] Angela Curry, and MVSU are all excited about it. We are trying to connect agriculture, the university and the community.* - Tracy Johnson

Finally, a goal of creating a downtown location for MVSU to have a physical presence within Itta Bena was discussed aspirationally. In 2020, the MVSU art department created murals on the former City Hall building. These murals are much loved, and additional downtown beautification is desired.

HOUSING

The housing related goals within the 2018strategic plan remain largely aspirational. Challenges regarding the cost of housing and a gap between construction costs and appraised values was discussed as a major limiting factor. Despite these challenges, the City secured funding for new homes and home repairs through the Mississippi Home Corporation's HOME program. The grant was written by Gregory and Associates of Greenwood. Looking to the future, Delta DB shared that the Greenwood-Leflore Fuller Center for Housing (formerly a Habitat for Humanity chapter) is increasing the number of households it can serve through home repairs annually. Currently one member of the Fuller Center board is from Itta Bena, but another representative of the community would be a welcome addition.

PUBLIC SPACES & COMMUNITY ACTIVITIES

Roebuck Lake remains underutilized despite some progress in terms of maintenance and removal of overgrowth. Mississippi Department of Fisheries and Wildlife (MDFW) grant funding was recommended as a future potential opportunity.

A Sunflower Park planning grant has been submitted to the National Park Service (NPS) by Joanne Purnell, and further information on this activity will be addressed later in this strategic plan.

Renovations to the LCT Brazil Center were completed in 2020, and have been impactful in allowing for a range of activities to take place.

In terms of community programming, ongoing activities at the library include a short-story program, chess club, and craft club. A summer reading program, funded by Delta Health Alliance, was also conducted at the library. Future goals related to these and similar programs include increasing the amount of space for classes (the library has limited space) and funding for equipment and supplies (for example, sewing machines for the quilting club).

The meeting concluded with a plan to engage a broader segment of Itta Bena residents through bringing these topics and additional ideas to a youth event in early September.

SECOND GATHERING

On Saturday, September 2, 2023, strategic planning engagement continued at the School of Champions Development and Learning Center's Back to School pep rally and youth

Back to School Rally Invitation, courtesy of Patricia Young conference. Delta DB attended the event and asked attendees (both youth and adults) for feedback on the same questions discussed at the first engagement activity. Individuals were also invited to write a postcard to themselves about favorite memories of Itta Bena. A few excerpts from the postcards are shown below:

I remember when it was safe to walk on the streets at night, and I imagine after school programs that get kids off the streets.

My best memories of Itta Bena are spending time with my kids and grandkids and watching them grow up here.

I remember when MVSU and Leflore County High School colors - the green and white with the red and black - used to mix and show our shared spirit.

More than 50 individuals participated in the event, which included inspirational speakers, games, door prizes, lunch and fellowship. Throughout the gathering, Delta DB gathered postcards, as described above, and discussed goals and challenges with residents of all ages. Finally, community members responded to the following questions on post-its:

I would walk on the sidewalk if there was one on ____________ street.

What do existing businesses need to grow?

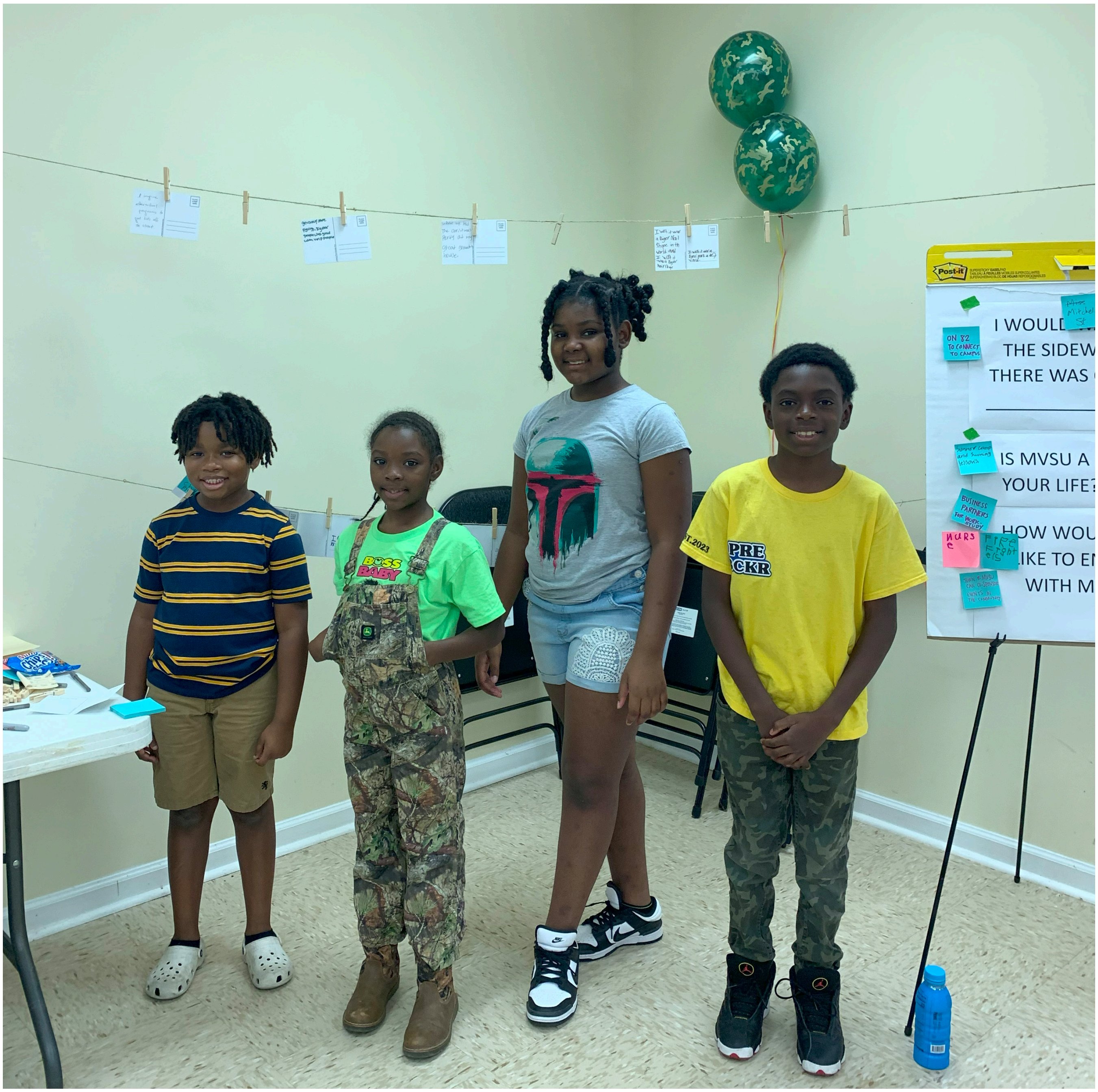
What businesses have recently opened or are being planned?

What businesses would you enjoy if they opened in itta Bena?

Is MVSU a part of your life? How?
How would you like to engage with Valley?

Among the responses to these questions, Freedom Street and Mitchell Street were the locations where sidewalks were most commonly requested. Another common thread included the desire for MVSU to bring back the NYSP program that many individuals enjoyed and benefited from in the past. While many individuals still hope that a grocery store is an option in Itta Bena's future, many were quick to express gratitude for the new businesses (especially the clinic and restaurants) that have opened. A number of people said they would like to see a nail salon open in Itta Bena.

Event organizer Patricia Young (right) and Delta DB's Michelle Stadelman discuss goals and strategies.



Youth who attended the event provided feedback including favorite memories in Itta Bena, connections to MVSU and businesses they would like to have in town.

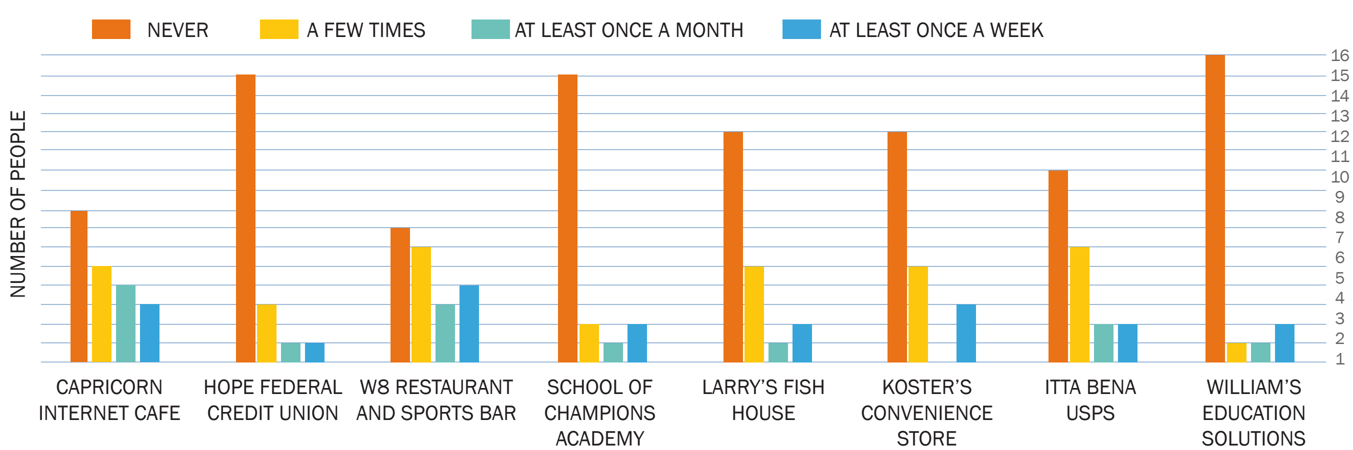
ADDITIONAL INPUT AND ACTIVITIES

In addition to the two initial planning activities, the project team held an engagement event at MVSU on October 9, 2023. The event was organized with faculty from the Department of Engineering Technology. Goals of the engagement included gaining MVSU perspectives to incorporate into this strategic plan and creating pathways for synergistic opportunities between City leadership and students.

The event was formatted as a presentation by Delta DB staff on socially impactful professional pathways relevant to the student majors represented in the department. This was followed by a survey to collect MVSU input for this document. Finally, interested students were invited to stay after the larger gathering and discuss opportunities for participating in faculty run projects or proposing their own senior projects based around Itta Bena needs and opportunities. Twelve students expressed varying degrees of interest. Potential student projects and pathways to develop a long-term collaboration between municipal leadership and the Engineering Technology Department are further detailed in the Strategic Goals section of this document.

Twenty people, three staff, and seventeen students completed the survey designed to collect information on how students do or do not spend time in Itta Bena and their impression of the town. The results of this survey suggest that slightly less than half of the participants spend leisure time and make purchases in Itta Bena. Another group of slightly less than half of the participants have not spent any time within the City limits. A small minority of participants appear to be engaging with the town of Itta Bena in a way that falls between these two polarized

GRAPH SHOWING RESPONSES TO THE FOLLOWING PROMPT:
Please indicate if you have visited the following businesses in Itta Bena.



experiences. Below, responses to survey questions are shown in terms of the number of people who answered true or false to the prompt. Graphs are also shown demonstrating how many survey respondents are engaging with existing businesses and how frequently (bottom left) and the frequency with which respondents say they would visit businesses that Itta Bena residents would like to see open in the city (bottom right).

I live within the City limits of Itta Bena.

True *7*
False *13*

The Double Quick and Dollar General are the closest I have ever been to visiting Itta Bena.

True *8*
False *12*

I have friends or family who live in Itta Bena.

True *13*
False *7*

I would like for MVSU and Itta Bena to feel more connected.

True *14*
False *6*

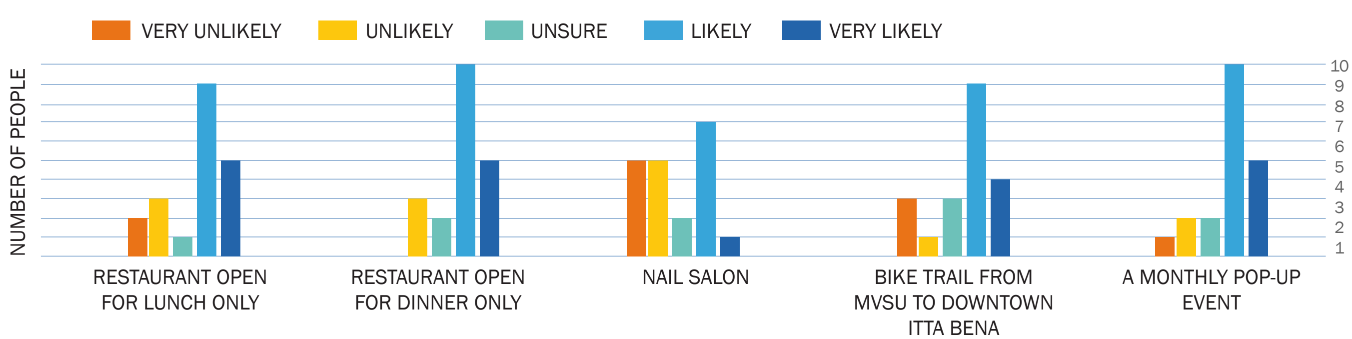
How do you think the majority of MVSU students feel about Itta Bena?

Positive *6*
Neutral *10*
Negative *4*

In addition to this strategic outreach event, two MVSU students joined the planning team in meeting with Mayor Reginald Freeman to discuss a strategic plan draft and gain his insights.

Finally, a draft of this strategic plan was circulated among individuals who provided their email addresses during strategic planning events, and feedback was incorporated into the final document.

GRAPH SHOWING RESPONSES TO THE FOLLOWING PROMPT:
How likely would you be to utilize the following amenities or visit these types of businesses if they existed in Itta Bena?



STRATEGIC GOALS

MUNICIPAL BEST PRACTICES

1. LEADERSHIP AND TRANSITIONS
2. AUDITS AND FINANCIAL PLANNING
3. INFRASTRUCTURE

ACTIVATED SPACES

1. PARKS
2. PATHWAYS
3. PROGRAMMING
4. DOWNTOWN UNIVERSITY PRESENCE

HOUSING

1. INFLATION REDUCTION ACT ENERGY EFFICIENCY IMPROVEMENT
2. GREENWOOD-LEFLORE FULLER CENTER FOR HOUSING
3. SYNERGISTIC HOUSING

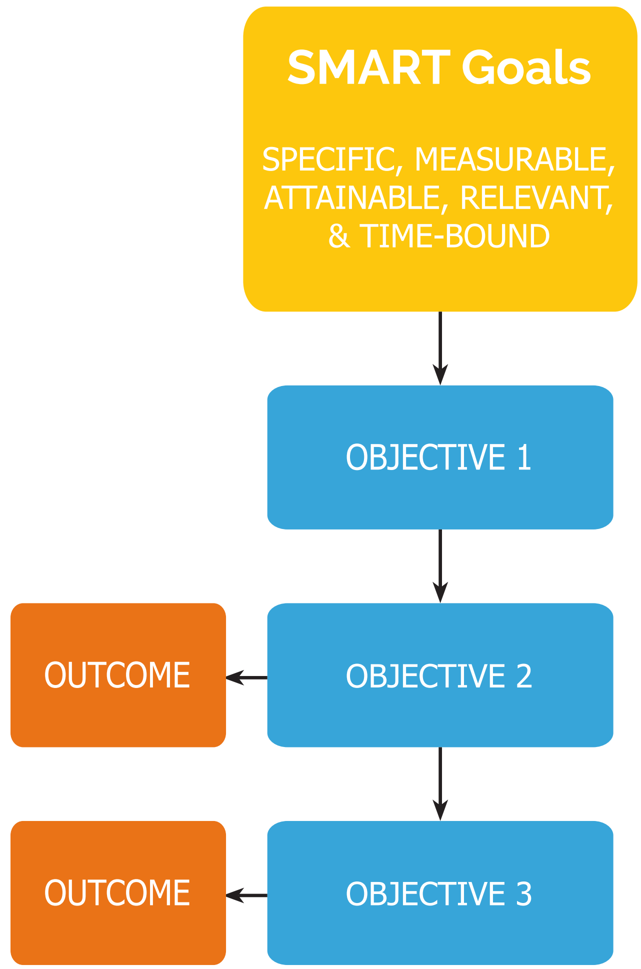
ECONOMIC INVIGORATION

1. POP-UP SHOPS
2. CONNECTING RESIDENTS TO RESOURCES
3. CASE STUDY: OUACHITA ELECTRIC COOPERATIVE CORPORATION

The research, engagement and collaborations described throughout this document resulted in the development of four areas of focus and SMART goals (Specific, Measurable, Attainable, Relevant, and Time-Bound) within each area. These SMART Goals vary in terms of scale and timeline, but all are actionable steps including roles for individuals and organizations to play, funding opportunities, and other guidelines for realizing outcomes. At right, a sample SMART Goals graphic shows the goal at the top (in gold), incremental steps toward the goal (in blue), and measurable outcomes at each step (in orange), which are included when relevant.

The strategic goals identified through this strategic plan are shown on the opposite page, and detailed throughout this section. Each of the goals overlap and feed in to a positive cycle of prosperity. A theme of economic, environmental and social sustainability is a thread that weaves throughout and connects each goal. Another thread that weaves throughout each of the strategic goals is collaboration with Mississippi Valley State University (Valley). The importance of partnership with this community anchor institution cannot be overstated. Collaborations with Valley promise a wide variety of opportunities for growth, economic and otherwise.

Though these four strategic goals have been identified as priorities for Itta Bena (both in terms of need as well as based on current capacity and interest in progressing the goal), community members identified numerous other areas of focus in need of attention. These include access to healthy food, increased access to health care and health education (both physical and mental), job creation and preservation, resilient development (including storm shelters, multi-scale green energy opportunities, public transportation and green jobs), expanded access to the internet, investment in natural resources and development of related amenities, and provision of a variety of educational opportunities for all ages.



MUNICIPAL BEST PRACTICES

Many of the challenges articulated by Itta Bena residents throughout the strategic planning process relate to community scale infrastructure. Elected leaders agree that addressing the aging infrastructure and the way in which it is managed and maintained is a top priority. Despite this clear imperative, existing conditions are inhibiting progress. Municipal leaders inherit the actions and outcomes of previous administrations. For example, as of September 2023, the City of Itta Bena is working with an accountant to complete audits for the past 5 years. The lack of current, verified financial information limits the City's ability to secure funding, both loans and grants, for a wide range of purposes.

This strategic goal, municipal best practices, touches on both short and long-term actions municipal leaders can take to positively impact Itta Bena during and after their tenure in leadership positions.

MUNICIPAL BEST PRACTICES STRATEGY: LEADERSHIP AND TRANSITIONS

Within a small town, many leadership positions are minimally compensated or voluntary. Additionally, with few total residents, only a small number of people are interested in municipal leadership positions. Those who are willing to take on these roles often must balance the positions with a full or part-time job. In order to allow these individuals to maximize the impact of the time that they spend leading the City of Itta Bena, both new and seasoned leaders should participate in training and educational opportunities. Examples of trainings include:

- Mississippi Municipal Leagues (MML)
- Neighborworks America Programs
- Delta State University's Local Government Leadership Institute

Beyond the information and skills gained through trainings like those listed above, these events are also networking opportunities. Municipal leaders will increase their leadership skills and overall impact if they develop a network of individuals who they can contact to understand how challenges and opportunities have been handled in other communities. The more diverse a network is, the more resources it can provide to local leaders. Developing relationships both far and near, including with MVSU faculty, staff and students, will enrich the information and support the network can provide.

Another challenge faced by municipal leaders is transition planning. Newly elected leaders are rarely provided in-depth insights or information from their predecessors. Despite the political nature of these roles, the following actions can be taken to increase the likelihood of smooth transitions and increase the effectiveness of local leadership in the process.

- Adopt a code of conduct for appointed and elected officials.
- Provide education on conflicts of interest

and have all elected and appointed officials review and sign the policy annually.
- Review non-elected municipal staff positions annually and update advertising, hiring, and benefits to retain and attract motivated individuals.
- Create a calendar of activities that need to be completed regularly by municipal leaders. Ensure tasks are assigned to individuals, deadlines are clear, and the calendar is easily accessible.
- Create communication standards to decrease the likelihood of important information being lost.
- Provide someone who is least likely to transition, such as the City Clerk, with a packet of information to provide to newly elected or appointed individuals with context on existing processes, projects, contacts, challenges, and opportunities.

MUNICIPAL BEST PRACTICES STRATEGY: AUDITS AND FINANCIAL PLANNING

Building upon the previous section, clearly defined goals and processes related to the City's finances will position both individual leaders and the community to realize positive outcomes. As previously mentioned, Itta Bena is currently hobbled by incomplete audits from 2018 onward. Lacking financial information, especially information that has been verified by a certified third-party, excludes the City from seeking funding from the majority of institutions that offers loans and grants. In addition, City leaders are hindered in their ability to make decisions when doing so with incomplete or unverified information about the budget.

In recent history, Itta Bena Mayors have had to catch up with past due audits more than once. Current leadership can position future leaders for success by documenting and implementing an ongoing protocol for completing audits to help prevent future backlogs.

Beyond completing best practices for tracking past finances, one of the most important tasks completed by municipal leaders is developing, approving, and implementing a budget. This is a complex process, made more difficult when expenses outstrip revenue. Further, a unit of local government is typically not in a position to run a deficit as the US Federal government does, but instead must balance the budget annually.

Below are tips for creating a balanced local budget.

1. Review past budgets, current needs and future goals to prepare new budgets.
2. Take stock of the local, state, national, and global economic climate and consider factors that may impact the local budget.
3. Seek input from department heads with in-depth knowledge of department assets, challenges, and needs.
4. Engage community members and maintain a focus on equity through elevating all voices.

5. Ensure the budget aligns with the City's strategic plan.
6. Evaluate known and planned expenditures and budget requests and compare these expenses with realistically projected revenue.
7. Publicize and approve the budget.

Examples of common sources of revenue for local governments are taxes, charges and fees, and transfers to the local government from the state or federal government. Taxes typically include property tax and sale tax, with property tax usually making up between 30% - 40% of a local governments total revenue.[17] With property tax playing such a large role in local government finances, questions of annexation should be carefully considered.

The City of Itta Bena increased revenues as a result of annexation in recent years. During the strategic planning process, municipal leaders indicated a strong interest in further annexation in the future.

City leadership would be well-served by maps documenting the city limits and past annexations, records of resident engagement, and potential tax revenue of areas being considered for annexation. As is a theme throughout this document, collaboration with Mississippi Valley State University would provide an invaluable resource toward achieving this goal. For example, students and faculty from the MVSU Department of Engineering Technology could create these resources at little to no cost. With detailed information in hand, the City could plan future annexation and project revenue that would result.

Another proven method to increase local revenue is to provide online payment methods and automated bill pay options for utilities, permits, and any other fees collected by the City.

MUNICIPAL BEST PRACTICES STRATEGY: INFRASTRUCTURE

Just as trained leaders, clear processes, and an informed and balanced budget are pre-requisites to a well-managed municipal government, functional infrastructure and well-organized administration of these system are baseline requirements of a thriving community. Improved infrastructure and infrastructure management was one of top priorities articulated by residents, including municipal leaders, throughout the engagement process.

As discussed in previous sections, audits are necessary to secure grant funding such as Community Development Block Grants that could improve the City's roads, sewer, water, and electrical systems. Despite the lack of current audits, efforts to improve local infrastructure are underway. The following sections provide detailed information regarding three types of infrastructure: supply water, wastewater, and electrical.

17 The State of State (and Local) Tax Policy. https://www.taxpolicycenter.org/briefing-book/what-are-sources-revenue-local-governments

Supply Water Infrastructure

Primary concerns of the water supply system in Itta Bena are leaks, lack of staff to read water meters, and clerical challenges.

Unresolved water leaks can cause significant damage and historically have been repaired intermittently by contractors hired by the City. In recent years, Mayor Freeman reports that by shifting from hiring subcontractors to having City staff complete these repairs, the City has been able to increase the number of leaks addressed while saving money and increasing the pay of municipal staff responsible for these repairs. This example demonstrates that agile and responsive leadership can result in multi-valent wins, in this case, savings for the City, increased pay for municipal employees, and improved water supply infrastructure.

A similar type of response is needed to remedy the challenge of capacity to read water meters. Without staff available to complete this task, Itta Bena residents pay a flat fee of $30.00 per month for municipal water service. This practice likely results in thousands of dollars lost annually on under billing.

Wastewater Infrastructure

Wastewater challenges at the scale of individual homes largely overlap with supply water challenges described above. At the community scale, the lagoon (also known as a waste stabilization pond), was previously out of compliance with Mississippi Department of Environmental Quality (MDEQ) standards. Funding from the American Rescue Plan Act (ARPA) and the Delta Regional Authority (DRA) has been secured to transfer the discharge location from Blue Lake (where the water is too stagnant to receive the sewage) to the faster moving Yazoo River, bringing the system into compliance. This effort is possible thanks to collaboration between the City, North Central Planning and Development District, and Willis Engineering. As is the case throughout the strategic goals laid out in this document, collaboration is key to realizing success.

Electrical Infrastructure

The City of Itta Bena is a small public utility system. The utility is beleaguered, facing compounding issues of derelict equipment, debt, minimal staffing, and negative perceptions. A comprehensive history of the utility would encompass a report unto itself.

In light of the challenges faced by Itta Bena in regard to the utility, Hope Enterprise Corporation commissioned three reports following completion of the 2018 strategic plan. These reports address and make recommendations regarding the utility's overall business practices, financial projections and rates, and the electrical distribution systems and related electrical equipment. These reports are included in their entirety in the Appendix of this document.

In brief, the overall business practices report (titled "Organizational Check-Up Final Report") recommended publishing a rate schedule, hiring at least one new utility staff position,

Table 1: Prioritization and Implementation Schedule

Best Practices	Recommendations	Implementation Schedule
Customer Service	1. Re-sort the order of premise addresses to match the logical walking route that a meter reader would take to efficiently cover the Itta Bena utility territory. 2. Consider adjusting disconnect/reconnect fees to more fully recover the costs of these activities.	To be completed by March 2019.
Technology	1. Meter reading recommendations from least to most costly: a. Purchase a single dedicated meter reading handheld. b. Install meters with communications modules that allow for remote reading of a meter.	To be completed by June 2019.
Utility Value and Finance	1. Itta Bena must clearly define and publish a rate schedule. 2. A separate enterprise fund must be restored.	To be completed by June 2019
Community Relations	1. Itta Bena should explore partnerships with local businesses to strengthen community relations and obtain additional support and resources, including MEAM, Greenwood Utilities, Mississippi Valley State University, Hope CU and Mississippi Delta Community College. 2. To improve the public perception, Itta Bena needs to update its website.	To be completed by March 2019
Workforce	1. The utility needs to have backup for the Superintendent position. 2. A lineman needs to be hired to support the Superintendent during vacation or sick leave and alternating weekends. 3. Itta Bena needs to develop partnerships with neighboring businesses, utilities and educational institutions to obtain additional resources while providing these personnel the possibility of gaining experience and also contributing to the community.	To be completed by March 2019
Employee Safety	1. Ensure employees are provided with the required safety gear and that they use it. 2. Adopt a safety manual to guide employees on electric utility practices and policies. 3. Build a culture of safety through specific safety training and adding safety as a topic at all meetings involving staff and/or governing board members	To be completed by February 2019.

Excerpt from "Organizational Check-Up Final Report" commissioned by Hope Enterprise Corporation and completed by Hometown Connections, Inc. on January 25, 2019

Table Eight – Suggested Rate Adjustments

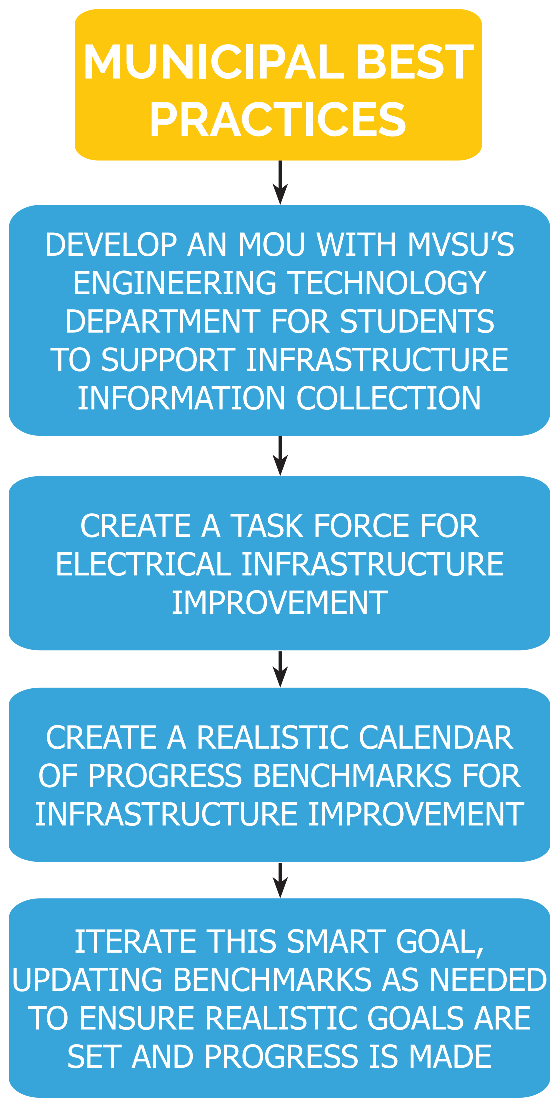
Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Available Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
FY2019	**0.0%**	$ 1,651,329	$ 1,813,537	$ (162,208)	$ (175,552)	$ -	$ -	n/a
FY2020	**9.9%**	1,811,319	1,854,050	(42,731)	401,858	324,216	972,648	(2.32)
FY2021	**9.9%**	1,987,148	1,901,897	85,251	90,445	324,216	-	1.16
FY2022	**9.9%**	2,180,385	1,950,617	229,768	570,527	324,216	648,432	2.68
FY2023	**2.5%**	2,234,013	2,000,231	233,782	381,182	324,216	-	2.03
FY2024	**2.5%**	2,288,982	2,050,760	238,221	209,150	324,216	-	2.16
Recommended Target in FY2020				**$ 68,006**				**1.45**
Recommended Target in FY2024				**$ 106,839**				**1.45**
Recommended MINIMUM Target in FY2020					**$ 458,215**			
Recommended MINIMUM Target in FY2024					**$ 570,584**			

Excerpt from "Itta Bena, MS Electric Findings Report" commissioned by Hope Enterprise Corporation and completed by Utility Financial Solutions, LLC on February 12, 2019.

purchasing and implementing use of a handheld meter reading device, seeking partnerships, and prioritizing employee safety. A table further detailing these recommendations is shown at the top of the opposite page.

The "Electric Findings Report" reviewed financial conditions and projections, and recommended significant and immediate rate increases, planning capital improvements, and developing a cash reserve. Though rate increases would undoubtedly be unpopular among Itta Bena residents, the report documents clearly that the current rates are not high enough to cover the cost of generation and distribution of power. The table at the bottom of the opposite page, sourced from this study, shows that significant percentage point rate increases are necessary in order for the local utility systems to continue to provide power to Itta Bena residents without bankrupting the municipality.

Finally, the third report addresses the existing electrical distributions systems and equipment,. It is titled "City of Itta Bena Electrical System Study & Construction Work Plan". This report provides clear technical information and short- and long-term recommendations. Two pages of the document, tailor made to include in grant or loan applications, are included on the following pages. Based on the urgent need for electrical infrastructure improvements, the SMART goal for the section focuses on making progress in this area specifically.



Short-Term Recommendations

Item	Description	Estimate of Probable Cost
1	Right-of-Way Clearing and Tree Trimming	$312,000
2	Pole Replacements and Repairs	$128,000
3	Substation Maintenance	$30,000
4	Revenue Metering Testing & Replacements	$TBD
	Total Costs of All Short-Term Recommendations	**$470,000**

LONG-TERM RECOMMENDATIONS (REPLACEMENTS AND RENOVATIONS)

The Consultant recommends that the CITY accomplish the following items as soon as is reasonably practicable:

- Replace CITY's existing 15 kV oil circuit breaker at Delta EPA's 115/13 kV Substation with a new 15 kV vacuum circuit breaker.
- Install new underground 13 kV feed from CITY's circuit breaker at Delta EPA's 115/13 kV substation. Make existing cables spare in case of cable or cable termination failure.
- Reconductor approximately 0.7 miles of existing 13 kV Feeder Circuit #214 from #2/0 ACSR to 336.4 kCMIL ACSR.
- Convert CITY's existing 4 kV Feeder Circuit #114 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #124 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #134 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #144 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #154 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #164 from 4 kV to 13 kV.
- Disconnect and retire the CITY's existing 13/4 kV substation.
- Install sectionalizing and protective devices as recommended in the CWP.
- Replace existing 167 kVA voltage regulators on 13 kV Feeder Circuit #214 with new 250 kVA voltage regulators.
- Install fixed and switched capacitors as recommended in the CWP.

Each of these CWP items are discussed in detailed in Section 7. Estimates of probable cost for each CWP item are included below.

Long-Term Recommendations

Item	Description	Estimate of Probable Cost
SUB-1	Replace CITY's 13 kV Oil Circuit Breaker with new 15 kV Vacuum Circuit Breaker at Delta EPA's 115/13 kV Substation	$30,000
SUB-2	Disconnect and Retire the CITY's 13/4 kV Substation	$50,000
FC-1	Replace Existing 13 kV Underground Cables between CITY's 13 kV VCB and Existing 13 kV Feeder Circuit #214	$34,000
FC-2	Reconductor 0.7 miles of CITY's Existing 13 kV Feeder Circuit #214	$145,000
FC-3	Convert Feeder Circuit #114 from 4 kV to 13 kV	$222,570
FC-4	Convert Feeder Circuit #124 from 4 kV to 13 kV	$117,570
FC-5	Convert Feeder Circuit #134 from 4 kV to 13 kV	$46,560
FC-6	Convert Feeder Circuit #144 from 4 kV to 13 kV	$50,910
FC-7	Convert Feeder Circuit #154 from 4 kV to 13 kV	$216,270
FC-8	Convert Feeder Circuit #164 from 4 kV to 13 kV	$94,200
S-1	Feeder Circuit #214 Sectionalizing Improvements	$80,000
VR-1	Feeder Circuit #214 Voltage Regulation Improvements	$50,000
CAP-1	Feeder Circuit #214 Power Factor Improvements	$14,000
	Total Cost of All Long Term Recommendations	**$1,151,080**

ACTIVATED SPACES

A second common thread shared by Itta Bena residents throughout the strategic planning process was the need for safe and engaging places for people, particularly youth, to spend time. Toward that end, this section is divided into four sections. Two address outdoor areas and safe routes between different parts of town, including to and from MVSU. A third section discusses planning for programs and activities within both new and existing community spaces. Finally, downtown buildings, many of which are vacant, are addressed through an ambitious depiction of a new downtown facility that would house MVSU classrooms and other spaces.

ACTIVATED SPACES STRATEGY: PARKS

Itta Bena is home to a number of outdoor recreation areas, including Roebuck Lake, Sunflower Park, and the playground and athletic area outside the LCT Brazil Center. Throughout the strategic planning process, updating and improving these parks was a common hope. Residents particularly mentioned the need for new playground equipment at Sunflower Park. While playground equipment is expensive, grants are available for this purpose. Landscape Structures, a play equipment company with a Jackson, MS based representative, will provide interested parties with a list of current playground grant sources. This information can be requested on the company's website (included in the footnote below).[18]

At the time of this writing, there are ongoing efforts to revitalize Sunflower Park. A committee, led by local residents Jo Ann Purnell and Dr. Roy Hudson, has been working toward securing funding to improve the park and plan events. A Community Field Day is scheduled for the spring of 2024. Another valued member of this group is Liz Smith-Incer, a Field Office Director for the National Parks Service.

Eric Mitchell, the Leflore County Supervisor for District 4, which encompasses Itta Bena, shared an update on his efforts related to Sunflower Park at a meeting of the Itta Bena Coalition in November of 2023. Mitchell has secured funding to add a figure-eight walking track, benches, tables, and improve ADA accessibility of the park. He is also working to provide electricity and fire hydrants to the park.

During this meeting, the parties involved noted that their individual efforts will be most successful if they collaborate. For example, playground equipment secured through a Mississippi State University Extension Office grant more than three years ago has not yet been installed. Itta Bena City Alderman Darrick Hart and Mitchell agreed to collaborate to secure labor to install this equipment, following creation of a site plan that will be created by Delta DB as a component of this strategic planning effort, and including input gathered during community engagement events.

18 Landscape Structures: Playground Grants. https://www.playlsi.com/en/playground-planning-tools/playground-funding/online-grant-resources/grant-resources-request-form/

While significant strides are being made at Sunflower Park, additional improvements are needed, and other community spaces in town are in need of attention, such as the approach to Roebuck Lake and it's dock. One potential funding source for these spaces is the recently created MOST grant (Mississippi Outdoor Stewardship Trust). Examples of projects that this grant can support are:

- *Improvement of state park outdoor recreation features and trails.*
- *Acquisition and improvement of parks and trails.*
- *Restoration or enhancement projects to create or improve access to public waters and lands for public outdoor recreation.*[19]

Funding can be pursued by the City of Itta Bena, Leflore County, non-profit entities, or a collaborative representing one or more of these groups.

ACTIVATED SPACES STRATEGY: PATHWAYS

While the outdoor recreation spaces discussed in the previous section are destinations, investment is also needed to create safe and attractive pathways to reach these and other locations in Itta Bena. Improving the quantity and quality of roads and sidewalks in town was a common request among Itta Bena residents engaged throughout the strategic planning process. In particular, residents shared that sidewalks are needed along Martin Luther King Jr. Drive, Schley St., Freedom St., and Sunflower Rd. Increased lighting is desired along Freedom St. and Sunflower Rd.

Supervisor Mitchell has made progress on paving some roads in the fall of 2023, and has begun working with MDOT on a plan to install lighting along Sunflower Road linking MVSU and Itta Bena. A pedestrian crossing at the intersection of US Highway 82 and Sunflower Road will also be included in this effort if possible.

The primary location proposed for a bike and walking trail route would follow the same path as the lighting project described above, with one end beginning at MVSU and the other in downtown Itta Bena, passing by Sunflower Park along the way. Paired with lighting, this amenity could significantly positively impact Itta Bena, providing safe walking routes for residents and an attractive point of entry to the city for MVSU students, staff, and faculty.

Another opportunity to connect Itta Bena and MVSU through public pathways was identified during the second community engagement event. Residents shared that the blending of Leflore County High School colors (red and black) and MVSU colors (green and white) is an important and simple way to signify that the two are linked and for amplifying the community's pride in the institutions. Opportunities for doing this include installing side by side banners along light poles and designing and painting crosswalks both

19 MS OUTDOOR STEWARDSHIP TRUST FUND APPLICATION FOR GRANT. https://www.dfa.ms.gov/most

Three images of colorful crosswalks featured in “Creative Crosswalks Around the World in Pictures”, a photo essay featured in The Guardian in 2016. https://www.theguardian.com/cities/gallery/2016/jul/14/creative-crosswalks-pedestrian-zebra-crossings-around-world-in-pictures downtown and at the intersection of Sunflower Road and US Highway 82 with the colors of the two schools intertwined. Implementation of this goal presents an opportunity to engage the MVSU art department to design each of these visual representations of the community and university partnership. Examples of colorful and creative crosswalks are pictured at left.

Finally, similar to the playground equipment mentioned in the previous section, the City secured wayfinding signage but has not yet been able to install it. Jo Ann Purnell, Alderman Hart and Supervisor Mitchell pledged to combine resources to have these signs installed. This type of signage can help newcomers and visitors to town easily find local amenities.

ACTIVATED SPACES STRATEGY: PROGRAMMING

Each of the spaces described in the previous two sub-sections is intended to be publicly accessible and require minimal maintenance, but planning programming would maximize the positive impacts of the improved parks and pathways. Examples of programming include festivals, concerts, and walking, running and biking events. Though these types of activities are not typically revenue generators in and of themselves, they pay dividends in the form of attracting people to Itta Bena who are then likely to support local businesses, and through the sense of social cohesion that they foster.

Itta Bena residents fondly remember downtown festivals in the past, and many current residents are energized to continue to create opportunities for gathering. The Juneteenth Festival, initiated in recent years, has grown each year and organizers intend to continue the annual celebration.

The Community Field Day planned for 2024 and discussed on the previous page is another example of a community event that will activate the newly updated Sunflower Park. Similarly, the Back to School Pep Rally, organized by the School of Champions Development and Learning Center and detailed in the Planning Process section of this document, brought together Itta Bena youth at the LCT Brazil Center, which was renovated as a result of the 2018 Strategic Plan.

Itta Bena Alderwoman Jennifer Walker shared about smaller scale ongoing community programming at the first strategic plan meeting. Over the course of 2023, the library has offered a short story club, chess club, craft club, and summer reading program.

Seeking support and collaboration with local and regional partners can amplify each of these types of programs. Delta Health Alliance, Artplace Mississippi (based in Greenwood), the Boys and Girls Club (both the regional organization and the MVSU-based club) are all examples of partnerships that can be fostered to increase resources and grow community programming. Further, expanding a project team increases it’s sustainability by dispersing responsibilities among contributors.

As spaces such a Sunflower Park and the Itta Bena library seek funding for capital improvements, simultaneous funding requests to support community gathering days, another year of short story club, or the library's dreamed of sewing club can be prepared. Regional funding sources that support these types of activities include the Community Foundation of Northwest Mississippi, Entergy Charitable Foundation, and the Mississippi Arts Commission.

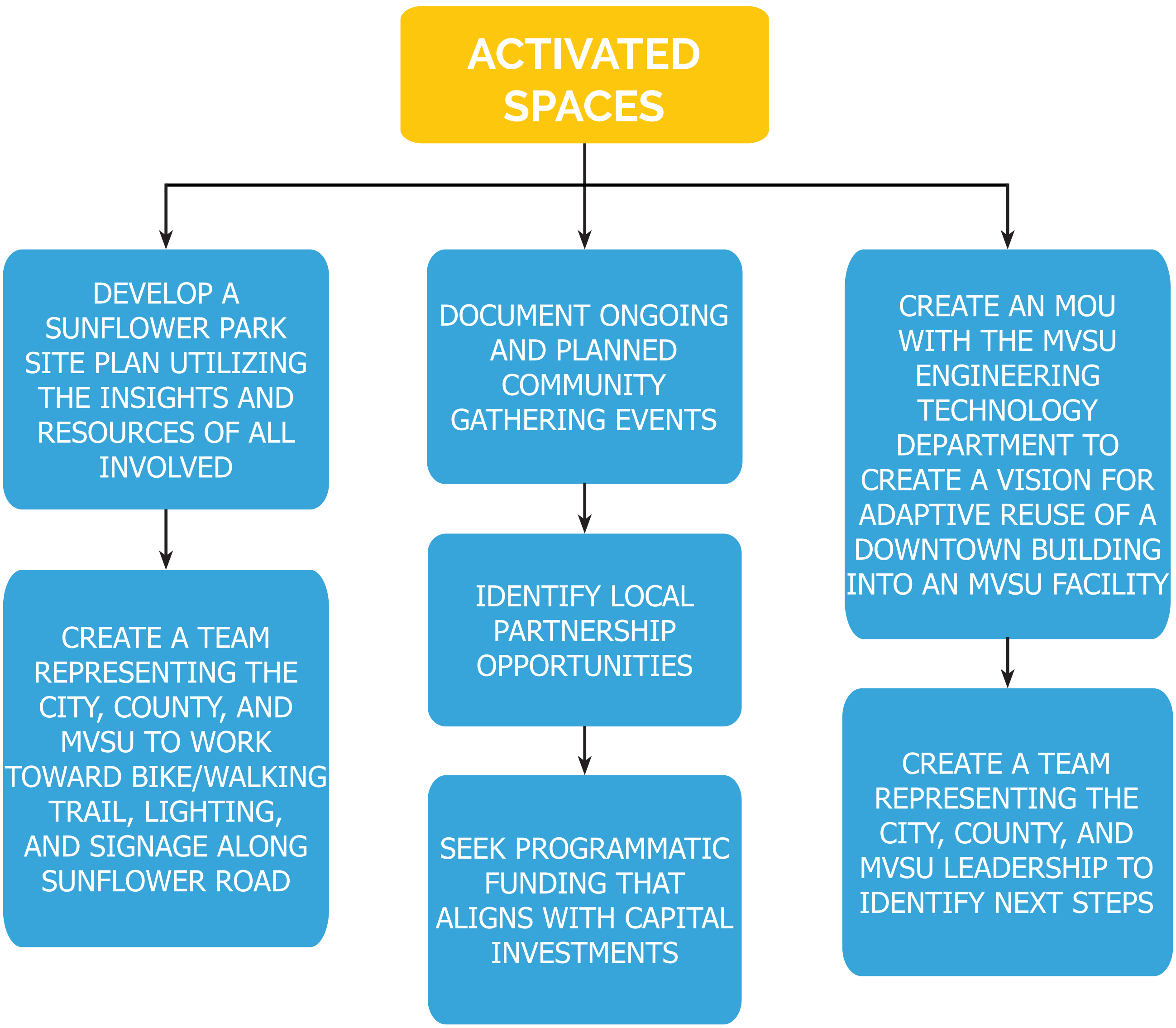
ACTIVATED SPACES STRATEGY: DOWNTOWN UNIVERSITY PRESENCE

The potential synergy and positive outcomes that would result from collaboration between the City of Itta Bena and MVSU is a thread that weaves through nearly every strategic goal and action item in this plan. While many of these opportunities to work in partnership could be simple, such as inviting students to job shadow City leaders or employees or inviting City leadership to speak to relevant university classes, larger scale collaborations would reap larger benefits. In this final section of the Activating Spaces section, the most ambitious and long-term collaboration is proposed in the form of locating a new downtown MVSU facility in a historic structure or structures.

Itta Bena's once thriving downtown is now homes to numerous vacant buildings. Though some spaces have been renovated, such as the former Big Star that now houses the William's Education Center, others are unused and deteriorating. With a population under 2,000 in the City limits, opportunities for new business enterprises are limited, but opportunities for education are not. For example, situating the Department of Social Work wholly or partially in downtown Itta Bena would position that department to become a pioneering laboratory for immersive learning. Students could gain real-world experience through programs designed to provide services to residents of Itta Bena and the surrounding area. Alternatively, the Department of Natural Sciences and Environmental Health could benefit similarly from developing a facility in such close proximity to Roebuck Lake and the bayou ecology adjacent to downtown.

Faculty within the MVSU Department of Engineering Technology have expressed interest in completing an initial step toward realizing this long-term strategy for collaboration. Under the guidance of faculty members Sabrina Perry and Daniel Splaingard, students within that department could begin evaluating existing buildings, mocking up floor plans, and developing three-dimensional images of what adaptive reuse of historical downtown structures could look like when reimagined as MVSU occupied spaces as early as the spring semester of 2024.

In order for even this initial step to take place, City leadership, both elected officials and other engaged residents, must develop relationships with MVSU leadership to foster collaboration that is beneficial to both of the university and the town of Itta Bena.


ACTIVATED SPACES
DEVELOP A SUNFLOWER PARK SITE PLAN UTILIZING THE INSIGHTS AND RESOURCES OF ALL INVOLVED
CREATE A TEAM REPRESENTING THE CITY, COUNTY, AND MVSU TO WORK TOWARD BIKE/WALKING TRAIL, LIGHTING, AND SIGNAGE ALONG SUNFLOWER ROAD
DOCUMENT ONGOING AND PLANNED COMMUNITY GATHERING EVENTS
IDENTIFY LOCAL PARTNERSHIP OPPORTUNITIES
SEEK PROGRAMMATIC FUNDING THAT ALIGNS WITH CAPITAL INVESTMENTS
CREATE AN MOU WITH THE MVSU ENGINEERING TECHNOLOGY DEPARTMENT TO CREATE A VISION FOR ADAPTIVE REUSE OF A DOWNTOWN BUILDING INTO AN MVSU FACILITY
CREATE A TEAM REPRESENTING THE CITY, COUNTY, AND MVSU LEADERSHIP TO IDENTIFY NEXT STEPS

HOUSING

Housing that meets the needs of local residents, both in terms of quality and affordability, is a prerequisite for a thriving community. In Itta Bena, residents consistently indicate that funding to repair the existing housing stock is a top priority.

> *"Homeownership and small business development contribute to the stability of places, and capital access facilitates the cultivation of both. Homeowners exhibit higher levels of social participation than renters and are more likely to maintain properties which could reduce crime within a neighborhood."*[20]

At the individual household scale, housing affordability, quality, and availability directly contribute to the well-being and tenure of residents. A home can be a catalyst for financial growth, a sense of stability, and physical and mental health improvements. Conversely, a home can burden a household if it is unaffordable, a source of stress, or a trigger for health issues (such as breathing problems as a result of poor indoor air quality).

Similarly, at the community scale, positive housing options can contribute to population growth, an increased tax base, and, as a result, myriad outgrowths of development.

20 Bynum, William J., Diana Elliott, and Edward Sivak, "U.S. Partnership of Mobility from Poverty: Opening Mobility Pathways by Closing the Financial Services Gap." Feb 2018.

HOUSING STRATEGY: INFLATION REDUCTION ACT

A primary challenge faced by many homeowners is the high cost of home repairs and maintenance. For a lower-wealth family, new shingles could easily represent more than 50% of annual household income. As a result, repairs and improvements are often deferred.

The Inflation Reduction Act, federal legislation passed in 2022, created a framework for States to roll-out rebates and tax incentives for electrification and energy efficiency improvements to residences beginning in 2024. Though guidelines are not available at the time of this publication, a sample of the types of home improvements and total cost of rebates that would be available to a low-income homeowner (according to the US Department of Housing and Urban Development (HUD), low-income is defined as households whose total income equals 80% or less of the County-wide area median income) in Leflore County is shown on the opposite page.

The Inflation Reduction Act includes rebates and incentives for both owners and renters at all incomes levels. For homeowners who are low-income, many of the incentives are doubled and/or available as rebates rather than tax credits. In Leflore County in 2023, a household must earn at or below the amounts shown on the opposite page annually to qualify. Thresholds for larger households are available on the HUD website.

80% AMI Income Limits	
One person	$34,850
Two person	$39,800
Three person	$44,800
Four person	$49,750

It is anticipated that for low-wealth households, rebates will be paid directly to contractors. As a result, these households will have no out-of-pocket costs and myriad long-term benefits. For example, updated electrical wiring protects

Household Electrification Incentives

ELECTRIFICATION REBATES | **TAX CREDITS**

Heat Pump Air Conditioner/Heater	$8,000 Late 2023
Efficiency Rebates	$8,000 Late 2023
Electric Panel	$4,000 Late 2023
Electric Wiring	$2,500 Late 2023
Heat Pump Water Heater	$1,750 Late 2023
Weatherization	$1,600 Late 2023
Electric/Induction Stove	$840 Late 2023
Heat Pump Clothes Dryer	$840 Late 2023

Projected Inflation Reduction Act Incentives. https://www.rewiringamerica.org/app/ira-calculator households from electrical fires, weatherization (such as added insulation or weatherstripping) reduces utility bills, and replacing gas appliances with electric appliances improves indoor air quality and, therefore, occupant health. Despite the promise of this funding source, there are concerns that resources may not reach many of the households most in need of electrification and energy efficiency improvements. A local advocate will likely be needed to serve as a liaison between homeowners and the State Energy Office in order to ensure the program is designed with guidelines that allow it to meet local needs.

HOUSING STRATEGY: GREENWOOD-LEFLORE FULLER CENTER FOR HOUSING

The Fuller Center for Housing, created by Habitat for Humanity founder Millard Fuller, is a global non-profit organization that "promotes collaborative and innovative partnerships with individuals and organizations in an unrelenting quest to provide adequate shelter for all people in need worldwide."[21] The Fuller Center is made up of over 100 local chapters called "covenant partners", including the Greenwood-Leflore Fuller Center for Housing.

The Greenwood-Leflore Fuller Center for Housing is over 30 years old, and through the efforts of volunteer leaders has built dozens of new homes and contributed to the repairs of over 100 homes of low-wealth residents. While the majority of the organization's efforts have taken place in Greenwood, both new homes and repair projects have taken place in Itta Bena. Two actionable steps are recommended for increasing Fuller Center activity in Itta Bena. First, though there has traditionally been at least one Itta Bena resident member on the Fuller Center board of directors, it is recommended that interested residents contact current Fuller Center leadership about increasing and codifying this representation. Representatives of MVSU have often been valuable members of the Fuller Center board as well.

Second, an important role of the Itta Bena resident(s) on the Fuller Center board would be to share information about the organization's programs with residents of the town. Applications and contact information can easily be shared via the group's website and email address (below).

https://fullercenter.org/greenwoodleflore/
greenwoodfullercenter@gmail.com

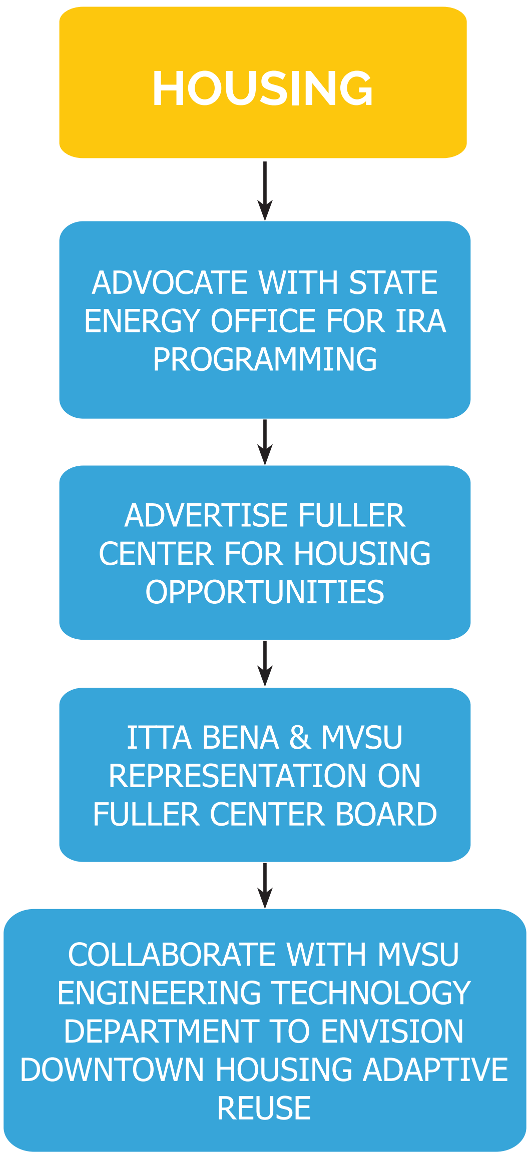
Finally, programs such as those offered by the Fuller Center for Housing often require that the home is owned by the occupants and not owned by someone else, such as a family member who lives elsewhere or is deceased. In order to ensure that clear title passes from the homeowner to the desired recipient, a will is required. This can be created with the assistance of an attorney for a fee. Alternatively, the Southern Poverty Law Center (SPLC) provides a free online platform that can create a basic will in approximately

21 The Fuller Center for Housing Mission Statement. https://fullercenter.org/mission-statement/

Greenwood-Leflore Fuller Center for Housing board members join an Itta Bena resident for a ribbon cutting at her new home in 2016.

twenty minutes. SPLC describes this valuable service as, “A gift for you and your future”. With a will in place, a homeowner positions inheritors to be able to access the value of the home through sale of the property, leveraging the equity, or home repair grants. Municipal leaders, whether members of the Fuller Center for Housing board or not, can provide a valuable service to Itta Bena residents and the community as a whole by sharing the link below and the importance of taking the time to create a will.

https://www.freewill.com/will



HOUSING STRATEGY: SYNERGISTIC HOUSING

Creating housing opportunities that increase the number of MVSU-associated students, faculty and staff who live, shop and eat in Itta Bena would benefit the City from a tax standpoint, would enrich the social fabric, and could increase MVSU's ability to recruit students and staff based on availability of nearby housing.

Strategies for creating and developing community to college connections thread throughout this strategic plan, and developing new housing opportunities is no exception. In particular, existing downtown structures could provide an avenue to funding for an adaptive reuse housing effort.

A precedent project in Milwaukee, WI is described below.

Ensuring affordable student housing is challenging, particularly so for the Milwaukee Area Technical College (MATC) located in downtown Milwaukee, Wisc. The demographics of the MATC student population skew older than typical college students and accordingly include a higher number of single parents with non-traditional housing needs. Now an adaptive reuse project, currently under construction by Milwaukee, Wisc.-based General Contractor CG Schmidt, seeks to tackle this issue head-on.

Reimagining a 1962, 115,000 sq.-ft.

building that was previously occupied by the long-standing Milwaukee Journal Sentinel newspaper, are developer J. Jeffers & Co. and Eppstein Uhen Architects (EUA). Their vision for the $27.7 million project is to help provide a truer campus experience for some of the more than 30,000 students who attend MATC...[22]

The similarities between the goals and needs described in this project, and those identified in Itta Bena, are striking. Though the scale in Itta Bena is smaller, a project 1% of this size would still be deeply impactful and could bring about the revitalization of thousands of square feet of space and house dozens of MVSU students and staff who otherwise would likely live in other towns and commute to campus.

The Office of Housing and Urban Development (HUD) provides limited funding for adaptive reuse of historic structures in order to create new housing. A current funding opportunity is detailed here as an example.

FY 2023 HOPE VI Main Street NOFO
Program Description:
a. The HOPE VI Main Street Program provides grants to communities smaller than 50,000 in population to assist in the renovation of a historic, traditional central business district, or "Main Street" area by replacing unused, obsolete, commercial space in buildings with affordable housing units. ... Eligible applicants under this NOFO are county governments, city or township governments, and special district governments. The local government whose jurisdiction includes the Main Street area is the only entity that is eligible to receive an award...

b. The objectives of the program are to:
i. Redevelop central business districts (Main Street areas);
ii. Preserve historic or traditional Main Street area properties by replacing unused commercial space in buildings with affordable housing units;
iii. Enhance economic development efforts in Main Street areas; and
iv. Provide affordable housing in Main Street areas.[23]

Throughout the Strategic Goals section of this document, a number of SMART and actionable next steps have been identified. While human capital and the dedication of local leaders is necessary to realize progress, funding is also a key component. In the final section of this document, Justice40 Initiative data is presented. This data is required for many funding applications today (such as the HUD NOFO shown on this page) and, in the case of Itta Bena, Justice40 will often allow for priority consideration for federal funding.

22 Adaptive Reuse Aimed at Combating Student Housing Insecurity. https://www.eua.com/media/articles/adaptive-reuse-aimed-at-combatting-student-housing-insecurity/

23 FY 2023 HOPE VI Main Street NOFO. https://www.hud.gov/program_offices/spm/gmomgmt/grantsinfo/fundingopps/fy2023_hopevi

ECONOMIC INVIGORATION

The final area of focus in this document is broadly titled Economic Invigoration in order to encompasses a range of business and community development strategies tailored to reflect both the desires of residents as well as the constraints inherent in a community of under 2,000 residents. Throughout the planning process, Itta Bena residents indicated a desire for restaurants, a grocery store, and services such as a nail salon in town. Similarly, the survey completed by MVSU students and faculty indicated that a strong majority of survey respondents would be "likely" to make purchases at these types of businesses in Itta Bena.

Studies completed by Hope Enterprise Corporation and others indicate that a larger customer base is needed to attract a grocery store to the community. Similarly, many other businesses are not able to open their doors in Itta Bena based on limited revenue projections. Despite these challenges, this section provides examples of strategies that small towns have employed to amplify economic activity with minimal investment, connect residents to nearby businesses, and revitalize a rural economy through energy.

ECONOMIC INVIGORATION STRATEGY: POP-UP SHOPS

The high cost of a capital investment to create a brick and mortar location and the burden of paying a full-time staff require significant revenue for a business to develop and survive. Pop-up shops offer an alternative model, right-sized for a small town economy. A pop-up shop is a temporary business that may exist for a few hours, days, or months. Though the concept is not new, in locations where vacant commercial spaces exist and business innovation is needed, pop-ups are increasingly common. Farmers' markets are a familiar example of a pop-up shop, but only one version of this agile business model. Pop-up shops can offer food, retail, services, or entertainment.

Pop-up shops are ideal for small communities because:

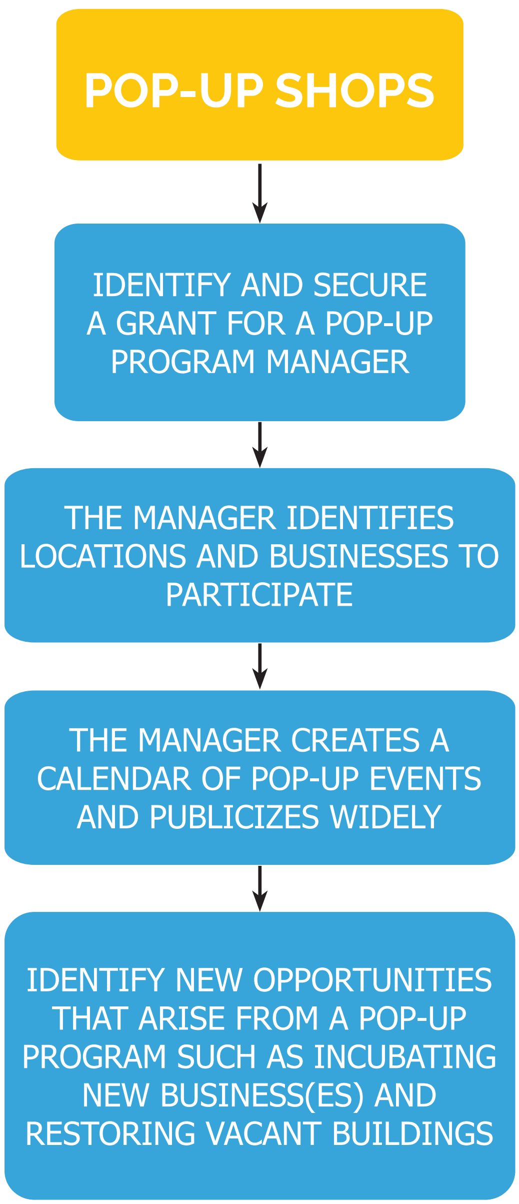
- Pop-up shops require little overhead, so even a small number of customers and sales will likely cover the cost of the pop-up for the business owner.
- Vacant space is readily available and building owner's would likely welcome even a temporary occupant for a minimal fee.
- Pop-up shops allow small business owners to test their business model and understand the cost of inputs and realistic sales.

In order for pop-up shops to be successful, small towns have cited that a program manager and a marketing strategy are necessary ingredients for success. For example, Itta Bena could apply for grant funding to hire an individual to operate a pop-up program. This individual would then identify locations where business pop-ups could take place. Sites might include vacant downtown storefronts, City-owned properties such as the LCT Brazil Center, or outdoor areas, weather permitting. Sites should be easily accessible for Itta Bena residents.

Simultaneous with site selection, the pop-up program manager would identify pop-up businesses. For example, based on community feedback, a nail salon is desired by Itta Bena residents. The manager could reach out to nail salons in nearby towns and identify a business owner interested in doing a pop-up nail salon in Itta Bena. Other local examples of pop-ups include food trucks (such a the Chick-fil-A truck and Larry's Fish House truck).

Once businesses and locations are identified, the program manager would organize dates and publicize the pop-ups. Grouping pop-up businesses together would help draw additional customers, and reaching a high number of Itta Bena residents would be necessary to ensure that the pop-up is profitable and businesses would be willing to repeat the venture.

While the immediate financial benefits of a pop-up program in Itta Bena would be minimal, the program has strong potential to generate new businesses that transition from temporary to permanent locations, perhaps occupying spaces that are currently vacant. Beyond economic invigoration, a pop-up programs brings amenities to Itta Bena residents, enriching the social and economic opportunities available within the City limits.



ECONOMIC INVIGORATION STRATEGY: CONNECTING RESIDENTS TO RESOURCES

With limited businesses and resources in a small town, residents travel to larger communities for specialty items and services. Residents of very small towns, such as Itta Bena, are miles from basic amenities such as grocery stores and pharmacies. While developing new businesses is one avenue to alleviating this challenge, this is not always feasible. Acknowledging this reality and responding to residents' needs is therefore a necessity. In the Mississippi towns of Drew and Shaw, residents have partnered with Hope Enterprise Corporation to pioneer grocery delivery services, saving local residents significant transportation costs by bringing groceries in to these towns from larger cities.

In Itta Bena, many residents travel approximately twelve miles from Itta Bena to Greenwood to shop, eat at restaurants, and access amenities. As a result, residents with cars incur the cost of fuel and wear and tear on their vehicle. Residents without vehicles pay as much as $20.00 one-way for transportation to and from Greenwood via unofficial taxi services, friends, or family. In the late 1990's the town of Hollandale, MS (about 50 miles away from Itta Bena) faced similar challenges. Hollandale's response was included in the 2008 University of North Carolina at Chapel Hill publication "Small Towns, Big Ideas: Case Studies in Small Town Community Economic Development".[24]

24 Case Studies in Small Town Development. https://www.sog.unc.edu/resources/microsites/case-studies-small-town-development

At the time of the UNC case study, the population of Hollandale was just over 3,000 residents, and residents were driving approximately 30 miles to the town of Elizabeth to purchase groceries and other necessities. Medical care, job opportunities, and higher education opportunities were even farther away.

> *Willie Burnside, former Director of Hollandale Economic and Community Development Foundation, "initiated a strategic planning exercise to jump-start development activity in Hollandale. The foundation sent staff and volunteers door to door to survey residents and, not surprisingly, found that the lack of jobs, housing, transportation and education were the greatest issues of concern for local residents.* ***"We looked at all of these problems and saw that each of them depended on transportation,"*** *said Burnside, who is now mayor of Hollandale.* ***"If we could improve transportation for people, we could get at a lot of these other issues."*** *Reliable and affordable transportation could provide residents with a way to get to school, work and health care facilities.*

The case study goes on to describe HEGA (Hollandale, Elizabeth and Glen Allen) Transportation, the strategy that developed as a result of this realization.

> *Hollandale partnered with two neighboring communities, Elizabeth and Glen Allen,*

and together they created a transportation system to connect residents to health care facilities, educational institutions, regional amenities and job opportunities. The process began in 1999 when the communities jointly applied for a Kellogg Foundation planning grant, which would allow them to create a long-term transportation strategy. HEGA, the transportation entity created by these three communities, received an initial $10,000 planning grant in late 1999. HEGA then worked with the U.S. Small Business Administration and Delta State University to draft a business plan, which was submitted to the Kellogg Foundation for implementation funding.

HEGA's objective was to create an affordable transportation network. In 2000 HEGA received a $100,000 grant from Kellogg, with which it bought two 15-passenger vans and hired two full-time drivers. HEGA also received funding from the Mississippi Department of Transportation and the Mississippi Rural Development Group. In an important strategic decision, HEGA funded an academic study of the likely economic and social impacts of a rural transportation network for the region. The results from this study gave the organization specific data that could be used in future fund-raising efforts.

Over the next four years, Hollandale received more than $500,000 in grant money to purchase additional buses and vans (including six 7-passenger vans and a 21-passenger bus). Round-trip fares are $5 for seniors and $7 for all others. In 2004 HEGA transported approximately 1,000 residents to jobs, 6,000 residents to educational institutions and 2,000 residents to medical facilities.

In addition to meeting basic transportation needs, HEGA has lowered the barriers for students and residents seeking employment and educational opportunities. "I know for a fact that a lot of kids wouldn't be able to go to college without this transportation system," Mayor Burnside said. "In fact, in January, my son, who is entering college, is going to start taking the bus." At the beginning of each school year, Burnside travels to the high schools in each community to see how many students are interested in going to college. This helps Burnside determine the following year's budget for the bus system and demonstrates to students that higher education is now an accessible option.[25]

This detailed account of the development and impacts of HEGA demonstrates how local leadership can precipitate significant change through incremental steps. Notably, the case study researchers attributed HEGA's success to three aspects of the effort: HEGA was based

25 Case Studies in Small Town Development. https://www.sog.unc.edu/resources/microsites/case-studies-small-town-development pages 74 - 76

on a deep understanding of local needs, project leaders documented these challenges through a transportation study, and the program was developed in collaboration with regional partners. These takeaways provide a road map for Itta Bena and other small towns to undertake similar endeavors.

ECONOMIC INVIGORATION CASE STUDY: OUACHITA ELECTRIC CO-OPERATIVE

Throughout the strategic planning process, Itta Bena residents expressed hope and optimism for community revitalization. Strategies guided by these positive outlooks have been detailed on previous pages. Despite this, the challenges faced by Itta Bena are large and encompass every aspect of individual and community health. In light of the comprehensiveness of these challenges, this final section of the Economic Invigoration section details a holistic economic revitalization effort, led by a local electric co-operative corporation in southern Arkansas.

OUACHITA Electric Cooperative Corporation (OECC) is located in Camden, Arkansas and serves 5 counties: Ouachita County, Bradley County, Nevada County, Dallas County, and Calhoun County.[26] Similar to the Mississippi Delta, these counties struggle with low population numbers, high rates of poverty, and retaining major employers. “In the 2000s, the closure of International Paper Company and Hughes Missile System led to losses of over 1,000 and 1700 jobs, respectively, in the utility’s service territory of five counties – a significant blow to an area with a population of approximately 15,000 people,” writes Jessica Lin in The Electricity Journal. Simultaneously, residents were also faced with high energy costs. Lin continues, “According to DOE analysis, the amount of money spent on electricity and heating fuel per month for the households in the lowest income bracket (0–30% of area median income, or AMI) is over $2000 per year for both renters and owners. This translates to an energy burden of 25% or 30% for families in the 0–30% AMI income bracket.”[27] Faced with these simultaneous challenges, OECC, led by Mark Cayce, sought opportunities to innovate. Beginning in 2013 and continuing at the time of this writing, the utility company’s innovations have had profound local impacts.

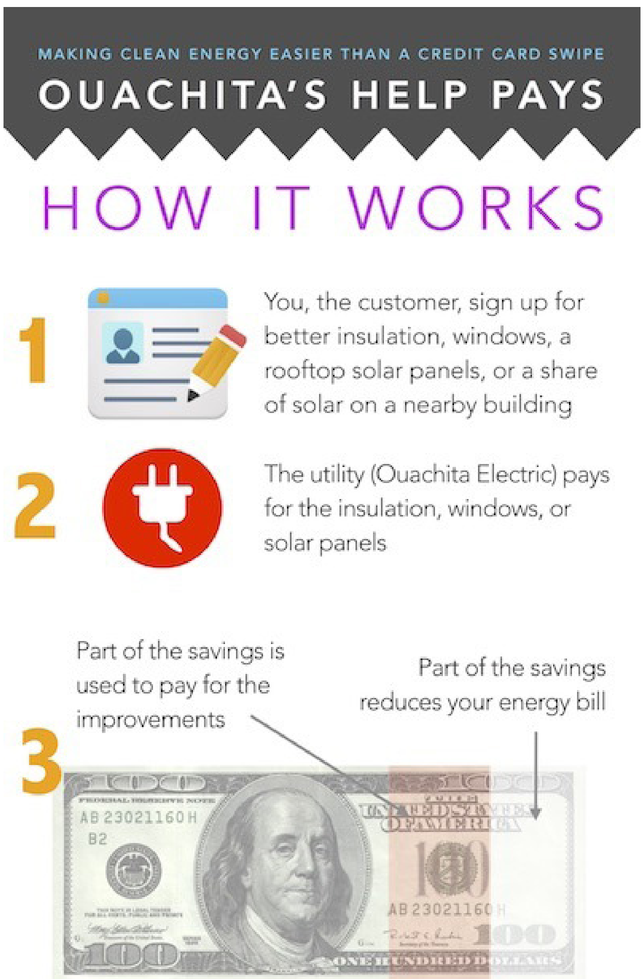
First, OECC innovated by developing a program that allows members to improve the energy efficiency and comfort of their homes with no out-of-pocket expenses.

With their Pay-As-You-Save (PAYS©) program, Ouachita gives its member-owners the opportunity to improve the energy efficiency of their homes and lower their energy bills. Through this program, the cooperative will cover any new

26 Ouachita Electric Cooperative Corporation. Service Area Map. https://www.oecc.com/service-area-map

27 Lin, Jessica. *The Pay As You Save program in rural Arkansas: An opportunity for rural distribution cooperative profits.* The Electricity Journal. Volume 31, Issue 6, July 2018, Pages 33-39 https://www.sciencedirect.com/science/article/abs/pii/S1040619018301441?via%3Dihub

appliances and insulation the home needs with no up-front costs to the member. Instead, the member pays a small charge on their monthly utility bill, called a tariff, in order to pay the cooperative back for its investment.



An infographic depicts Ouachita Electric Cooperative's HELP PAYS program. Image credit: Institute for Local Self-Reliance

Even with this additional tariff, the bill is lower than it was before due to all the energy saved from the new installations... Each member also gets to keep around 20 percent of the money they saved on the new utilities bill. Instead of spending money on energy bills, now that money can be used for other things like groceries and health care.[28]

The impacts of this program are far-reaching. While individual home owners are more comfortable in their homes and have additional cash on hand thanks to energy savings, the overall economy benefits as well. New heating and air systems and lighting are saving the local schools over $17,000 annually in utility expenses. Millions of dollars have been spent with local contractors to complete the weatherization and other improvements, and the utility provider has less delinquent accounts. Finally, HELP PAYS helped grow and retain local jobs. OECC's Cayce describes one example:

At the Arkansas Law Enforcement Academy, they were working with a 1960's boiler system for their heating and cooling in the dorm. We replaced it with mini split heat pumps. We also converted all of their lighting to LED. The state was considering if they wanted to move the training facility somewhere else, and that helped us guarantee that we can keep them here.

28 *Revitalizing Ouachita: How One Electric Co-op is Moving Forward.* Appalachian Voices. November 15, 2018. https://appvoices.org/2018/11/15/revitalizing-ouachita-how-one-electric-co-op-is-moving-forward/

The academy has about 50 jobs, but also hundreds of cadets come through every year.[29]

Building upon the success of the HELP PAYS program, OECC continued to innovate by implementing solar power projects, once again not only retaining existing jobs, but catalyzing job growth. Working closely with Arkansas Electric Cooperative Corporation (AECC) and Aerojet Rocketdyne, one of the area's largest employers, OECC developed the first utility-scale solar array in Arkansas in 2016. The 12-MW solar project has "reduced OECC's summer peak demand by up to 30 percent", "lowered the cost of power for OECC's more than 7,000 members", and not only retained Aerojet Rocketdyne as a local employer but led to the company adding more than 225 full-time jobs. Following the completion of this first solar array, additional projects have been completed with similar, multi-valent positive outcomes. Finally, as a result of these innovations in solar and the HELP PAYS program, OECC found itself in need of a rate decrease. Nearly unheard of among utility providers, OECC implemented a 4.5% rate decrease for customers in February of 2020.[30]

29 Southeast Energy Efficiency Alliance. *A Tale of Two Tariffs: Ouachita Electric Cooperative and Roanoke Electric Cooperative.* March 16, 2020. https://www.seealliance.org/a-tale-of-two-tariffs-ouachita-electric-cooperative-and-roanoke-electric-cooperative/

30 National Rural Utilities Cooperative Financial Corporation News. *Solar + Efficiency + Innovation = Lower Rates for Arkansas Co-op Members.* December 16, 2019. https://www.nrucfc.coop/content/nrucfc/en/news/stories/solar---efficiency---innovation---lower-rates-for-arkansas-co-op.html

The third rung on this ladder of utility driven economic invigoration brought high speed Internet to residents of OECC's service area.

Ouachita Electric is collaborating with the local, family-owned, telephone company, South Arkansas Telephone, which already provides Internet service to half of Ouachita Electric's service territory. The partnership, the Arkansas Rural Internet Service (ARIS), is set to bring phone, video, and gigabit Internet service -- more than ten times the speeds typically offered by cable companies -- to all 9,500 homes and businesses throughout Ouachita Electric's service territory...

ARIS will offer speeds of up to one gigabit (1,000 Mbps) directly to homes for less than $100 per month. The entire venture will involve installing about 1,800 miles of fiber over the next few years.

These rural communities cannot wait for the better connectivity -- which won't just be better than what they had, it will rival the best networks in the country. Within the first week of the announcement, over 400 members signed up for service.[31]

The value of high-speed connectivity in rural communities cannot be overstated. At the individual scale it enables households to access

31 Weinmann, Karlee. *Arkansas Utility Leads on Energy, Broadband.* Institute for Self-Reliance. March 2, 2017. https://ilsr.org/arkansas-utility-leads-on-energy-broadband/

remote education, healthcare, and employment opportunities. At the community scale, this allows residents to remain in the Ouachita area who would otherwise have to relocate in search of better opportunities. New businesses are also incentivized to locate in areas with easily accessible and affordable high-speed internet. Finally, the innovation has led to partnerships and growth for the nearby Southern Arkansas University Tech.

> *Ouachita Electric has cemented its status as a pioneer in boosting access to energy programs and broadband, but it shouldn't be an outlier. The co-op's attentiveness to its member-owners' needs spotlights opportunities to introduce well-designed initiatives that plug gaps in the local economy. It's a formula that should attract all co-ops, designed with democratic ideals in mind.*[32]

The far-reaching successes of the innovations implemented over the past decade by OECC and it's partners are provided here in order to demonstrate a rural model for smart growth, equitable development, and innovative change. Leflore County and Ouachita County share many similarities, and though local innovations must be tailored to each community's unique context, Ouachita County leadership are accessible by phone or for visits and their story is an example of the scale at which economic evolution is possible in the rural South.

32 ibid

JUSTICE40 INITIATIVE

Justice40 Initiative

In 2022, the Federal Government set a goal that 40 percent of the overall benefits of certain Federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution. Hundreds of Federal programs across the government to ensure that disadvantaged communities receive the benefits of new and existing Federal investments.

Itta Bena and the surrounding area make up the census tract of this study. This area, as well as the majority of the surrounding tracts, have been identified as disadvantaged by the program. Details for how the target areas are identified as disadvantaged for the Justice40 Initiative are required for many federal grant applications now.

The entirety of Leflore County is listed as disadvantaged in the Justice40 Initiative's criteria. As economic demographics reflect, areas within Itta Bena that are proportionally areas of greater low-wealth households and are not targeted for new development.

Itta Bena, MS, in Leflore County sits within Mississippi Tract 28083950300. The tract is identified as 100% disadvantaged, and surrounded 100% by other disadvantaged tracts. This part of Leflore County meets 4 categories of criteria to be labeled as disadvantaged:

- Climate Change
- Energy
- Health
- Workforce Development

The Justice40 Initiative allows for this portion of Leflore County to be prioritized for federal support in engaging communities and labor; investing in America's workforce; advancing diversity, equity, inclusion, and accessibility. Federal departments including the Department of Transportation, Department of Energy, and HUD, among others, all have integrated requirements to serve Justice40 areas with a percentage of each funding opportunity. These investments are an effort to close the wealth and resource gap that exists between regions throughout the United States.

CLIMATE CHANGE
Are at or above the 90th percentile for expected agricultural loss rate OR expected building loss rate OR expected population loss rate OR projected future flood risk OR projected future wildfire risk

AND are at or above the 65th percentile for low income

ENERGY
Are at or about the 90th percentile for energy cost OR PM 2. in the air

AND are at or above the 65th percentile for low income

HEALTH
Are at or above the 90th percentile for asthma or diabetes OR heart disease OR low life expectancy

AND are at or above the 65th percentile for low income

HOUSING
Experienced historic underinvestment OR at or above the 90th percentile for housing cost OR lack of green space OR lack of indoor plumbing OR lead paint

AND are at or above the 65th percentile for low income

LEGACY POLLUTION
Have at least one abandoned mine land OR Formerly Used Defense Sites (FUDS) OR are at or above the 90th percentile for proximity to hazardous waste facilities OR proximity to Superfund (National Properties List (NPL)) sites OR proximity to Risk Management Plan (RMP) facilities

AND are at or above the 65th percentile for low income

TRANSPORTATION
Are at or above the 90th percentile for diesel particulate matter exposure OR transportation barriers OR traffic proximity and volume

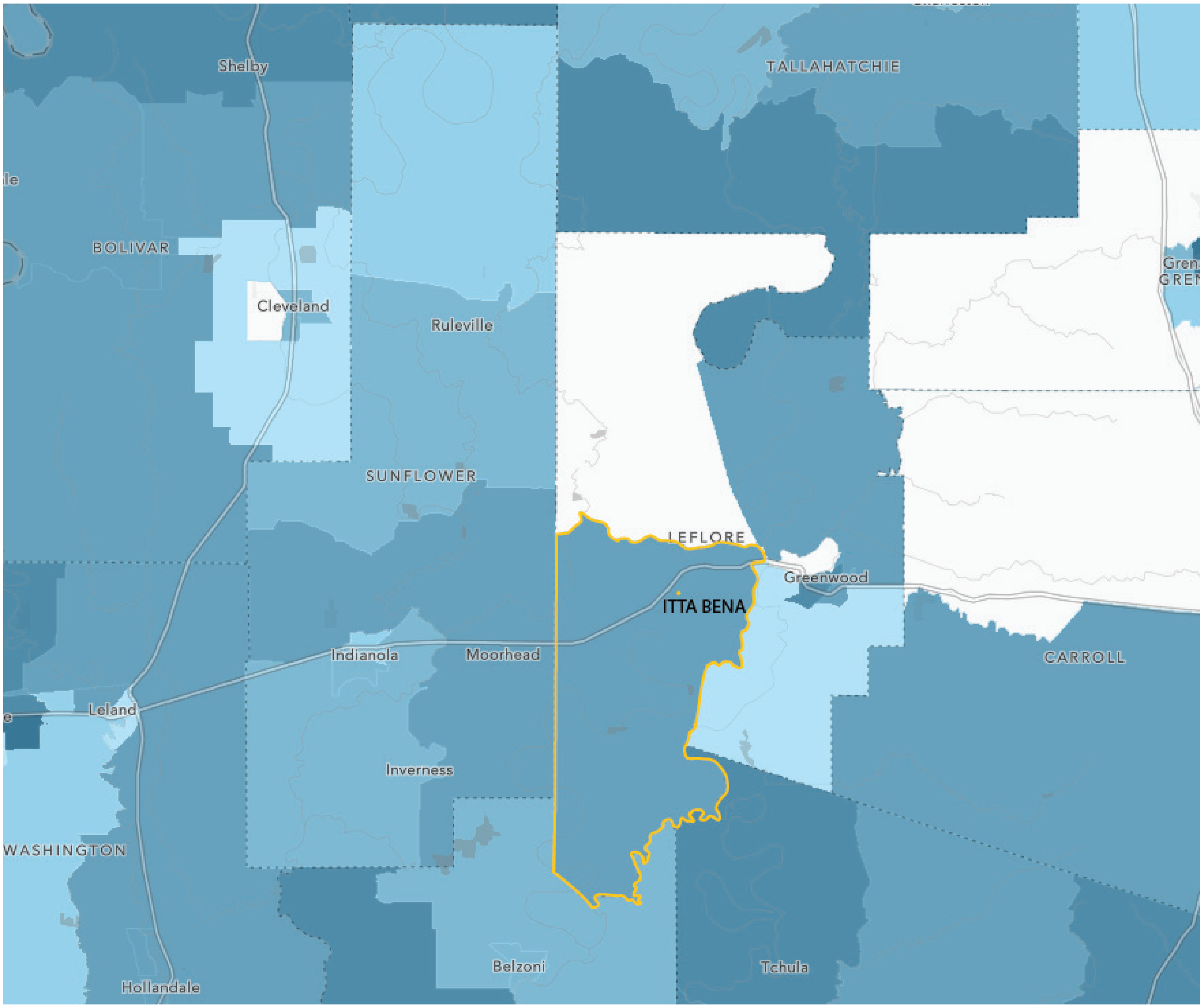
AND are at or above the 65th percentile for low income

WATER AND WASTEWATER
Are at or above the 90th percentile for underground storage tanks and releases OR wastewater discharge

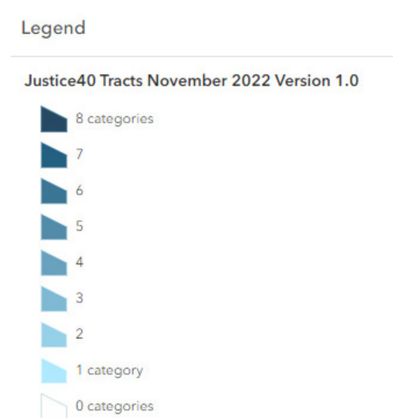
AND are at or above the 65th percentile for low income

WORKFORCE DEVELOPMENT
Are at or above the 90th percentile for linguistic isolation OR low median income OR poverty OR unemployment

AND fewer than 10% of people ages 25 or older have a high school education (i.e. graduated with a high school diploma or equivalent)



TRACT INFORMATION
Number: 28083950300
County: Leflore County
State: Mississippi
Population: 4799



Identified as disadvantaged?	YES
Identified as disadvantaged without considering neighbors?	YES
Identified as disadvantages based on neighbors and relaxed low income threshold only?	NO

BASELINE DATA

TRACT INFORMATION
Number: 28083950300
County: Leflore County
State: Mississippi
Population: 4799

Low Income Low income census tract	**YES**
Percentage of tract that is disadvantaged The percentage of the tract by area that is disadvantaged	**100%**
Neighbors to tract that are disadvantaged Share of neighbors that are identified as disadvantaged	**75%**
Federal Poverty Level Percentile Adjusted percent of individuals below 200% the Federal Poverty Line (percentile)	**95th**
Federal Poverty Level Percentage of individuals below 100% of the Federal Poverty Line	**42%**
Historic Federal Poverty Level Percentage of households below 100% of the Federal Poverty Line in 2010	**40%**

CLIMATE CHANGE

Expected Agricultural Loss Rate Economic loss to agricultural value resulting from natural hazards each year greater than or equal to the 90th percentile	**NO**
Expected Building Loss Rate Economic loss to building value resulting from natural hazards each year (percentile)	**80th**
Expected Low Income Population Loss Rate Fatalities and injuries resulting from natural hazards each year greater than or equal to the 90th percentile AND low income	**TRUE**
Expected Population Loss Rate Fatalities and injuries resulting from natural hazards each year (percentile)	**93rd**
Projected Flood Risk Share of properties projected risk to properties at projected from floods from tides, rain, riverine and storm surges within 30 years (percentile)	**77th**
Projected Wildfire Risk Share of properties projected risk to properties from wildfire from fire fuels, weather, humans, and fire movement within 30 years (percentile)	**33rd**

QUALIFYING DISADVANTAGED INDICATOR

CLOSELY APPROACHING A QUALIFYING DISADVANTAGED INDICATOR

SOURCE: https://screeningtool.geoplatform.gov/en/downloads

ENERGY

Energy Burden **YES**
Economic burden for energy costs and low income greater than or equal to the 90th percentile

Energy Cost **94th**
Average annual energy costs divided by household income (percentile)

PM2.5 in the Air **58th**
Level of inhalable particles, 2.5 micrometers or smaller (percentile)

LEGACY POLLUTION

Abandoned Mine Land **NO**
Presence of one or more abandoned mine land within the tract

Formerly Used Defense Sites **NO**
Presence of one or more Formerly Used Defense Sites within the tract

Proximity to Hazardous Waste Facilities **13th**
Count of hazardous waste facilities within 5 kilometers (percentile)

Proximity to Superfund Sites **14th**
Count of proposed or listed Superfund (or National Priorities List (NPL)) sites within 5 kilometers (percentile)

Proximity to Risk Management Plan (RMP) Facilities **41th**
Count of Risk Management Plan (RMP) facilities within 5 kilometers (percentile)

TRANSPORTATION

Diesel Particulate Matter Exposure **14th**
Amount of diesel exhaust in the air (percentile)

Transportation Barriers **80th**
Average relative cost and time spent on transportation measured through the The Department of Transportation's Travel Barrier Scoring (percentile)

Traffic Proximity and Volume **10th**
Count of vehicles at major roads within 500 meters (percentile)

HEALTH

Asthma **96th**
Share of people ages 18 years and older who have been told they have asthma (percentile)

Diabetes **93th**
Share of people ages 18 years and older who have diabetes other than diabetes during pregnancy (percentile)

Heart Disease **72nd**
Share of people ages 18 years and older who have been told they have coronary heart disease (percentile)

Low Life Expectancy **86th**
Average number of years a person can expect to live (percentile)

Life Expectancy **74**
Average number of years a person can expect to live (years)

HOUSING

Historic Underinvestment Census tracts with historically high barrier to accessing home loans	NO
Housing Burden Percent of households considered housing burdened (making less than 80% of the area median family income and spending more than 30% of income on housing) (percentile)	81st
Housing Cost Share of households making less than 80% of the area median family income and spending more than 30% of income on housing	36%
Median Home Value Median value ($) of owner-occupied housing units (percentile)	4th
Median Home Value ($) Median value ($) of owner-occupied housing units	$66,100
Lack of Green Space Amount of land, not including crop land, that is covered with artificial materials like concrete or pavement (percentile)	86th
Lack of Indoor Plumbing Share of homes without indoor kitchens or plumbing (percentile)	70th
Lead Paint Share of homes that are likely to have lead paint (percent of pre-1960's housing as a lead paint indicator)	15%

WORKFORCE DEVELOPMENT

Linguistic Isolation Share of households where no one over age 14 speaks English very well (percentile)	27th
Low Median Income Comparison of median income in the tract to median incomes in the area (percentile)	94th
Poverty Share of people in households where the income is at or below 100% the Federal Poverty Level (percentile)	96th
Unemployment Number of unemployed people as a part of the labor force (percentile)	95th
Unemployment Percent of unemployed people as a part of the labor force	14%
High School Education Percent of people ages 25 years or older whose high school education is less than a high school diploma (percentile)	86th

WATER & WASTEWATER

Underground Storage Tanks & Releases Formula of the density of leaking underground storage tanks and number of all active underground storage tanks within 1500 feet of the census tract boundaries (percentile)	53rd
Wastewater Discharge Modeled toxic concentrations at parts of streams within 500 meters (percentile)	15th

QUALIFYING DISADVANTAGED INDICATOR (dark teal: Median Home Value, Median Home Value ($), Low Median Income, Poverty, Unemployment ×2)

CLOSELY APPROACHING A QUALIFYING DISADVANTAGED INDICATOR (light teal: Lack of Green Space, High School Education)

SOURCE: https://screeningtool.geoplatform.gov/en/downloads

APPENDIX

ORGANIZATIONAL CHECK-UP FINAL REPORT
Hometown Connections, Inc.
January 25, 2019

ITTA BENA, MS ELECTRIC FINDINGS REPORT
Utility Financial Solutions, LLC
February 12, 2019

CITY OF ITTA BENA ELECTRIC SYSTEM STUDY & CONSTRUCTION WORK PLAN
Atwell & Gent, P.A.
September 28, 2018

Organizational Check-Up
Final Report

CITY OF ITTA BENA
Itta Bena, Mississippi

Prepared by
Hometown Connections, Inc.
January 25, 2019

Table of Contents

Executive Summary

Hometown Connections was retained by the Hope Credit Union Enterprise Corporation (Hope CU) to conduct an organizational review of the utility business practices and identify areas that are working well, along with areas where improvements are recommended. Given the breadth of this study within the given constraints, this assessment is not designed to provide significant detail in any one area. Instead, the Organization Check Up is designed more to gauge how well the many pieces of the utility's organization and operations fit together. The review looked at the following aspects of Itta Bena's utility operations:

1. Customer service
2. Technology
3. Utility value and finance
4. Community relations
5. Employee safety
6. Workforce

Itta Bena is a small public utility system – under 1,000 customers, serving the small community of Itta Bena, population 1,800. Itta Bena officials, in conjunction with the Hope CU sought input on the city's utility operations, in response to feedback from several utility customers and their expectations of the service they received.

Itta Bena is fairly impoverished community, with a median household income in 2016 of $22,416, which almost half the Mississippi state average of $41,754. Unemployment remains high, long after much of the rest of the nation has enjoyed record low unemployment rates. The economic condition of the community presents many challenges to the city government and the utility services it provides. Utility infrastructure, as outlined in a separate engineering study, has witnessed years of neglect, seriously impacting system reliability and safety. Utility billing and finances are also impacted by high numbers of delinquent payments, and limited billing options.

To the city's credit, the utility billing system is run very efficiently with a clearly defined billing cycle that is tightly enforced. Many utilities, in their attempts to provide leniency to low-income customers, find themselves in a morass of their own making, where extensive payment extensions create an administrative nightmare of managing and monitoring special payment arrangements for a significant portion of their customers. Itta Bena has avoided this through an unwavering adherence to clearly defined city policies.

Nonetheless, there are several elements of the city's utility services that make it difficult to deliver the quality of utility services that staff desires.

As a small community and a poor community, Itta Bena finds itself in the difficult situation of keeping up with rapid utility industry changes – mostly driven by new technologies – that threaten to leave many small, public utility systems behind. This poses a grave threat to the continued existence of small, locally-owned public power utilities. Compared to its neighboring utilities, Itta Bena is certainly among the smallest. Yet, across the U.S., the median sized public power utility is only about 1,800 customers – only slightly larger than Itta Bena. Indeed, of the 2010 public power utilities in the U.S., over 800 of them are actually *smaller* than Itta Bena. Certainly, Itta Bena is not alone in trying to keep pace with the changing industry. Nonetheless, local economic conditions, lack of community support, woeful infrastructure conditions due to deferred maintenance and a poorly developed support system of potential partners all make the challenge of correcting its course that much more challenging.

While staff and elected officials seem committed to the success of the utility, it will be difficult to achieve without the adoption of some new technologies, new processes and the support of other regional or state players. Additional staffing, while desirable, it probably not feasible, given the tight budgets already in place. And while new technologies certainly come with a price tag, in many cases there are inexpensive, or one-time purchases that may greatly facilitate the efficiency of the utility operations. One that will be discussed in more detail below is the current methodology for reading meters, which is currently dysfunctional and relies not on *old* technology, but *incorrect* technology. It is Hometown Connections' belief that an investment of a few thousand dollars could have a dramatic impact on the efficiency of the meter reading process.

Several recommendations here will require additional resources in order to implement, which certainly poses a challenge to Itta Bena in light of its fiscal constraints. Nonetheless, as will be discussed further below, we believe that there are potential partners that merit further dialogue to explore how they may be able to create win-win situations. The partnership that Hope CU formed with Itta Bena to evaluate utility operations is just one example of what could be many, where other institutions may be able to assist Itta Bena. The most obvious one is Mississippi Valley State University. Despite being located in Itta Bena, according to Itta Bena officials, the university has little interaction with the community or local government. Beyond, the borders of Itta Bena, other public utility agencies may also be in a position to support Itta Bena's improvement efforts. Throughout the nation, the public power community tends to be a tight-knit group that can come to the aid of their fellow utilities, whether it be mutual aid after a storm, sharing critical spares inventory, or simply offering advice, perspectives or other resources when the need arises.

Public utilities, and in particular, public power, has a long history of providing an attractive alternative to private, for-profit utility operations. It has long prided itself on competitive rates, reliable power and strong customer service, operating in a transparent manner through its local governing board. Yet many of these values propositions are not strongly in evidence in Itta Bena. It is currently difficult, if not impossible to make an apples to apples rate comparison with neighboring utilities: the condition of the electric distribution system suggests reliability is low – if this information were being tracked, and customer service is apparently low, based not on any customer survey work, but just anecdotally. Yet, the foundation for a strong public utility remains: dedicated staff and a desire to do better. We are optimistic that Itta Bena can improve the quality of its utility operations, but we don't believe they can do it without help. Hope CU is a start, but there are others who could be an active part of its rejuvenation.

As a public utility, Itta Bena's overall purpose is to provide reliable, safe and affordable electric service to its customers and be a resource for the community it serves. It is important for utilities to dedicate efforts to develop good community relations because this establishes and maintains in the public mind confidence and support for the public power utility. At the time of this assessment, discussions held with staff indicate that the perception of the utility is very negative, mostly due to the belief that rates are very high, despite the fact that rates have not been raised in over 15 years. This presents an opportunity for Itta Bena to tell its story, provide information to customers to help them lower their monthly bills, and change its perception in the community.

For a variety of reasons, Itta Bena does not have partnerships with local businesses or neighboring utilities which would provide opportunities for the utility to:

(a) Access to additional resources,
(b) Strengthen weaker aspects of its business,
(c) Access to new services
(d) Enable economic development opportunities

Workforce issues are a significant challenge that many public power utilities across the nation are facing. In Itta Bena's case, the utility only has one full- time equivalent (FTE), the Superintendent, who is responsible for all field operations. Administrative functions such as customer service, billing, procurement, finance, etc. are handled by city personnel under the direction of the City Clerk. The Superintendent and the City Clerk have extensive experience in their roles and have been able to keep utility operations going; however, the current staffing level at Itta Bena is a significant concern.

Employee safety is also of significant concern. Staff understands the importance of safety practices; however, safety measures and equipment are either not available or not consistently employed.

The electric utility organization finds itself in a precarious situation where improvements in many areas are needed; however, the financial resources to move forward with recommendations may not be readily available. To assist Hope CU and Itta Bena in determining the most relevant recommendations to implement within three to six months of this review, Hometown Connections has prioritized recommendations in Table 1: Prioritization and Implementation Schedule below. Further detail for each organizational aspect and recommendations is found in Table 2: Current Situation under the Findings and Recommendations section of this report. Hometown Connections suggests that all other recommendations included in Table 2 be implemented by December 2019.

Table 1: Prioritization and Implementation Schedule

Best Practices	Recommendations	Implementation Schedule
Customer Service	1. Re-sort the order of premise addresses to match the logical walking route that a meter reader would take to efficiently cover the Itta Bena utility territory. 2. Consider adjusting disconnect/reconnect fees to more fully recover the costs of these activities.	To be completed by March 2019.
Technology	1. Meter reading recommendations from least to most costly: a. Purchase a single dedicated meter reading handheld. b. Install meters with communications modules that allow for remote reading of a meter.	To be completed by June 2019.
Utility Value and Finance	1. Itta Bena must clearly define and publish a rate schedule. 2. A separate enterprise fund must be restored.	To be completed by June 2019
Community Relations	1. Itta Bena should explore partnerships with local businesses to strengthen community relations and obtain additional support and resources, including MEAM, Greenwood Utilities, Mississippi Valley State University, Hope CU and Mississippi Delta Community College. 2. To improve the public perception, Itta Bena needs to update its website.	To be completed by March 2019
Workforce	1. The utility needs to have backup for the Superintendent position. 2. A lineman needs to be hired to support the Superintendent during vacation or sick leave and alternating weekends. 3. Itta Bena needs to develop partnerships with neighboring businesses, utilities and educational institutions to obtain additional resources while providing these personnel the possibility of gaining experience and also contributing to the community.	To be completed by March 2019
Employee Safety	1. Ensure employees are provided with the required safety gear and that they use it. 2. Adopt a safety manual to guide employees on electric utility practices and policies. 3. Build a culture of safety through specific safety training and adding safety as a topic at all meetings involving staff and/or governing board members	To be completed by February 2019.

Methodology

Hometown Connections conducted an onsite visit to Itta Bena on September 23, 2018, to meet with the Mayor and key utility and city personnel to gather information and performance results in the following key areas of an electric public power utility:

1. Customer service
2. Technology
3. Utility value and finance
4. Community relations
5. Employee safety
6. Workforce

Hometown Connections and staff discussed participation in the study prior to Hometown Connections' onsite visit, settling on a final agenda, timing and participation. The objective of these discussions was to document service offerings, business processes, organizational policies and the supporting technology and resources that allows for the effective delivery of electric services.

The results of these discussions were then reviewed and analyzed by the Hometown Connections team and evaluated against their experience with comparable public power utilities. This resulted in the summary recommendations contained in this report.

Best Practices, Findings and Recommendations

Table 1: Current Situation, presents best practices for each area reviewed by Hometown Connections. These best practices are compared against the current situation observed at Itta Bena and recommendations for improvement are provided where necessary.

Table 2: Current Situation

Best Practices	Current Situation	Recommendations
Customer Service – Billing and customer service operations are seamlessly integrated into utility operations, ensuring the timely and accurate flow of information within the organization and between the organization and its customers. This begins with meter data, which is collected in an efficient and accurate manner and uploaded seamlessly into the customer information system (CiS). Customer data is complete allowing staff to quickly assess account status, payment history, and contact information. Bills are generated and mailed within a timely manner after the meter reading. Similarly, payments are due within a reasonable period of time and measures to secure delinquent payments are efficient, consistent and predictable. On the customer-facing side, utility customers have easy access to rate information, account status, payment options, including online payments. New or existing customers may start or stop service either online or over the phone. Phone systems are established to ensure easy customer access both during and after normal business hours. Online systems allow customers to conduct most utility business from any location and at any hour of the day. The organization has additional strong linkages to its customers/community through outreach, surveys, key accounts and media relations	**Meter reading**: Currently four Itta Bena staff members read the utility meters once a month, copying down meter readings on books, transferred manually to a handheld computer, which is then placed in a cradle for uploading to the utility billing software. Unfortunately, the order of the premise addresses that have been uploaded to the handheld, are not in the logical order that a meter reader would walk as part of an efficiently designed route. Further, the handheld in use is not a meter reading handheld, but rather an inventory and warehouse control handheld. As such, what would be an easy, field-configurable change to a meter reading route on a meter-reading designed handheld, is far more difficult on the existing one. **Billing cycle**: the billing cycle is very tightly constructed and adhered to. Customers have a predictable and consistent billing process to follow. Payment extensions are not granted, reflecting the very disciplined billing process. **Late fees/disconnect fees:** residential late fees are at about industry averages. Disconnect/reconnect fees average about $40 in public power, an amount which is not likely to recover the fully loaded costs of staff and resources to terminate service. **Payment Options**: It is estimated that 85% of customers are paying in person, which is among the highest rates in the industry. Industry averages are about 1/3 paying in	1. Re-sort the order of premise addresses to match the logical walking route that a meter reader would take in order to efficiently cover the Itta Bena utility territory. There would likely be some programming time involved to make this change and the field staff would need to identify and document the correct route. With a more streamlined process, reading of a couple of thousand water and electric meters in a four-square mile area should only take a day. Additional discussion may be found in the Technology section. 2. Consider adjusting disconnect/reconnect fees to more fully recover the costs of these activities. 3. Explore with the CIS provider (BBI) and local financial institutions the feasibility of offering bank drafts. 4. Explore with CIS provider the feasibility of creating an Electronic Bill Payment and Presentment option 5. Revamp the city's website to provide information on billing, payments, rates, etc. Additional discussion may be found in the Customer Interface section 6. Explore feasibility with CIS provider of moving to a two-page bill, affording space to provide important city and utility information 7. Explore feasibility and cost-effectiveness of outsourcing bill print and mail-shop services

Best Practices	Current Situation	Recommendations
	person. While this no doubt is a reflection of the economic status of many Itta Bena customers, more automated payment options are limited, and nothing has been done to move customers to options that could be easier for both the city and customers. Bills are currently sent out on a small postcard, which limits how much information can be shared regarding rates, payment options, etc.	
Technology – Extensive technology changes over the past 20 years have changed the way many utilities do business. Smart grid technologies allow for seamless integration across distribution, billing, and work order systems, to name a few, ensuring more efficient use of electricity, faster response to outages, greater safety, faster, more accurate billing processes, and a more user-friend experience for both utility staff and customers. Public power's use of technology varies tremendously, with many utilities committed to deploying leading edge technology, while others take a more conservative approach, adopting new technologies only after they have proven themselves effective. Furthermore, for many utilities, a lack of resources has made owning and operating many of the available current technologies difficult if not impossible to obtain. Hometown Connections believes there are a variety of acceptable approaches for public power to take in assessing and adopting new technologies. What is not acceptable is	Itta Bena's technology deployment is uneven and at times, seems counter-productive. **CIS**: On the plus side, Itta Bena has made effective use of the CIS technology from BBI Inc., a regional software provider specializing municipal and public utility solutions. **Meter Reading**: Meter reading activities are currently conducted in a manner that seems highly labor intensive, adding tremendous time and raising the possibility of greater errors. Currently four Itta Bena staff members read the utility meters once a month, copying down meter readings on books, transferred manually to a Datalogic Falcon X3 handheld computer, which is then placed in a cradle for uploading to the BBI utility billing software. Unfortunately, the Falcon X3 is not a meter reading handheld, but rather an inventory and warehouse control handheld. As understood from staff, the premise information that has been uploaded to the handheld, is not in the logical order that a meter reader would walk as part of an efficiently designed route. As	1. Meter reading recommendations from least to most costly: a. Re-sort the order of premise addresses to match the logical walking route that a meter reader would take in order to efficiently cover the Itta Bena utility territory. There would likely be some programming time involved to make this change and the field staff would need to identify and document the correct route. b. Purchase a single dedicated meter reading handheld. Most, if not all, of these have basic route management software on the handheld, making it easy to create and restructure optimal routes, add or subtract meters, flag high and low reads, and allow entry of additional notes such as bad dog, locked gate, etc. Such a handheld, properly configured, should easily allow a single meter reader to complete the 900 meters located within the 1.5 square miles of the service territory in a single day. The use of new technology is key to enabling the 900 meters to be read in one day. Several vendors sell these handhelds, with prices ranging from \$2,000 to \$5,000. There are many excellent models available, and as long at Itta Bena were to read only non-AMR meters (the L+G E130 Focus being one example), any good brand would work. The biggest consideration on brand is whether the utility billing software provided by BBI has an

Best Practices	Current Situation	Recommendations
simply to ignore the emergence of new technologies that have tremendous potential to impact public power's success by lowering costs, improving reliability and increasing customer satisfaction. Regardless of the level of technology deployment It is critical that all technologies in use enjoy a high degree of interoperability. Utility operations include many functionalities that involve departments operating under different funds and reporting relationships. High performing organizations ensure that a technology plan drives the sequencing, purchasing and implementation of technologies.	such, what would be an easy, field-configurable change in a meter reading route on a meter-reading designed handheld, is far more difficult on the Falcon. **Website**: The Itta Bena website is woefully outdated, which continues to list, among other things, the mayor as Thelma Collins, who was replaced in 2017 by J.D. Brasel. The site is not mobile-friendly, as determined through the Google Mobile Friendly Test. There is no utility or billing-specific information. Phone System: Itta Bena's phone system does not have options to answer or record customer calls after hours. The fire or police department receives the calls from customers after hours and then forward to needed staff.	existing software interface between their own billing software and the route management software used in the handheld. Recent conversations with the President of BBI, Larry Barrett, note that Leland Light and Water Dept., among others, have meter reading interfaces with the BBI software. c. Install meters with communications modules that allow for remote reading of a meter. This can be an important consideration when attempting to read meters behind locked gates or where bad dogs may reside. These AMR-enabled meters will typically communicate via an RF (radio frequency) signal, allowing a handheld with a compatible receiver to upload meter consumption data from several hundred feet away. The cost of RF meters and the cost of an RF-equipped handheld are both higher than those that aren't so equipped. Itta Bena should expect roughly a 50% premium on cost of these. If Itta Bena is happy with the L+G meters, their representatives can provide additional information on AMR meter costs and compatible handhelds. d. One recommendation we are NOT prepared to make is the move toward Automated Metering Infrastructure (AMI). This is an order of magnitude more expensive solution that would be excessive for the limited additional functionality it would afford to Itta Bena. Much of the pricing for AMI is in up-front costs, which vary little between a 900-meter utility and a million-meter utility. In other words, Itta Bena would be forced to spread large, up-front fixed costs across a very small customer base. 2. Update the website as further described under Community Relations. 3. Update the phone system to be able to leave messages and explore possibility of Integrated Voice Response systems.

Best Practices	Current Situation	Recommendations
		4. Technology Review and Plan: Discuss with CIS provider BBI, as well as neighboring MEAM members where Itta Bena's best opportunities lie. Consider hosting a technology charette with these and other resources to examine more closely Itta Bena's current situation and how best to adopt new technologies.
Utility Value and Finance – Utility value is a key differentiator among public power utilities. The utility has a clear sense of its values proposition to the community and communicates that to its customers and community. These include rates, reliability and customer service. (Customer service is covered elsewhere in this report while reliability is covered through a separate engineering report prepared by consulting engineers, Atwell & Gent, P.A.). Rate schedules are readily accessible on the utility website, on the utility bill or in person. Rates are competitive against neighboring utilities and shown in simplified form on the utility website. Utility contributions to the municipal government and more broadly to the community are tracked and the value of owning a public power system are widely shared. Financial operations follow GASB's generally accepted accounting principles. Enterprise funds are clearly delineated from general fund operations with transfers clearly accounted for.	**Rates**: There is no rate schedule or basic rate information published anywhere. Not on the bill, not on the website and apparently not even through direct inquiries of staff. Independent research through the U.S. Energy Information Administration found no entry for Itta Bena after 2009. Hometown Connections and Utility Financial Solutions have never encountered such lack of transparency in the publication of rate schedules. Staff notes that the rates have remained unchanged for over 15 years. It is very unlikely that utility revenues in 2018 come close to matching the cost of providing those utility services, which is the intent of any governmental enterprise fund. **Utility Contributions**: A separate utility enterprise fund was folded into the general fund, which is a very unusual step that was apparently encouraged by the auditing firm working with Itta Bena staff. While staff notes that utility activities can be separated and accounted for, the absence of an independent enterprise fund is cause for concern. It makes it difficult to ensure that utility rates are set at a level that closely matches the cost of providing electric and water services. Cross-subsidization between enterprise funds and general funds, as well as between different utility funds (e.g. water	1. Itta Bena must clearly define and publish a rate schedule. From there, it should complete a comprehensive cost-of-service study that determines the cost of serving various utility customers – water, electric, residential, commercial, etc. – and the efficacy of those rates on funding power supply purchase as well maintaining current operations and necessary system improvements to ensure future uninterrupted power and water supply. 2. If the utility is expected to run as a municipal enterprise, which is the essential business model of municipal utility ownership, a separate enterprise fund must be restored, allowing for stronger and more transparent accounting of utility operations.

Best Practices	Current Situation	Recommendations
	and electric), hinders the setting of fair rates and the reinvestment of utility revenues into system upgrades and improvements. Further, the lack of a formal transfer from an enterprise fund to the general fund hides a key public power differentiator: the payment in lieu of taxes (PILOT) transfer that demonstrates value of public power ownership with stronger and more diverse revenue sources than simply local taxes. For comparison, Greenwood Utilities gives appropriations to the city in lieu of taxes as well as providing free electricity and water for a wide range of community facilities. Itta Bena cannot easily demonstrate the value of the utility either through payments in lieu of taxes or in the contribution of in-kind services, such as electricity or water.	
Community Relations -- The overall objective for good community relations is to establish and maintain in the public mind confidence and support for the public power utility. Important aspects included under Community Relations are: **- Partnerships with local businesses:** Public power utilities are a core component of any community. For the utility, partnerships with local businesses: (e) Provide access to additional resources, (f) Strengthen weaker aspects of the business, (g) Access to new services (h) Enable economic development opportunities	Itta Bena does not have staff to conduct activities to strengthen its community relations, as described below. **Partnerships with local businesses:** Itta Bena has very limited staff available to pursue, develop and maintain partnerships with local business. The utility purchases power from the ***Municipal Energy Agency of Mississippi (MEAM),*** a joint action agency (JAA). JAAs were created to help public power utilities have access to resources and negotiate for better wholesale power prices. Itta Bena attends board meetings at MEAM, but otherwise has no interaction with its JAA and does not know whether MEAM provides additional resources. Hometown	1. Itta Bena should explore partnerships with local businesses to strengthen community relations and obtain additional support and resources: a. MEAM: Based on a call with Hometown Connections, MEAM does not offer support to its members such as human resources; however, we encourage the Mayor follow up with MEAM and obtain further information about any programs MEAM may offer its members. b. GU: Re-establish contact with GU to explore opportunities for mutual aid. c. MSVU: Establish contact with MSVU to identify partnerships opportunities that will benefit both organizations. For example the utility needs support developing and maintaining the website and could explore offering internship opportunities for students. Additionally, MSVU has a Rural Public Policy and Planning and Business Administration programs and it

Best Practices	Current Situation	Recommendations
- **Public Perception and Education:** Visibility in the community, through online presence, public events, school presentations and volunteerism, is a hallmark of public power, highlighting the local nature of the hometown utility provider compared to the investor-owned utilities. Utility dedicates efforts to communicate and educate customers and the community about the value of the utility and current programs. **- Economic Development**: The degree to which public power utilities engage in economic development activities varies tremendously. In slow growth and rural areas, the local public power utility may play a prominent role, which may include: (a) Funding of the Economic Development Councils, (b) Participating in governing board roles, (c) Building out electric distribution infrastructure to attract new industry, (d) Establishing rates to attract new business The utility gets strong value for its investment, and recognition among local stakeholders for the contribution it makes.	Connections contacted MEAM to identify potential for resources and support for Itta Bena and was informed that MEAM does not provide additional services to its members; however, for further information MEAM suggested the Mayor present these inquiries directly to MEAM. ***Neighboring utilities*** include Greenwood Utilities (GU) and Delta Electric Power Association (DE). Currently, Itta Bena does not have any interaction with these utilities. In the past, local organizations provided mutual aid support, but that is no longer the case. For example, when the bucket truck broke down, Leflore County would supply a bucket truck to the utility; however, due to safety concerns and liability issues this practice was stopped. Today, Itta Bena rents a bucket truck from a vendor, which adds significantly to costs. ***Mississippi Valley State University*** (MSVU) is located in Itta Bena and is served by DE. Itta Bena does not have any interaction with MSVU. Programs offered by MSVU that may be of interest for Itta Bena are Business Administration, Engineering Technology, Computer & Information Sciences, Mass Communication, and Rural Public Policy and Planning. ***Mississippi Delta Community College*** *(MDCC):* Currently, Itta Bena does not have a partnership with this school which offers linemen training. **Public Perception and Education:**	may be possible for Itta Bena to provide internship opportunities to students in these programs. d. MDCC: Contact MDCC and explore opportunities to provide on-the-job experience to students pursuing the lineman and other technical certifications. e. Explore internship opportunities for MSVU students to develop educational programs for the high school and elementary students, as well as conservation efforts for the community. f. Continue to work with the Hope to identify ways in which the utility can support economic development efforts. Additionally, since Hope CU is a credit union and provides financial resources to communities, Itta Bena should explore ways of working with Hope CU to develop payment options and educate customers in the options developed (such as bank drafts or credit card payments). 2. To improve the public perception, Itta Bena needs to: a. Review public power websites to obtain ideas and best practices in the industry to consider when updating the utility webpage. The APPA Annual Directory includes URLs for most utilities. Examples include: o Greenwoodutilities.com o Austinenergy.com o Paducahpower.com b. Update the website. Once a resource to update and maintain the website has been secured, it is important to design the website to be user-friendly and have relevant content such as: current leadership for the City, customer service hours and options, promote the value of public power, and provide educational information such as what customers can do to conserve electricity. c. Promote educational content developed for teachers and elementary students to understand electricity and

Best Practices	Current Situation	Recommendations
	Itta Bena does not have efforts to promote and educate customers about the value it brings to the community. Currently, the public perception towards the utility is negative mostly due to the high bills. The utility's ***largest electrical accounts*** are the high school and the elementary schools, but no volunteer or educational programs are in place, mostly due to lack of resources. As previously mentioned, content on the **website** is outdated, does not promote the services and value provided by the utility, does not provide customer service options or account information (i.e. billing and payment) or educational information (i.e. conservation tips). **Economic Development:** Currently Itta Bena does not conduct any economic development efforts. However, the ***Hope Credit Union Enterprise*** (Hope) is dedicated to strengthening communities by providing quality financial products and is sponsoring the engineering, financial and organizational assessments for Itta Bena. Hope has the Small Towns Partnership program, which provides economic development training and technical assistance for seven Mississippi communities.	develop electrical safety. It is not necessary for Itta Bena to develop content for teachers and students since materials are available such as pathways.nppd.com, which is a site developed and maintained by the Nebraska Public Power District. Other options include educational videos on YouTube (https://www.youtube.com/watch?v=Uf76pThNXZc) d. Establish oversight to ensure the links and education content are in alignment with Itta Bena's mission. e. Develop metrics to track website traffic. Google analytics is a free service frequently used to monitor traffic to websites. This information will help Itta Bena keep its website current and with content that is relevant to customers and the community.
Workforce -Utility recruits and retains a workforce that is competent, motivated, adaptive, and safe-working. A participatory, collaborative organization dedicated to continual learning and improvement drives	**Staffing Levels are a Significant Concern:** Itta Bena's utility operations have one full-time employee, the Superintendent. The administrative functions such as finance, accounting, customer service, human	1. Secure backup for the Superintendent position. Hometown Connections understands Itta Bena does not have the financial resources to hire an additional full-time equivalent employee to support field operations. Yet, is appears that the costs of outsourcing electric

Best Practices	Current Situation	Recommendations
positive results from all aspects of operations. Effective succession planning ensures that institutional knowledge is retained and improved upon over time. Career development and training provides opportunities for employees to acquire skills, capabilities and knowledge improving their effectiveness and heightening employee satisfaction. The workforce is sufficient in quantity and capabilities to accomplish performance objectives. Workforce needs are planned, measured, tracked and reported.	resources are conducted by the City Clerk supported by city employees. The Mayor serves as CEO and sits on the Board of Alderperson, composed of five members – one at-large seat and four Ward seats. Itta Bena does not have staff or resources to develop and maintain community relations including partnerships with local businesses, communication and educational programs, and economic development efforts. Technical positions are difficult to fill. It is challenging for Itta Bena to attract personnel with knowledge and experience. **Qualified Workforce:** The Superintendent is very knowledgeable, skilled and has many years of utility experience; however, he does not have any support to cover operations and lives approximately one hour away. When operational support is required, it has to be outsourced. If the Superintendent were to leave the utility, there is no redundancy to cover operations and keep the system running. The City Clerk is very knowledgeable and experienced. She manages a team of three full-time equivalent employees that handle functions for the entire City, which limit the focus on utility processes. **Workforce Development:** Itta Been does not have a workforce development plan and succession plan to attract and retain qualified personnel. Training and career development efforts are not conducted for the Superintendent. City personnel are provided certain training	distribution work is substantial and may justify adding staff as a potential cost-saving measure. Regardless, it is important for the utility to explore partnerships with neighboring utilities (such as GU or DE) to have access to qualified field personnel when the Superintendent is not available. Backup for this position may enable the utility to respond to unexpected situations and emergencies more effectively and quickly. It will also allow for the Superintendent to attend training programs. 2. A lineman needs to be hired to support the Superintendent during vacation or sick leave and alternating weekends. 3. As presented under "Partnerships with Local Businesses" section, we recommend Itta Bena explore opportunities to partner with neighboring businesses and educational institutions to obtain additional resources while providing these personnel the possibility of gaining business experience and also contributing to the community, such as: 4. Students from MSVU to develop and maintain website and support community relations efforts. 5. Students in the lineman certification at MDCC to support field operations while gaining on-the-job training and experience.

Best Practices	Current Situation	Recommendations
	opportunities and attendance to conference.	
Employee Safety – The utility is committed to the safety of its employees. Safety is a core attribute for the utility. Injury prevention program is in place; training is provided; compliance is monitored; performance is tracked and reported; and exceptions are addressed. Safety equipment is provided to employees. Safety training is regularly provided.	**Safety Culture:** Safety is recognized as a very important factor; however, a culture of safety does not exist. As an example, the Superintendent does not own a hard hat or when in the bucket truck is not able to latch on due to outdated or broken equipment. The bucket truck was being repaired at the time of Hometown Connections site visit, but feedback obtained stated that the truck probably has not been inspected in ten years. The Superintendent has other safety equipment, such a fire-retardant clothing. An updated safety manual is needed to provide guidelines related to injury prevention, metrics, safety performance and compliance. Regular safety training efforts are needed.	1. It is of the uttermost importance that Itta Bena develop a safety culture by: a. Adopt a safety manual to guide employees on electric utility practices and policies. The APPA *Safety Manual for an Electric Utility*, *16th Edition,* is the premier source for safety compliance information. It reviews topics such as employee training, protective equipment, control of hazardous materials, first-aid, etc. b. Ensure employees review and comply with the guidelines stated in the Safety Manual. c. Ensure employees are provided with the required safety gear and that they use the safety equipment (i.e. hard hats, fire-retardant clothing, gloves, eye wear, etc.) d. Reinforce the importance of safety with all staff and recognizing good safety performance. A practice frequently used at various utilities is to start each meeting with a “Safety Minute.” This entails that a person leading or attending the meeting, will dedicate a minute to make a statement about safety, such as wearing protective gear, emergency exits, etc. e. Ensure safety training is provided to all personnel per their job description. For example, field personnel require training to handle meters or wires, while office personnel will require training related to safety within an office. f. Define and implement safety metrics and goals that are relevant to Itta Bena and work with the City’s human resources staff to track the metrics. Examples of metrics frequently monitored at utilities include: ○ First aid cases ○ Recordable injuries/illnesses ○ Lost and restricted days ○ Worker’s compensation costs

Best Practices	Current Situation	Recommendations
		○ Property losses ○ Near misses regulatory fines ○ Training hours

Executive Report

ITTA BENA, MS

Electric Findings Report

February 12, 2019

UFS

Utility Financial Solutions, LLC

Specializing in Cost of Service, Rate Design, and Financial Analysis

February 12, 2019

Demetria "Dee" Jones
Hope Enterprise Corporation
546 MLK Blvd North
P.O. Box 573
Greenville, MS 38702-0573

Dear Ms. Jones:

We are pleased to present this executive summary report for the Electric Department of Itta Bena, MS. This report was prepared to provide Itta Bena with a summary of findings by examination of its existing financial statements, as well as current rate practices. The examination was based on limited information available and provided by Itta Bena. Financial data for the utility should be recorded similar to FERC over the next fiscal year, and the financial projection updated to ensure it is on track. In addition, a proper cost of service study should be completed once a full fiscal year of billing data and financial information is available.

Given the limited data, the specific purposes of this study are:

1) Determine projected electric utility's revenue requirements for fiscal year 2020
2) Recommend rate adjustments needed to work toward targeted revenue requirements
3) Examine current rate practices and offer improvements

This report includes results of the long-term financial projection based on known and estimated information. Any variances in projected capital, expense and revenues can greatly affect the overall financial health of the system and therefore should be monitored and updated frequently.

1) Recommended rate tracks are based on the utilities ability to work toward three factors listed below:
    a. Debt Coverage Ratio
    b. Minimum Cash Reserves
    c. Optimal Net Income

This report is intended for information and use by management and the Board of Directors for purposes stated above and is not intended to be used by anyone except the specified parties.

Sincerely,

Dawn Lund

Utility Financial Solutions, LLC
Dawn Lund
Vice-President

Electric Findings

This report was prepared to provide Itta Bena Electric with a long-term financial projection, rate track, and recommendations on current rate practices. A financial projection was prepared and the scope of this project is identified below:

1) ***Determine electric utility's revenue requirements for fiscal year 2020 (test year)***. The Electric Utility's revenue requirements were projected for the period from 2019 – 2024 and included adjustments for the following:
   a. Anticipated power costs. It does not appear retail rates have been reflective of the overall costs of the system as a past due amount of $30,000 each month is applied to the power supply bill and is included in the projection. The projection should be updated each year to reflect the actual and projected power supply costs and other expenses.
   b. Capital improvements currently underway and scheduled over next five years. The Capital plan was provided by Itta Bena through Atwell and Gent, P.A.

2) ***Recommend rate adjustments needed to meet targeted revenue requirements.*** The primary purpose of this study is to identify appropriate revenue requirements and the rate adjustments needed to work toward targeted revenue requirements. The report includes a long-term rate track for Itta Bena Electric to help ensure the financial stability of the utility in future years. The rate track was designed after evaluation of financial data provided, some assumptions were made during the analysis as data was limited. Financial information should be recorded in a manner similar to FERC over the next fiscal year, and the projection updated on a yearly basis with the budget process to ensure the projected is on track.

Hope Enterprises, through Hometown Connections, retained Utility Financial Solutions, LLC to review the above items and make recommendations on the appropriate course of action. This report includes results of the long-term financial projection.

Utility Revenue Requirements

Revenue requirements for Itta Bena Electric were projected for 2020 based on 2014 actual expenses (last date of audited statements and data available) and budget 2019. Revenues and expenses were analyzed with adjustments made to reflect projected operating characteristics. Detailed descriptions of the methodology are included in the section "Summary of Significant Assumptions". The table below is a summary of the financial projection based on the following assumptions:

	Projected FY2019	Projected FY2020	Projected FY2021	Projected FY2022	Projected FY2023	Projected FY2024
General Inflation Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Power Supply Inflation Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Growth	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interest on Investments	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%

Itta Bena's projected operating loss for 2020 is $(202,721) and under the target operating income of $68,006. Losses are projected to grow throughout the projection. Cash balances are at critical levels and projected to be negative. Bonds issues are needed in 2020 ($972,648) and 2022 ($648,432) to help fund the capital plan. The key financial targets are not being met without rate increases.

Table Two – Projected Financial Statements – Without Rate Adjustments

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Available Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
FY2019	**0.0%**	$ 1,651,329	$ 1,813,537	$ (162,208)	$ (175,552)	$ -	$ -	n/a
FY2020	**0.0%**	1,651,329	1,854,050	(202,721)	241,868	324,216	972,648	(9.80)
FY2021	**0.0%**	1,651,329	1,901,897	(250,569)	(405,446)	324,216	-	(3.10)
FY2022	**0.0%**	1,651,329	1,950,617	(299,289)	(454,465)	324,216	648,432	(3.01)
FY2023	**0.0%**	1,651,329	2,000,231	(348,902)	(1,226,779)	324,216	-	(2.42)
FY2024	**0.0%**	1,651,329	2,050,760	(399,432)	(2,036,655)	324,216	-	(2.70)
Recommended Target in FY2020				**$ 68,006**				**1.40**
Recommended Target in FY2024				**$ 106,839**				**1.40**
Recommended MINIMUM Target in FY2020					**$ 458,215**			
Recommended MINIMUM Target in FY2024					**$ 570,584**			

1. The five-year capital improvement plan was provided by Itta Bena Electric through Atwell and Gent, P.A.
2. Financial projections should be updated during the budgeting process each year. The financial data was limited to create the projection.
3. Additional assumptions were used in developing the financial projections. Please see summary of significant assumptions on page 9.

DEVELOPMENT OF RECOMMENDED RATE TRACK:

When evaluating rates to charge customers, three key factors must be considered:

1. Debt Coverage Ratio
2. Minimum Cash Reserves
3. Optimal Net Income

Each of these factors is discussed below:

1. **Debt Coverage Ratio -** Itta Bena Electric does not currently hold debt in the Electric Department. However, debt will need to be issued in the future if the capital plan materializes. Typical revenue bonds require a debt coverage ratio of 1.25. We recommend a minimum debt coverage ratio of 1.45 to allow for fluctuation in sales and help to achieve the following:

    a. Helps to ensure adequate funds are available to meet debt service payments in years when sales are low due to cold summers or loss of a major customer(s).
    b. Obtain higher bond rating, if revenue bonds are sold in the future, to lower interest cost.

Itta Bena is not projected to meet recommended ratios with the projected bond issuances.

Debt Coverage Ratio	Projected FY2019	Projected FY2020	Projected FY2021	Projected FY2022	Projected FY2023	Projected FY2024
Add Net Income	$ (267,952)	$ (329,896)	$ (399,021)	$ (460,690)	$ (523,074)	$ (571,091)
Add Depreciation Expense	92,400	98,884	111,853	124,822	137,790	150,759
Add Interest Expense	-	21,398	42,797	55,625	68,396	65,883
Cash Available for Debt Service	$ (175,552)	$ (209,613)	$ (244,372)	$ (280,244)	$ (316,889)	$ (354,450)
Debt Principal and Interest	$ -	$ 21,398	$ 78,726	$ 92,992	$ 131,210	$ 131,210
Projected Debt Coverage Ratio (Covenants)	**n/a**	**(9.80)**	**(3.10)**	**(3.01)**	**(2.42)**	**(2.70)**
Minimum Debt Coverage Ratio	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**	**1.45**

1) **Minimum Cash Reserve Target** - To help ensure timely completion of capital improvements and enable the utility to meet requirements for large unexpected expenditures, a minimum cash reserve policy should be established. Minimum cash reserves attempt to quantify the minimum amount of cash the utility should keep in reserve, actual cash reserves may vary substantially above the minimum and is dependent on the life cycle of assets that are currently in service. The methodology used in this report is based on certain assumptions related to percent of operation and maintenance, rate base, capital improvements, and debt service. The establishment of minimum cash reserves should consider a number factors including:

- **Working Capital Lag** - Timing differences between when expenses are incurred and revenues received from customers. Establishing a minimum cash reserve helps to ensure cash exists to pay expenses in a timely manner.
- **Investment in assets** – Catastrophic events may occur that require substantial amounts of cash reserves to replace damaged assets. Some examples of catastrophic events include ice storms, earthquakes, wind storms, floods, or tornadoes. Many of these catastrophic events may allow the utility to recover the cost of damages from FEMA; however FEMA reimbursements can take between 6 months to 2 years to recover. The utility should ensure adequate cash reserves exist to replace the assets in a timely fashion. The minimum reserve levels are often combined with emergency funding from banks or bonding agencies.
- **Annual debt service** – Debt service payments do not occur evenly throughout the year and often occurs at periodic times typically every six months. The utility has to ensure adequate cash reserves exist to fund the debt service payment when the payment is due.
- **Capital improvement program** – Some capital improvements are funded through bond issuances and some through cash reserves. The establishment of a minimum cash reserve level helps to ensure timely replacement or construction of assets.

The minimum recommended cash reserve for Itta Bena Electric is approximately $500,000. Current cash balances are at critical levels and bonds issues are needed in 2020 ($972,648) and 2022 ($648,432) to help fund the capital plan should it materialize. Table four on the next page provides the minimum cash reserve calculation.

Table Four – Minimum Cash Reserves – Fiscal Year Ending 2020 – 2024

	Percent Allocated	Projected FY2020	Projected FY2021	Projected FY2022	Projected FY2023	Projected FY2024
O&M Less Depreciation & P/S Expense	**12.3%**	$ 77,595	$ 78,425	$ 79,276	$ 80,148	$ 81,042
Annual Power Supply Expense	**12.3%**	222,868	227,090	231,417	235,853	240,399
Historical Rate Base	**2%**	79,026	88,753	98,479	108,206	117,932
Electric Portion of Debt Service	**100%**	78,726	92,992	131,210	131,210	131,210
Five Year Capital Improvements - Net of bond proceeds	**20%**	-	-	-	-	-
Recommended Minimum Cash Reserve		**$ 458,215**	**$ 487,259**	**$ 540,382**	**$ 555,417**	**$ 570,584**
Projected Cash Reserves		**$ 241,868**	**$ (405,446)**	**$ (454,465)**	**$ (1,226,779)**	**$ (2,036,655)**

Cash reserves are critical fall below recommended minimum targets throughout the projection.

Notes:

1. Operation and maintenance expenses exclude purchased power costs and exclude depreciation expense.
2. Rate base is historical investment in plant and equipment
3. Five-year capital is budgeted capital improvements for next five years and excludes capital improvements funded through debt issuances of 2020 ($972,648) and 2022 ($648,432) and included in the cash balance.

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2) Optimal operating income targets - The optimal target for setting rates is the establishment of a target operating income to help ensure the following:

1. Funding of Interest Expense on the outstanding principal on debt. Interest expense is below the operating income line and needs to be recouped through the operating income balance.
2. Funding of the inflationary increase on the assets invested in the system. The inflation on the replacement of assets invested in the utility should be recouped through the Operating Income
3. Adequate rate of return on investment to help ensure current customers are paying their fair share of the use of the infrastructure and not deferring the charge to future generations.

As improvements are made to the system, the optimal operating income target will increase unless annual depreciation expense is greater than yearly capital improvements. The target established for 2020 is $68,006 and losses are projected throughout the period.

Table Five - Optimal Operating Income Targets Compared to Projected

	Percent Allocated	Projected FY2020	Projected FY2021	Projected FY2022	Projected FY2023	Projected FY2024
Interest Expense On Debt allocated to Electric	0.0%	$ 21,398	$ 42,797	$ 55,625	$ 68,396	$ 65,883
Inflationary Inrease on Asset Investment	6.4%	46,608	36,069	9,722	25,673	40,956
Target Operating Income		**$ 68,006**	**$ 78,865**	**$ 65,347**	**$ 94,069**	**$ 106,839**
Projected Operating Income		**$ (202,721)**	**$ (250,569)**	**$ (299,289)**	**$ (348,902)**	**$ (399,432)**
Rate of Return in %		**5.3%**	**5.3%**	**3.8%**	**5.0%**	**5.2%**

Itta Bena Electric is projected to fall below optimal targeted operating income levels throughout the projection period.

Suggested Rate Track

The study identifies minimum rate increases of 9.9% in FY 2020 - 2022 as well as inflationary increases thereafter, are needed to work toward financial health. Rate increases could be immediately implemented, but the system fiscal year end is June, so the test year of the study will reflect a full fiscal year 2020. The rate track was determined trying to keep the rate track as low as possible, yet working toward targets over time. The debt coverage ratio and the cash balances are driving the rate recommendation. Should the capital plan change, the rate track and bonding could change significantly. Financial data was very limited; the projection should be updated frequently to ensure the rate track is sufficient. Table Eight is a summary of the financial results with the suggested rate adjustments.

Table Eight – Suggested Rate Adjustments

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Available Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
FY2019	**0.0%**	$ 1,651,329	$ 1,813,537	$ (162,208)	$ (175,552)	$ -	$ -	n/a
FY2020	**9.9%**	1,811,319	1,854,050	(42,731)	401,858	324,216	972,648	(2.32)
FY2021	**9.9%**	1,987,148	1,901,897	85,251	90,445	324,216	-	1.16
FY2022	**9.9%**	2,180,385	1,950,617	229,768	570,527	324,216	648,432	2.68
FY2023	**2.5%**	2,234,013	2,000,231	233,782	381,182	324,216	-	2.03
FY2024	**2.5%**	2,288,982	2,050,760	238,221	209,150	324,216	-	2.16
Recommended Target in FY2020				**$ 68,006**				**1.45**
Recommended Target in FY2024				**$ 106,839**				**1.45**
Recommended MINIMUM Target in FY2020					**$ 458,215**			
Recommended MINIMUM Target in FY2024					**$ 570,584**			

Significant Assumptions

This section outlines the significant assumptions for Itta Bena electric study.

Forecasted Operating Expenses

Forecasted expenses were based on 2014 (last actual audit) and budget 2019 adjusted for inflation.

Power Supply

Power supply costs were provided by Itta Bena Electric. It does not appear retail rates have been reflective of the overall costs of the system as a past due amount of $30,000 each month is applied to the power supply bill and is included in the projection. The projection should be updated frequently to reflect the actual and projected power supply costs.

Sales Forecast

0% Growth was used throughout the projection.

Revenue Forecast

The revenue forecast was based on actual 2014 (last actual audit and available financial information) and Budget 2019.

Capital Improvement Program

The capital improvement program was provided by Itta Bena Electric through Atwell and Gent, P.A. $1.621 million is projected to be spent over the next five years. The capital program was allocated at $324,216 per year to reflect the total.

Fiscal Year	Capital Improvements
FY2019	$ -
FY2020	324,216
FY2021	324,216
FY2022	324,216
FY2023	324,216
FY2024	324,216

Summary of Findings

1) The projection indicates current revenues are not adequate to maintain the long-term financial health of the Utility. Minimum rate increases of 9.9% in FY 2020 - 2022 as well as inflationary increases thereafter, are needed to work toward financial health. The rate track was determined trying to keep the rate track as low as possible, while working toward targets over time. The debt coverage ratio and the cash balances are driving the rate recommendation. Should the capital plan change, the rate track and bonding could change significantly. Financial data was very limited; the projection should be updated frequently to ensure the rate track is sufficient.

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Available Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
FY2019	**0.0%**	$ 1,651,329	$ 1,813,537	$ (162,208)	$ (175,552)	$ -	$ -	n/a
FY2020	**9.9%**	1,811,319	1,854,050	(42,731)	401,858	324,216	972,648	(2.32)
FY2021	**9.9%**	1,987,148	1,901,897	85,251	90,445	324,216	-	1.16
FY2022	**9.9%**	2,180,385	1,950,617	229,768	570,527	324,216	648,432	2.68
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FY2024	**2.5%**	2,288,982	2,050,760	238,221	209,150	324,216	-	2.16
Recommended Target in FY2020				**$ 68,006**				**1.45**
Recommended Target in FY2024				**$ 106,839**				**1.45**
Recommended MINIMUM Target in FY2020					**$ 458,215**			
Recommended MINIMUM Target in FY2024					**$ 570,584**			

2) Financial data for the utility should be recorded similar to FERC over the next fiscal year, and the financial projection updated to ensure it is on track. In addition, a proper cost of service study should be completed once a full fiscal year of billing data and financial information is available.

3) A cash reserve policy should be considered based on the formula below.

	Percent Allocated	Projected FY2020	Projected FY2021	Projected FY2022	Projected FY2023	Projected FY2024
O&M Less Depreciation & P/S Expense	**12.3%**	$ 77,595	$ 78,425	$ 79,276	$ 80,148	$ 81,042
Annual Power Supply Expense	**12.3%**	222,868	227,090	231,417	235,853	240,399
Historical Rate Base	**2%**	79,026	88,753	98,479	108,206	117,932
Electric Portion of Debt Service	**100%**	78,726	92,992	131,210	131,210	131,210
Five Year Capital Improvements - Net of bond proceeds	**20%**	-	-	-	-	-
Recommended Minimum Cash Reserve		**$ 458,215**	**$ 487,259**	**$ 540,382**	**$ 555,417**	**$ 570,584**

City of Itta Bena
Electric System Study
& Construction Work Plan

September 28, 2018

Prepared for:

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Executive Summary

BACKGROUND

The City of Itta Bena ("CITY") provides electric service to residential, commercial, and industrial customers in the City of Itta Bena, Mississippi. Power is purchased by the CITY from the Municipal Energy Agency of Mississippi ("MEAM") at 13,200 volts at Delta EPA's 115/13.2 KV Itta Bena Substation.

Power is distributed at 13.2 kV via one CITY-owned substation oil circuit breaker ("OCB") located at Delta EPA's Itta Bena 115/13.2 kV Substation. This 13.2 kV OCB and associated 13.2 kV feeder circuit serves several large electrical loads within the City and also serves the CITY's 13/4 kV substation. The CITY's 4 kV substation has six 4 kV circuit breakers/electronic reclosers and associated 4 kV feeder circuits which distribute power to the vast majority of the City's electric consumers.

The highest demand on the system in the previous two year period prior to the date of this report was 3,900 KW. This peak occurred in June 2018.

PURPOSE OF STUDY

The Electric System Assessment ("ESA") included in this Study is intended to provide a high-level assessment of the CITY's medium-voltage electric system. This ESA provides a visual assessment and evaluation of CITY's existing 13 kV and 4 kV electrical distribution systems and related electrical equipment.

The Construction Work Plan ("CWP") included in this Study is intended to provide a detailed study of CITY's 13 kV and 4 kV electric systems. The 2019 CWP documents the engineering analysis and proposed system improvements required for CITY to provide satisfactory and reliable service to its customers.

Atwell & Gent, P.A. ("Consultant") was retained by Hope Enterprise Corporation to assist the CITY in the preparation of the Study, ESA and CWP. The Study includes descriptions, estimated costs, and justification of required maintenance activities and facility improvements.

SUMMARY

The CITY's 13 kV to 4 kV substation and 4 kV electric distribution systems are obsolete, operating far beyond their useful life, and should be replaced with new 13 kV facilities. In the Consultant's opinion, it makes little sense to renovate or replace the CITY's existing 4 kV substation or 4 kV electric distribution feeder circuits.

Additionally, the topology of the CITY's electric system is problematic. A single event (OCB failure, cable failure, vehicle hits pole, etc.) on the CITY's 13.2 kV feeder circuit will result in the total loss of power to the CITY's electric system. Existing 4 kV feeder circuits cannot be tied because switches have been removed, jumpers cut at open points, phase conductors removed, or phasing between these circuits has been modified so that adjacent circuits are out of phase. As such, a single event (circuit breaker failure, vehicle hits pole, wire down, etc.) on any of the CITY's six (6) 4 kV feeder circuits will result in the total loss of power to the entire 4kV feeder circuit.

Likewise, the operation and maintenance of the CITY's electric system is severely lacking. The CITY's electric system right-of-way clearing is in poor condition. Inadequate tree trimming causes numerous outages and creates unnecessary stresses (due to fault currents) on the electric system as a whole. Numerous poles and crossarms are in need of replacements. There is no evidence that the substation circuit breakers have been maintained or tested anytime since 1999 (last test tag observed in circuit breakers). DC tripping for the six (6) 4 kV circuit breakers are supplied by two automotive batteries located outdoors in battery storage box. DC tripping power to each circuit breaker is supplied using what appears to be lamp cord fished through the access door of each circuit breaker. Five (5) of the six (6) 4 kV circuit breakers do not automatically reclose and must be closed manually. As such, these 4 kV feeder circuits trip and do not reclose for temporary faults (lightning, limb dropping, etc.). Since studies indicate that temporary faults account for more than 80% of all system faults, the CITY's consumers are experiencing an unnecessary number of permanent outages.

Because required maintenance and repair activities can be implemented more quickly than renovations and replacements, we have provided both short-term (maintenance) and long-term (replacements and renovations) recommendations.

SHORT-TERM RECOMMENDATIONS (MAINTENANCE)

The Consultant recommends that the CITY accomplish the following items as soon as possible:

- Commence right-of-way clearing operations. We recommend that right-of-way clearing be performed by an outside contractor.
- Replace existing poles and crossarms which are deemed to be critical in nature as soon as possible. We recommend that these maintenance activities be performed by an outside contractor concurrent with tree trimming activities.
- Maintain and test substation circuit breakers. We recommend that these maintenance activities be performed by an outside contractor prior to any tree trimming or maintenance activities.
- Replace or test existing electric revenue metering and review utility billing practices.

Each of these short-term recommendation items are discussed in detailed in Section 4. Estimates of probable cost for each item are included on the following page.

Short-Term Recommendations

Item	Description	Estimate of Probable Cost
1	Right-of-Way Clearing and Tree Trimming	$312,000
2	Pole Replacements and Repairs	$128,000
3	Substation Maintenance	$30,000
4	Revenue Metering Testing & Replacements	$TBD
	Total Costs of All Short-Term Recommendations	**$470,000**

LONG-TERM RECOMMENDATIONS (REPLACEMENTS AND RENOVATIONS)

The Consultant recommends that the CITY accomplish the following items as soon as is reasonably practicable:

- Replace CITY's existing 15 kV oil circuit breaker at Delta EPA's 115/13 kV Substation with a new 15 kV vacuum circuit breaker.
- Install new underground 13 kV feed from CITY's circuit breaker at Delta EPA's 115/13 kV substation. Make existing cables spare in case of cable or cable termination failure.
- Reconductor approximately 0.7 miles of existing 13 kV Feeder Circuit #214 from #2/0 ACSR to 336.4 kCMIL ACSR.
- Convert CITY's existing 4 kV Feeder Circuit #114 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #124 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #134 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #144 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #154 from 4 kV to 13 kV.
- Convert CITY's existing 4 kV Feeder Circuit #164 from 4 kV to 13 kV.
- Disconnect and retire the CITY's existing 13/4 kV substation.
- Install sectionalizing and protective devices as recommended in the CWP.
- Replace existing 167 kVA voltage regulators on 13 kV Feeder Circuit #214 with new 250 kVA voltage regulators.
- Install fixed and switched capacitors as recommended in the CWP.

Each of these CWP items are discussed in detailed in Section 7. Estimates of probable cost for each CWP item are included below.

Long-Term Recommendations

Item	Description	Estimate of Probable Cost
SUB-1	Replace CITY's 13 kV Oil Circuit Breaker with new 15 kV Vacuum Circuit Breaker at Delta EPA's 115/13 kV Substation	$30,000
SUB-2	Disconnect and Retire the CITY's 13/4 kV Substation	$50,000
FC-1	Replace Existing 13 kV Underground Cables between CITY's 13 kV VCB and Existing 13 kV Feeder Circuit #214	$34,000
FC-2	Reconductor 0.7 miles of CITY's Existing 13 kV Feeder Circuit #214	$145,000
FC-3	Convert Feeder Circuit #114 from 4 kV to 13 kV	$222,570
FC-4	Convert Feeder Circuit #124 from 4 kV to 13 kV	$117,570
FC-5	Convert Feeder Circuit #134 from 4 kV to 13 kV	$46,560
FC-6	Convert Feeder Circuit #144 from 4 kV to 13 kV	$50,910
FC-7	Convert Feeder Circuit #154 from 4 kV to 13 kV	$216,270
FC-8	Convert Feeder Circuit #164 from 4 kV to 13 kV	$94,200
S-1	Feeder Circuit #214 Sectionalizing Improvements	$80,000
VR-1	Feeder Circuit #214 Voltage Regulation Improvements	$50,000
CAP-1	Feeder Circuit #214 Power Factor Improvements	$14,000
	Total Cost of All Long Term Recommendations	**$1,151,080**

Section 1

Introduction

1.1 BACKGROUND

The City of Itta Bena ("CITY") provides electric service to residential, commercial, and industrial customers in the City of Itta Bena, Mississippi. Power is purchased by the CITY from the Municipal Energy Agency of Mississippi (MEAM) at 13,200 volts at Delta EPA's 115/13.2 KV Itta Bena Substation.

Power is distributed at 13.2 kV via one CITY-owned substation oil circuit breaker ("VCB") located at Delta EPA's Itta Bena 115/13.2 kV Substation. This 13.2 kV OCB and associated feeder circuit serves major load in the City as well as Itta Bena's 13/4 kV substation. The CITY's 4 kV substation has six 4 kV circuit breakers/electronic reclosers and associated 4 kV feeder circuits which distribute power to the vast majority of the City's electric consumers.

1.2 PURPOSE OF STUDY

The Electric System Assessment ("ESA") is intended to provide a high-level assessment of the CITY's medium-voltage electric system.

This ESA provides a visual assessment and evaluation of CITY's existing 13 kV and 4 kV electrical distribution systems and related electrical equipment. The ESA also provides an overall electric system map for the CITY's existing 13 kV and 4 kV electrical systems. It is noted that visual inspection is limited to viewing items that could be readily accessible without hazard or the need for electrical outages.

The 2019 CWP documents the engineering analysis and proposed system improvements required for CITY to provide satisfactory and reliable service to its customers. The CWP includes descriptions, estimated costs, and justification of required new facilities and facility improvements.

Atwell & Gent, P.A. ("Consultant") was retained by Hope Enterprise Corporation to assist the CITY in the preparation of the overall Study, ESA and CWP.

1.3 BACKGROUND INFORMATION

This ESA includes the following relevant background information which will aid the reader in understanding ESA recommendations:

- Basis of Electric System Assessment: Review of the basis of the ESA and provides the basis of recommendations made in this ESA. Refer to Section 2 for further details.
- Latest Utility Construction Practices: Review of the present use of 4 kV electrical systems and overhead and underground construction practices. Refer to Section 3 for further details.

1.4 KEY OBJECTIVES

The assessment of CITY's existing 13 kV and 4 kV electrical systems and the presentation of recommendations are based on the following key objectives:

- Ease of Operation: Up to date maps of CITY's medium-voltage electric system are available for both routine and emergency switching operations. Switches are clearly identified by number or other nomenclature.
- Reliability: Outages on any particular 13 kV or 4 kV circuit should be minimized to the greatest extent possible by utilizing proper sectionalizing and protection schemes
- Operational Flexibility: CITY's 13 kV and 4 kV electrical distribution systems should provide maximum flexibility under both normal and contingency conditions at peak electrical demand and should also be designed to facilitate installation of future loads without replacement of major electrical components.
- Maintenance: CITY's 13 kV and 4 kV electrical distribution systems should be properly maintained in order to maximize the life span of electrical equipment and systems. These systems should also be designed and configured to allow for ease of routine operation, maintenance and testing.

Section 2

Basis of Electric System Assessment

2.1 SUMMARY

This section reviews the basis of the ESA and provides the basis of recommendations made in this ESA.

2.2 VISUAL ASSESSMENT OF CONDITION OF EQUIPMENT

Subjective visual determinations relating to the condition of the equipment have been made, but major medium-voltage components such as transformers, circuit breakers, reclosers, switches, fuses and cables, etc. being energized and in use prevented a more detailed inspection. Primary evaluation criteria that were used in making visual assessments follow:

- Age of Electrical Equipment and Availability of Replacement Parts: Is equipment beyond its expected service life of 40 years? Older equipment is usually more maintenance intensive and often harder to keep operational due to the lack of availability of spare parts.
- Physical Condition of Electrical Equipment: Is equipment in good physical and electrical repair? Has equipment been routinely maintained, tested and operated?
- Reliability: Is the system configured to minimize outages on any particular 13 kV or 4 kV circuit to the greatest extent possible by utilizing proper sectionalizing and protection schemes?
- Ease of Operation: Can the medium-voltage electric system be easily operated and maintained using available up-to-date system maps and field identification and tagging?
- Operational Flexibility: Can the medium-voltage electrical system be readily switched and reconfigured in case of a contingency event or as required for routine testing and maintenance? Can the electric system facilitate installation of future loads without replacement of major electrical components?

Section 3

Latest Utility Construction Practices

3.1 SUMMARY

This section reviews widespread present-day utility construction practices for underground medium-voltage systems and how they relate to CITY's existing 13 kV and 4 kV electric distribution systems and any planned future additions, renovations and improvements to these systems.

3.2 4 kV ELECTRICAL SYSTEMS

Prior to World War II, most urban electrical systems operated at 4 kV. With the advent of air conditioning, these 4 kV systems rapidly became overloaded, wires sagged or melted, and substation circuit breaker and transformers failed. Because there is a linear relationship between the capability of a device to transit power and voltage level (P=3*VLN*I, where P=power, VLN=line-to-neutral voltage and I= current), increasing the distribution level from 4 kV to 13 kV provides a nearly 300% increase in the capacity to transit power over the same size cable or conductor. For this reason, virtually all electric utilities increased the nominal primary system voltages to much higher levels (e.g. 13 kV, 25 kV, 35 kV) to eliminate these issues. Today, 4 kV electric distribution systems are extremely rare and in almost all cases, obsolete. Replacement equipment is difficult to find.

3.3 SUBSTATION FACILITIES

Typically, most utility substation and step-down stations have sufficient transformer and circuit breaker capacity either within the station or through medium-voltage distribution circuit ties with other stations so that any single point of failure (e.g. transformer failure, circuit breaker failure, extended loss of utility, etc.) can be easily isolated and power restored to all of the buildings or facilities on the loop.

Step down stations without redundancy are avoided because repair of station equipment failures can be very time consuming compared to restoration of repair of other distribution failures (hours versus days). Oftentimes, and especially with 4 kV equipment, spare transformer units are very difficult to find and even more difficult to get on site.

3.4 OVERHEAD DISTRIBUTION TOPOLOGY

Presently, most utilities construct overhead feeder circuits in a looped configuration. These circuits are sized so that any single point of failure such as a broken pole or wire down can be easily isolated, and power restored to the majority of the customers served from the circuit.

3.5 UNDERGROUND DISTRIBUTION TOPOLOGY

Presently, virtually all utilities construct underground medium-voltage distribution circuits which serve multiple buildings or facilities in a looped configuration.

Additionally, cable and equipment are sized such that any single point of failure such as a cable or cable termination failure can be easily isolated and power restored to all of the buildings or facilities on the loop. Radial medium-voltage distribution circuits serving multiple buildings or facilities are avoided because repair of underground distribution failures can be very time consuming compared to restoration of repair of overhead distribution failures (hours versus days).

Additionally, utilities avoid having medium-voltage circuit loops originate at the same point in order to avoid the possibility of a single point of failure at the origination/termination point taking down the entire loop until such time as the failure is repaired.

Electric System Assessment

4.1 BACKGROUND

Atwell & Gent has conducted an electric system assessment ("ESA") of the CITY's 13 kV and 4 kV medium-voltage electric systems. This section includes a summary of findings from our assessment and helps provide the basis for this CWP and its recommendations.

4.2 UTILITY SUPPLY

Power is purchased by the CITY from the Municipal Energy Agency of Mississippi (MEAM) at 13,200 volts at Delta EPA's 115/13.2 KV Itta Bena Substation. Power is distributed at 13.2 kV via one CITY-owned substation oil circuit breaker ("OCB") located at Delta EPA's Itta Bena 115/13.2 kV Substation. This 13.2 kV OCB and associated feeder circuit serves major load in the City as well as Itta Bena's 13/4 kV substation. The CITY's 4 kV substation has six (6) 4 kV circuit breakers/electronic reclosers and associated 4 kV feeder circuits which distribute power to the vast majority of the City's electric consumers.

4.3 SYSTEM CAPACITY – 13 kV/4 kV STEP-DOWN STATIONS

The total installed 13 kV-4 kV transformer firm capacity for the CITY's electric system is approximately 3,750 kVA. The firm capacity of the CITY electric system is the total substation transformer capacity, less the capacity of the largest transformer. The total transformer capacity of the system must be such that the system can carry the peak load even if the largest transformer fails.

4.4 SYSTEM CAPACITY – 13 kV ELECTRIC DISTRIBUTION SYSTEM

The CITY's existing 13.2 kV feeder circuit and associated voltage regulators are presently operating at or very near maximum capacity and cannot serve increased or new electrical loads. The 13 kV feeder circuit is constrained by sections of #2/0 ACSR overhead conductors, which have maximum capacity of approximately 4,600 kVA at 13kV, and existing 167 kVA voltage regulators, which have a maximum capacity of approximately 5,000 kVA.

4.5 SYSTEM CAPACITY – 4 kV ELECTRIC DISTRIBUTION SYSTEM

The overwhelming majority of CITY's customers are served at 4 kV. 4 kV electric systems are limited in their ability to accept increased or new electrical loads, because small increases in electrical demand create large increases in loading on the affected 4 kV distribution loop. Most of the CITY's 4 kV feeder circuits are constrained by sections of #2 ACSR overhead conductors, which have maximum capacity of approximately 1,000 kVA at 4 kV.

4.6 SYSTEM POWER FACTOR

For the 12-month billing history reviewed in the ESA, it appears that CITY averages a system power factor of approximately 0.91 at system peak. Because good engineering practice and economics recommends that the CITY maintain a minimum 0.95 power factor at peak, CITY is incurring excess system losses during summer months because of poor power factor.

4.7 SELECTIVE COORDINATION

While actual verification of fuse sizes was impossible because all electrical equipment is energized and being used, based on field observations it appears very likely that few if any of the CITY 4 kV feeder circuits are selectively coordinated. The system seems to utilize a hodgepodge of circuit breakers (stations) and expulsion fuses. To exacerbate the problem, because the preponderance of CITY's electric distribution facilities operates at 4 KV, fuse sizes must be so large to carry load current that selective coordination utilizing expulsion fuses would be difficult, even under ideal circumstances.

4.8 AGE & CONDITION OF EQUIPMENT

Generally, most 4 KV electric distribution utility systems are obsolescent due to both the age and poor maintenance practices. The CITY's step-down station appears to be 50+ years old and is in generally poor repair. No sign of routine maintenance or testing is evident. Virtually all of the CITY's 4 kV distribution system's equipment, transformers, meters, etc. are operating well beyond their expected life span.

4.9 RELIABILITY AND OPERATIONAL FLEXIBILITY

The majority of CITY's 4 kV electric system is obsolete and operating well beyond it service life. Additionally, most of the CITY's 4 kV electric system is incapable of serving additional load for either new construction or for a contingency event such an equipment failure.

4.10 ELECTRIC SYSTEM TOPOLOGY

In several key locations, the network topology is problematic in the event of equipment failure. For example, the 13 kV feeder circuit is fed from Delta EPA's substation via a single substation OCB and radial underground 13 kV cable run. In the event of failure of the substation OCB or 13 kV underground cables run, (e.g. cable or cable termination failure, etc.) the City would be without power indefinitely.

The topology of the CITY's electric system is problematic. A single event (OCB failure, cable failure, vehicle hits pole, etc.) on the CITY's 13.2 kV feeder circuit will result in the total loss of power to the CITY's electric system until such time as repairs could be made.

The CITY's existing 4 kV feeder circuits cannot be tied because switches have been removed, jumpers cut at open points, phase conductors removed, or phasing between these circuits has been modified so that adjacent circuits are out of phase. As such, a single event (circuit breaker failure, vehicle hits pole, wire down, etc.) on any of the CITY's six (6) 4 feeder circuits will result in the total loss of power to the entire 4kV feeder circuit.

4.11 SOUTH (DELTA EPA) 115/13 kV SUBSTATION

Power is purchased by the CITY from the Municipal Energy Agency of Mississippi ("MEAM") at 13,200 volts at Delta EPA's 115/13.2 KV Itta Bena Substation. Power is distributed at 13.2 kV via one CITY-owned substation oil circuit breaker ("OCB") located at Delta EPA's Itta Bena 115/13.2 kV Substation. The CITY's electrical facilities at this station consists of one (1) 15 kV oil circuit breaker, 15 kV riser, underground aluminum underground cables, and a riser pole located just north of the substation.

The 13 kV OCB is approximately 50 years old and is in poor repair. There is no evidence of recent electrical testing or maintenance.

4.12 NORTH (CITY) 13/4 kV SUBSTATION

The CITY's North 13/4 kV Substation is located just north of the railroad on Dewey Street. The North Substation is fed by the CITY via one radial overhead 13.2 kV feeder circuit supplied from the North (Delta EPA) Substation. Power is transformed to 4 kV and then distributed at 4 kV via the CITY's 4 kV Feeder Circuits #114, #124, #134, #144, #154 and #164.

The station consists of one (1) 3,750 kVA three-phase power transformer, five (1) 4 kV electronic reclosers, and one (1) 4 kV oil circuit breaker.

The 3,750 kVA 13/4 kV power transformer is 11+ years old. Based on field interviews and visual inspection, no routine maintenance or testing has been performed on the power transformer, such as electrical testing, insulating oil-testing, or dissolved gas analysis.

Three (3) single-phase 1,250 kVA spare power transformers are in place in case of transformer failure or for required routine maintenance and testing. It appears these transformers were reworked in 2009.

All five (5) 4 kV electronic reclosers are approximately 40 years old. The one (1) 4 kV oil circuit breaker is 69 years old. Based on field interviews and visual inspection, no routine maintenance or testing has been performed on the power transformer, such as electrical testing, insulating oil-testing, or dissolved gas analysis.

DC tripping for the six (6) 4 kV circuit breakers are supplied by two automotive batteries located outdoors in battery storage box. DC tripping power to each circuit breaker is supplied using what appears to be lamp cord fished through the access door of each circuit breaker.

Five (5) of the six (6) 4 kV circuit breakers/electronic reclosers do not automatically reclose and must be closed manually. As such, these 4 kV feeder circuits trip and do not reclose for temporary faults (lightning, limb dropping, etc.). Since studies indicate that temporary faults account for more than 80% of all system faults, the CITY's consumers are experiencing unnecessary number of permanent outages.

Electrical clearances to existing circuit breakers do not meet NESC requirements. Hot parts of 4kV electronic reclosers appear to be approximately 6'-6" above finished grade. **These clearances create a hazard for operating personnel.**

Generally, the substation is in poor repair and **desperately** requires routine repairs and testing until such time as the station can be retired. Refer to Appendix G for recommended O&M practices.

4.13 13 kV FEEDER CIRCUIT #214

13kV Feeder Circuit #214 is radially in nature and originates from the South (Delta EPA) 115/13 kV Substation. Because this feeder circuit is not looped, in event of an equipment failure, underground cable or cable termination failure, broken pole, wire down, etc. the entire feeder circuit will be out of service until repairs are completed.

4.14 4 kV FEEDER CIRCUIT #114

4kV Feeder Circuit #114 is radially in nature and originates from the CITY's 13/4 kV Substation. Because this feeder circuit is not looped, in event of an equipment failure, broken pole, wire down, etc. the entire feeder circuit will be out of service until repairs are completed.

Generally, the feeder is in poor repair and requires routine repairs and replacements. Refer to Appendix G for recommended O&M practices.

4.15 4 kV FEEDER CIRCUIT #124

4kV Feeder Circuit #124 is radially in nature and originates from the CITY's 13/4 kV Substation. Because this feeder circuit is not looped, in event of an equipment failure, broken pole, wire down, etc. the entire feeder circuit will be out of service until repairs are completed.

Generally, the feeder is in poor repair and requires routine repairs and replacements. Refer to Appendix G for recommended O&M practices.

4.16 4 kV FEEDER CIRCUIT #134

4kV Feeder Circuit #134 is radially in nature and originates from the CITY's 13/4 kV Substation. Because this feeder circuit is not looped, in event of an equipment failure, broken pole, wire down, etc. the entire feeder circuit will be out of service until repairs are completed.

Generally, the feeder is in poor repair and requires routine repairs and replacements. Refer to Appendix G for recommended O&M practices.

4.17 4 kV FEEDER CIRCUIT #144

4kV Feeder Circuit #144 is radially in nature and originates from the CITY's 13/4 kV Substation. Because this feeder circuit is not looped, in event of an equipment failure, broken pole, wire down, etc. the entire feeder circuit will be out of service until repairs are completed.

Generally, the feeder is in poor repair and requires routine repairs and replacements. Refer to Appendix G for recommended O&M practices.

4.18 4 kV FEEDER CIRCUIT #154

4kV Feeder Circuit #124 is radially in nature and originates from the CITY's 13/4 kV Substation. Because this feeder circuit is not looped, in event of an equipment failure, broken pole, wire down, etc. the entire feeder circuit will be out of service until repairs are completed.

Generally, the feeder is in poor repair and requires routine repairs and replacements. Refer to Appendix G for recommended O&M practices.

4.19 4 kV FEEDER CIRCUIT #164

4kV Feeder Circuit #124 is radially in nature and originates from the CITY's 13/4 kV Substation. Because this feeder circuit is not looped, in event of an equipment failure, broken pole, wire down, etc. the entire feeder circuit will be out of service until repairs are completed.

Generally, the feeder is in poor repair and requires routine repairs and replacements. Refer to Appendix G for recommended O&M practices.

4.20 RIGHT-OF-WAY CLEARING

The CITY's electric system right-of-way clearing is in poor condition and <u>desperately</u> requires routine trimming. Inadequate tree trimming exacerbates system outages and creates unnecessary stresses (due to fault currents) on the electric system as a whole. Refer to Appendix G for recommended O&M practices.

Section 5

Basis of Study

5.1 SUMMARY

This section reviews the basis of the CWP and provides the basis of recommendations made in this CWP.

5.2 ELECTRIC SYSTEM MODEL

The CITY's electric system was modeled on Milsoft's Windmill Power System Modeling, Simulation, Design, Analysis, Planning & Optimization software. Load data was obtained from CITY's billing history and from field readings made by Consultant's personnel at various locations during times of system peak loading. Load-flows were prepared to provide information such as the percent conductor loading to its capacity, calculated line losses, power factor information, and voltage drop along line sections. The load-flow and voltage drop data from the computer model was compared to the criteria outlined in this report. Recommendations made were based on these results.

5.3 MINIMUM SYSTEM PERFORMANCE CRITERIA

In order to ensure of adequacy of voltages, thermal loading, safety, and reliability on the electric system, CITY's 13 kV and 4 kV electric distribution systems should meet the following minimum requirements:

- <u>Equipment Thermal Loading</u>: CITY's 13 kV and 4 kV electrical equipment should not be thermally loaded more than 80% for normal system operations or more than 100% for a single contingency (N-1) event (e.g. one 13 kV feeder circuit out of service, etc.).
- <u>Circuit Thermal Loading</u>: Looped 13 kV and 4 kV feeder circuits should not be loaded beyond approximately 50% of their summer rating. All other 13 kV and 4 KV feeder circuits should be not be loaded beyond 80% of their summer rating.
- <u>Circuit Voltage</u>: The maximum voltage drop on primary distribution lines shall not exceed 6 volts after regulation on a 120 volt base during peak summer loading, including the effect of voltage re-regulation.
- <u>Circuit Power Factor</u>: The reactive demand on the CITY system should not be less than 95% power factor during peak summer loading.
- <u>Protective Device Selectivity</u>: Protective devices should operate in a manner to trip the minimum circuits or equipment to isolate the fault. Coordination is required with the adjacent and upstream protection devices. Adequate separation between fault clearing and minimum trip times of upstream and downstream protective devices is required to eliminate misoperation of protective devices.
- <u>Protective Device Speed of Operation</u>: Protective devices should minimize fault duration and consequent equipment damage to the greatest extent practical.

- Protective Device Ratings: Protective devices should be capable of sensing and interrupting fault conditions without imposing limitations on the protective device's ability for cold-load and non-coincident demand load restoration. Protective devices shall be rated to interrupt maximum available fault current.
- Distribution Circuits: To ensure adequate system protection, every point on the distribution system shall be within the protective zone of a protective device. The extent of the protective zone is that distance that will satisfy the following conditions:
  - The maximum available three-phase fault current at the extremity of the protective zone (or at the downline device) must be greater than the phase-current-sensing minimum trip of the source-side device multiplied by a multiplier of 2.
  - The phase-to-ground restricted fault current (with 30 ohm impedance for overhead circuits and 10 ohms for underground circuits) at the extremity of the protective zone (or at the downline device) must be greater than the ground-current-sensing minimum trip of the source-side device.

5.4 SYSTEM OUTAGES & RELIABILITY

The Rural Utilities Service (RUS) recommends that annual system-wide outage hours average less than one hour per customer for urban areas. CITY's goal should be to improve system reliability and keep average outage hours per customer below the RUS recommended guideline. Construction recommended in this CWP shall meet the following minimum requirements:

- Proper Coordination & Sectionalizing: Outages on any particular feeder circuit shall be minimized to the greatest extent possible by utilizing proper sectionalizing and protection schemes detailed in paragraph 5.3 above.
- Minimize Exposure: Both the number of customers interrupted and interruption times on any particular feeder circuit shall be minimized to the greatest extent possible by avoiding feeder circuits with excessive exposure (line length) or loading. Where practical, protective devices shall be installed in feeder circuit mid-points to further minimize exposure.

5.5 RELIABILITY & OPERATIONAL FLEXIBILITY

Electrical utilities are generally REQUIRED to maintain N-1 redundancy for all transmission, generation, and major distribution components. The electric system is obviously required to work properly (i.e. maintain standard voltages, acceptable currents, etc.) when all N components are available. The N-1 criterion requires that all loads can be restored if any single component fails (i.e. N-1 components still available). For example, it can take 4-6 hours to replace a pole broken by a vehicle or fallen tree. As such, it is highly recommended by the Consultant for CITY to plan for and provide N-1 redundancy for major components and for 13 kV and 4 kV feeder circuits on its electric system.

5.6 DISTRIBUTION LINE & EQUIPMENT COSTS

Below and on the following page, overhead and underground distribution line and equipment costs are shown in Tables 5-1 and 5-2 respectively. These costs are based on utility averages for the State of Mississippi using contract construction crews. These estimated costs are not site-specific and do not include engineering, tree trimming for overhead lines, engineering, or construction administration.

Table 5-1
Overhead Distribution Line & Equipment (Installed Cost)

Description	Estimated Cost
Pole Replacement, Single Phase	$1,000/Each
Pole Replacement, Three Phase	$1,400/Each
Reinsulate Existing Pole from 4 kV to 13 kV	$325/Each
Replace 25 kVA 2.4 kV Transformer with new 25 kVA 7.62 kV Dual Rated Transformer	$1,500/Each
Replace 50 kVA 2.4 kV Transformer with new 50 kVA 7.62 kV Dual Rated Transformer	$1,900/Each
Replace 75 kVA 2.4 kV Transformer with new 75 kVA 7.62 kV Dual Rated Transformer	$2,300/Each
Tree Trimming	$60,000/Mile
Reconductor 3Ø to 3Ø - #2/0 ACSR	$120,000/Mile
Reconductor 3Ø to 3Ø - 336.4 kCMIL ACSR	$180,000/Mile
Demolition of 3Ø 4 kV Circuit	$60,000/Mile
3Ø, 300 KVAR Fixed	$5,000/Each
3Ø, 600 KVAR Switched	$9,000/Each
(1) 1Ø Fuse Cutout	$600/Each
(1) 3Ø Recloser, Electronic	$26,000/Each
3Ø Group Operated Switch, Standard	$8,000/Each

Table 5-2
Underground Distribution Line & Equipment (Installed Cost)

Description	Estimated Cost
Ductbank, 2 x 4"	$40/LF
Duct, 2 x 4" in Bored Hole	$40/LF
Ductbank, 2 x 6"	$50/LF
Duct, 2 x 6" in Bored Hole	$50/LF
Vista Box Pad	$5,800/EA
Pad Mounted Switchgear - 422	$60,000/EA
Cable Junction Enclosure, 600 Ampere	$4,500/EA
750 kCMIL Aluminum 15kV Cable	$10/LF
#4/0 Aluminum 15kV Cable	$8/LF
600 Ampere Elbow Terminations	$800/EA
200 Ampere Elbow Terminations	$200/EA

5.7 SUBSTATION EQUIPMENT COSTS

Below, substation equipment costs are shown in Table 5-3. These costs are based on utility averages for the State of Mississippi using contract construction crews. These estimated costs are not site-specific and do not include engineering or construction administration.

Table 5-3
Substation Equipment (Installed Cost)

Description	Estimated Cost
New 4 kV Vacuum Circuit Breaker in Existing Bay	$30,000/EA
New Substation Battery Bank and Enclosure	$35,000/EA

Section 6

Electric System Demand & Forecasts

6.1. SUMMARY

This section provides loads forecasts (LF) for the 2019 CWP time period. This section also details 13 kV feeder circuit capacities for both existing 2018 and projected 2019 loading data.

6.2. ANALYSIS OF 2017-2018 SYSTEM LOADING

In order to prepare the LF for the 2019 CWP, the Consultant reviewed historical system peak demand for the previous 2 year period. Below and on the following page, Table 6-1 and Figure 6-1 illustrate the actual historical system peak demand for the 2014 to 2018 period.

Table 6-1
2017-2018 Historical System Peak Demands

Year	Summer High Temperature (^{0}F)	Actual System Loading (kW)
2017	97	3,700
2018	97	3,900

Figure 6-1
2017-2018 Historical System Peak Demands

6.3. SYSTEM LOAD FORECAST FOR 2019

In order to prepare the annual LF for the 2019 CWP, the Consultant reviewed projected growth rates for the State of Mississippi for the forecast years and also CITY's anticipated construction plans for the load forecast period.

The Consultant based the 2019 CWP LF on an average growth of demand and energy sales of 1.8% based upon the latest Mississippi Economic Outlook and average summer temperatures. Below, Table 6-2 illustrates the projected LF for the 2019 CWP period.

Table 6-2
2019 Projected Electric System Peak Demands

Year	Actual System Loading (kW)	Forecast System Loading (kW)
2018	3,900	N/A
2019	N/A	3,970

6.4. SUBSTATION LOAD DATA FOR EXISTING 2018 SYSTEM

The CITY purchases power from MEAM at 13.2 kV via one CITY-owned substation oil circuit breaker ("OCB") located at Delta EPA's Itta Bena 115/13.2 kV Substation. This 13.2 kV OCB and associated feeder circuit serves major load in the City as well as Itta Bena's 13/4 kV substation. The CITY's 4 kV substation has six (6) 4 kV circuit breakers/electronic reclosers ("CB") and associated 4 kV feeder circuits which distribute power to the vast majority of the City's electrical consumers. Below, Table 6-3 summarizes configuration, voltage, and capacity for the CITY's substation.

Table 6-3
Substation Data & Configuration

Substation	Voltage (kV)	Total Capacity (kVA)	Transformer Configuration Quantity - Phase - Rating (kVA)
CITY's Itta Bena 13.4 kV Substation	13.2-4.16	3,750	(1) 3Ø - 3,750
(Spare Transformers)	13.2-4.16	3,750	(3) 1Ø - 3,750

6.5. 13 KV & 4 KV FEEDER CIRCUIT DATA FOR EXISTING 2018 SYSTEM

As mentioned above, the CITY's electric system is served at 13.2 kV via one CITY-owned 13-kV OCB at Delta EPA's Itta Bena substation and further distributed via the CITY's 13/4 kV substation and associated 4 kV feeder circuits. Below, Table 6-4 summarizes the conductor capacity and existing 2018 loading of CITY's 13.2 kV and 4 kV electric systems.

Table 6-4
13 kV & 4 kV Feeder Circuit Data for Existing 2018 System

Location	Circuit	Backbone Conductor	Circuit Capacity (kVA)	2018 Peak Loading (kVA)	2018 Percent Conductor Loading
CITY's 13 KV VCB and 13 kV Feeder Circuit	214	#2/0 ACSR	4,600	4,043	**87.9%**
CITY's 4 KV CB and 4 kV Feeder Circuit	114	#2 ACSR	1,000	713	**71.3%**
CITY's 4 KV CB and 4 kV Feeder Circuit	124	#2 ACSR	1,000	250	25.0%
CITY's 4 KV CB and 4 kV Feeder Circuit	134	#2 ACSR	1,000	167	16.7%
CITY's 4 KV CB and 4 kV Feeder Circuit	144	#2 ACSR	1,000	248	19.6%
CITY's 4 KV CB and 4 kV Feeder Circuit	154	#2 ACSR	1,000	793	**79.3%**
CITY's 4 KV CB and 4 kV Feeder Circuit	164	#2 ACSR	1,000	309	30.9%

6.6. 13 KV & 4 KV FEEDER CIRCUIT DATA FOR EXISTING 2018 SYSTEM FOR AN N-1 CONTINGENCY EVENT

Electrical utilities are generally REQUIRED to maintain N-1 redundancy for all transmission, generation, and major distribution components. The electric system is obviously required to work properly (i.e. maintain standard voltages, acceptable currents, etc.) when all N components are available. The N-1 criterion requires that all loads can be restored if any single component fails (i.e. N-1 components still available). For example, it can take 4-6 hours to replace a pole broken by a vehicle or fallen tree. As such, it is **highly recommended** by the Consultant for CITY to plan for and provide N-1 redundancy for major components and 13 kV and 4 kV feeder circuits on its electric system.

In its current configuration, the CITY has no redundancy on either its 13 kV or 4 kV feeder circuits. The topology of the CITY's 13.2 kV feeder circuit is problematic. A single event (VCB failure, cable failure, vehicle hits pole, etc.) could result in the total loss of power to the CITY's electric system. Additionally, none of the CITY's 4 kV feeder circuits have usable tie points between feeder circuits. As such, a single event (VCB failure, cable failure, vehicle hits pole, etc.) could result in the total loss of power to the affected 4 kV feeder circuit until such time as repairs are made.

Below, Table 6-5 summarizes the conductor capacity and existing 2018 loading of CITY's 13.2 kV and 4 kV electric systems at critical locations for an N-1 contingency event.

Table 6-5
13 kV & 4 kV Feeder Circuit Data for Existing 2018 System for an N-1 Contingency Event

Location	Circuit	Backbone Conductor	Circuit Capacity (kVA)	2018 Peak Loading (kVA)	2018 Percent Conductor Loading
CITY's 13 KV VCB and 13 kV Feeder Circuit	214	#2/0 ACSR	4,600	4,043	OFF
CITY's 4 KV VCB and 4 kV Feeder Circuit	114	#2 ACSR	1,000	713	OFF
CITY's 4 KV VCB and 4 kV Feeder Circuit	124	#2 ACSR	1,000	250	OFF
CITY's 4 KV VCB and 4 kV Feeder Circuit	134	#2 ACSR	1,000	167	OFF
CITY's 4 KV VCB and 4 kV Feeder Circuit	144	#2 ACSR	1,000	248	OFF
CITY's 4 KV VCB and 4 kV Feeder Circuit	154	#2 ACSR	1,000	793	OFF
CITY's 4 KV VCB and 4 kV Feeder Circuit	164	#2 ACSR	1,000	309	OFF

6.7. 13 KV & 4 KV FEEDER CIRCUIT VOLTAGE REGULATION DATA FOR EXISTING 2018 SYSTEM

As previously mentioned in this report, the CITY's electric system is served at 13.2 kV via one CITY-owned 13-kV OCB at Delta EPA's Itta Bena substation and further distributed via the CITY's 13/4 kV substation and associated 4 kV feeder circuits. The 13.2 kV feeder circuit's voltage is regulated by three CITY's owned single phase, 167 kVA (219A), +/-10% voltage regulators located just north of Delta EPA's Substation. No voltage regulation is provided on the CITY's 4 kV feeder circuits. Below, Table 6-6 summarizes worst case conditions for CITY's 13.2 kV and 4 kV electric systems at critical locations for existing 2018 loading.

Table 6-6
13 kV & 4 kV Feeder Circuit Voltage Regulation Data for Existing 2018 System

Location	Circuit	Backbone Conductor	Voltage Drop (Volts)
Freedom Street at MLK Drive	214	#2/0 ACSR	1.7
Nelson Drive	114	#2 ACSR	**9.9**
Basket Street at George Street	124	#2 ACSR	**7.3**
Catching Street south of Cleveland Street	134	#2 ACSR	5.8
Schley Street at Haley Street	144	#2 ACSR	3.9
Miller Road at End of Line	154	#2 ACSR	**8.7**
Schley Street at End of Line	164	#2 ACSR	**10.0**

6.8. 13 kV FEEDER CIRCUIT DATA FOR RECOMMENDED 2019 SYSTEM

Assuming the recommended system improvements are constructed, the CITY's 2019 electric system will be entirely served at 13.2 kV via one CITY-owned 13-kV VCB at Delta EPA's Itta Bena substation and distributed throughout the CITY's electric service area at 13 kV. On the following page, Table 6-7 summarizes the conductor capacity and loading for the CITY's proposed 2019 electric system at critical locations.

Table 6-7
13 kV Feeder Circuit Data for Recommended 2019 System

Location	Circuit	Backbone Conductor	Circuit Capacity (kVA)	2019 Peak Loading (kVA)	2019 Percent Conductor Loading
CITY's 13 KV VCB and 13 kV Feeder Circuit	214	336.4 ACSR	8,000	4,126	51.6%
CITY's Electronic Recloser and 13 kV Sub-Circuit	114	#2 ACSR	3,200	785	24.5%
CITY's 13 KV VCB and 13 kV Fused Tap	124	#2 ACSR	3,200	117	3.7%
CITY's 13 KV VCB and 13 kV Fused Tap	134	#2 ACSR	3,200	346	10.8%
CITY's Electronic Recloser and 13 kV Sub-Circuit	154	#2 ACSR	3,200	707	22.1%
CITY's Electronic Recloser and 13 kV Sub-Circuit	164	#2 ACSR	3,200	769	24.0%

6.9. 13 kV FEEDER CIRCUIT DATA FOR RECOMMENDED 2019 SYSTEM FOR AN N-1 CONTINGENCY EVENT

As mentioned in the preceding paragraph, the CITY's 2019 electric system will be entirely served at 13.2 kV via one CITY-owned 13-kV VCB at Delta EPA's Itta Bena substation and distributed throughout the CITY's electric service area at 13 kV. Below, Table 6-8 summarizes the conductor capacity and loading for the CITY's proposed 2019 electric system at critical locations.

Table 6-8
13 kV Feeder Circuit Data for Recommended 2019 System for N-1 Contingency Event

Location	Circuit	Backbone Conductor	Circuit Capacity (kW)	2019 Peak Loading (kVA)	2019 Percent Conductor Loading
CITY's 13 KV VCB and 13 kV Feeder Circuit	214	336.4 ACSR	8,000	4,126	51.6%
CITY's Electronic Recloser and 13 kV Sub-Circuit	114	#2 ACSR	3,200	1,492	46.6%
CITY's 13 KV VCB and 13 kV Fused Tap	124	#2 ACSR	3,200	902	28.2%
CITY's 13 KV VCB and 13 kV Fused Tap	134	#2 ACSR	3,200	346	10.8%
CITY's Electronic Recloser and 13 kV Sub-Circuit	154	#2 ACSR	3,200	1,492	46.6%
CITY's Electronic Recloser and 13 kV Sub-Circuit	164	#2 ACSR	3,200	769	24.0%

6.10. 13 KV FEEDER CIRCUIT VOLTAGE REGULATION DATA FOR RECOMMENDED 2019 SYSTEM

As previously mentioned in this report, the CITY's 2019 electric system will be entirely served at 13.2 kV via one CITY-owned 13-kV VCB at Delta EPA's Itta Bena substation and distributed throughout the CITY's electric service area at 13 kV. Below, Table 6-9 summarizes worst case conditions for CITY's for the CITY's proposed 2019 electric system at critical locations.

Table 6-9
13 kV Feeder Circuit Voltage Drop for Recommended 2019 System

Location	Circuit	Backbone Conductor	Voltage Drop (Volts)
Freedom Street at MLK Drive	214	336.4 ACSR	1.3
Nelson Drive	214	#2 ACSR	1.3
Basket Street at George Street	214	#2 ACSR	0.2
Catching Street south of Cleveland Street	214	#2 ACSR	0.6
Schley Street at Haley Street	214	#2 ACSR	0.9
Miller Road at End of Line	214	#2 ACSR	1.2
Schley Street at End of Line	214	#2 ACSR	1.9

6.11. REACTIVE POWER DATA FOR RECOMMENDED 2019 SYSTEM

Good engineering and operation practice recommends that utilities maintain a system power factor of 0.95 during system peak loading for each billing period. Failure to do so results in excessive distribution system losses and increased loading of electrical conductors and equipment. Additionally, system power factor must not go leading during time of light loading each billing period. On the following page, Table 6-10 summarizes capacitor bank configuration and capacity and 2019 peak reactive power demand for the CITY's 13 kV feeder circuit <u>with improvements recommended in this CWP</u>.

Table 6-10
Capacitor Data & Reactive Power Flow for Recommended 2019 System

Feeder Circuit	2017 Peak Reactive Loading (kVAR)	Fixed Capacitor Capacity (kVAR)	Required Fixed Capacitor Capacity (kVAR)	Surplus or (Deficit) of Fixed Capacitor Capacity (kVAR)	Switched Capacitor Capacity (kVAR)	Required Switched Capacitor Capacity (kVAR)	Surplus or (Deficit) of Switched Capacitor Capacity (kVAR)
214	1,648	0	254	(254)	0	508	(508)

Notes: Add 300 KVAR Fixed Capacitors and 600 kVAR switched capacitors.

6.12. SYSTEM OUTAGE & RELIABILITY DATA

The CITY presently does not aggregate customer service interruption event or duration data, so outage data was not available.

Section 7

Recommended Construction Items

7.1 SUMMARY

Construction items recommended in the 2019 CWP items are discussed in this section. The design criteria given in Section 5 were used as a guide to identify potential CWP items for evaluation. Load-flow, voltage drop, and where appropriate, N-1 contingency planning, have been performed to support the recommended CWP items.

7.2 SUBSTATIONS

The CITY's 13/4 kV substation equipment is obsolete, in generally poor repair, and is operating far beyond their expected life span.

Under an N-1 contingency event (e.g. failure of incoming 13.2 kV supply due to broken pole or wire down), the CITY's electric system topology becomes very problematic. Because the 13/4 kV substation is fed from a radial circuit with no ties, there is no way to restore power to customers fed from this substation.

To correct the issues detailed above and evidenced in this Study, the following improvements to correct these issues are recommended for the 2019 CWP:

SUBSTATION IMPROVEMENTS

CWP Item: SUB-1

Estimated Cost: $30,000

Description: Replace existing 13 kV oil circuit breaker located at Delta EPA's 115/13 kV substation with new 13 kV vacuum circuit breaker.

Justification: The CWP Item is recommended to replace obsolescent substation equipment. The oil circuit breaker is approximately 57 years old and is in need of replacement.

SUBSTATION IMPROVEMENTS

CWP Item: SUB-2

Estimated Cost: $50,000

Description: Disconnect and abandon existing 13/4 kV substation and convert all six (6) 4 kV feeder circuits fed from the substation to 13.2 kV. Refer to companion work plan items FC-1 through FC-8.

Justification: The CWP Item is recommended to avoid significant substation costs to replace obsolescent substation equipment and increase overall system capacity and reliability. Additionally, during an N-1 contingency event, the substation cannot restore power to the affected facilities because the substation is fed from a radial 13.2 kV circuit. With the recommended improvements, the electric system will be in good repair and capable of full restoration of power for an N-1 contingency event.

7.3 13 kV ELECTRIC DISTRIBUTION SYSTEM

The following improvements to 13 kV feeder circuits are recommended for the 2019 CWP:

RECONDUCTOR FEEDER CIRCUIT #214

CWP Item: FC-1

Companion CWP Items: All CWP Items.

Estimated Cost: $34,000

Description: Install redundant underground supply cables from Delta EPA 115/13 kV Substation. Replace existing AL underground cables with 750 kCMIL AL underground cables between CITY's 13 kV OCB and riser pole north of the Delta EPA 115/13 kV Substation. Existing underground cables shall remain as spares in the event of a cable failure.

Justification: This CWP Item is recommended to allow for restoration of power under N-1 contingency events such as cable or cable termination failure.

RECONDUCTOR FEEDER CIRCUIT #214

CWP Item: FC-2

Companion CWP Items: All CWP Items.

Estimated Cost: $145,000

Description: Reconductor approximately 0.7 miles of existing 13 kV Feeder Circuit #214 from #2/0 ACSR to 336.4 kCMIL ASCR.

Justification: This CWP Item is recommended to reduce voltage drop, relieve conductor loading, improve system reliability, and allow for restoration of power under N-1 contingency events.

With the recommended improvements, Feeder Circuit #214 will meet study minimum system performance criteria for both 2019 normal loading and 2019 N-1 contingency event loading.

7.4 4 KV ELECTRIC DISTRIBUTION SYSTEM

Conversion of all six (6) existing 4 kV feeder circuits is recommended to allow retirement of the CITY's 13/4 kV substation, reduce voltage drop, relieve conductor loading, improve system reliability, and allow for restoration of power under N-1 contingency events. The following improvements to existing 4 kV feeder circuits are recommended for the 2019 CWP:

CONVERT FEEDER CIRCUIT #114 FROM 4 KV TO 13 KV

CWP Item: FC-3

Companion CWP Items: All CWP Items.

Estimated Cost: $222,570

Description: Convert existing 4 kV Feeder Circuit #114 from 4 kV to 13 kV. Reinsulate all poles from 4 kV to 13 kV. Replace all 4 kV pole mounted transformers with 13 kV transformers. Replace all 4 kV switches, cutouts, and arresters with 13 kV devices.

Justification: This CWP Item is recommended to avoid significant substation costs to replace obsolescent substation equipment and increase overall system capacity and reliability and replace obsolete electric system equipment.

CONVERT FEEDER CIRCUIT #124 FROM 4 KV TO 13 KV

CWP Item: FC-4

Companion CWP Items: All CWP Items.

Estimated Cost: $117,570

Description: Convert existing 4 kV Feeder Circuit #124 from 4 kV to 13 kV. Reinsulate all poles from 4 kV to 13 kV. Replace all 4 kV pole mounted transformers with 13 kV transformers. Replace all 4 kV switches, cutouts, and arresters with 13 kV devices.

Justification: This CWP Item is recommended to avoid significant substation costs to replace obsolescent substation equipment and increase overall system capacity and reliability and replace obsolete electric system equipment.

CONVERT FEEDER CIRCUIT #134 FROM 4 KV TO 13 KV

CWP Item: FC-5

Companion CWP Items: All CWP Items.

Estimated Cost: $46,560

Description: Convert existing 4 kV Feeder Circuit #134 from 4 kV to 13 kV. Reinsulate all poles from 4 kV to 13 kV. Replace all 4 kV pole mounted transformers with 13 kV transformers. Replace all 4 kV switches, cutouts, and arresters with 13 kV devices.

Justification: This CWP Item is recommended to avoid significant substation costs to replace obsolescent substation equipment and increase overall system capacity and reliability and replace obsolete electric system equipment.

CONVERT FEEDER CIRCUIT #144 FROM 4 KV TO 13 KV

CWP Item: FC-6

Companion CWP Items: All CWP Items.

Estimated Cost: $50,910

Description: Convert existing 4 kV Feeder Circuit #144 from 4 kV to 13 kV. Reinsulate all poles from 4 kV to 13 kV. Replace all 4 kV pole mounted transformers with 13 kV transformers. Replace all 4 kV switches, cutouts, and arresters with 13 kV devices.

Justification: This CWP Item is recommended to avoid significant substation costs to replace obsolescent substation equipment and increase overall system capacity and reliability and replace obsolete electric system equipment.

CONVERT FEEDER CIRCUIT #154 FROM 4 KV TO 13 KV

CWP Item: FC-7

Companion CWP Items: All CWP Items.

Estimated Cost: $216,270

Description: Convert existing 4 kV Feeder Circuit #154 from 4 kV to 13 kV. Reinsulate all poles from 4 kV to 13 kV. Replace all 4 kV pole mounted transformers with 13 kV transformers. Replace all 4 kV switches, cutouts, and arresters with 13 kV devices.

Justification: This CWP Item is recommended to avoid significant substation costs to replace obsolescent substation equipment and increase overall system capacity and reliability and replace obsolete electric system equipment.

CONVERT FEEDER CIRCUIT #164 FROM 4 KV TO 13 KV

CWP Item: FC-8

Companion CWP Items: All CWP Items.

Estimated Cost: $94,200

Description: Convert existing 4 kV Feeder Circuit #164 from 4 kV to 13 kV. Reinsulate all poles from 4 kV to 13 kV. Replace all 4 kV pole mounted transformers with 13 kV transformers. Replace all 4 kV switches, cutouts, and arresters with 13 kV devices.

Justification: This CWP Item is recommended to avoid significant substation costs to replace obsolescent substation equipment and increase overall system capacity and reliability and replace obsolete electric system equipment.

With the recommended improvements, all 4 kV Feeder Circuits will be converted to 13 kV and will meet study minimum system performance criteria for both 2019 normal loading and 2019 N-1 contingency event loading.

7.5 SECTIONALIZING EQUIPMENT

The protection schemes of all new or significantly changed circuits due to CWP projects have been analyzed. Upon completion of the analyses, a list is prepared of reclosers, fuses, and other devices required to adequately protect the circuits investigated. This list of protection equipment additions and changes, and their respective estimated installed cost is included in below:

<u>**13 KV FEEDER CIRCUIT #214**</u>

CWP Item: S-1.

Estimated Cost: $80,000

Work Description: Improve selective coordination on this feeder circuit by installing electronic reclosers and fused cutouts on selected taps.

Work Required: Install 560 ampere electronic recloser on Freedom Street east of Chapman Street. Install 560 ampere electronic recloser on Martin Luther King Drive west of Freedom Street. Install 560 ampere electronic recloser on Martin Luther King Drive west of Freedom Street. Install fused cutouts on Lakeside Street east and west of Mississippi Highway 7. Install new disconnect switches and make normally open on Freedom Street just west of Chapman Street.

Justification: The project is recommended to reduce exposure and ensure selective coordination on 13 kV Feeder Circuit #214.

7.6 VOLTAGE REGULATION

Each 13-kV and 4-kV feeder circuit was analyzed for adequate voltage and loading conditions. The computer analysis of the existing 2018 revealed numerous voltage drop voltage deficiencies under normal 2018 loading. The following power factor correction improvements are recommended for the 2019 CWP:

<u>**13 KV FEEDER CIRCUIT #214**</u>

CWP Item: VR-1

Estimated Cost: $50,000

Description: Replace existing 167 kVA (219A), +/-10% voltage regulators with new 250 kVA (328A), +/-10% voltage regulators located just north of the Delta EPA 115/13 kV Substation.

Justification: Existing voltage regulators are 96.3% loaded at system peak.

7.7 POWER FACTOR CORRECTION (CAPACITORS)

Each 13-kV and 4-kV feeder circuit was analyzed for adequate reactive power flow and power factor. Capacitor additions to 13 kV Feeder Circuit #214 is recommended so that a 95% power factor is maintained on the CITY system during peak 2019 summer loading. The following power factor correction improvements are recommended for the 2019 CWP:

13 KV FEEDER CIRCUIT #214

CWP Item: CAP-1

Estimated Cost: $14,000

Description: Install 600 kVAR switched capacitor bank just north of Delta EPA substation. Install 300 kVAR fixed capacitor bank on Freedom Street just south of Martin Luther King Drive.

Justification: Meet 2019 system reactive power demand by installing fixed and switched capacitor banks.

Appendix
A

Electric System Map for Existing 2018 System

LEGEND

2	OVERHEAD PRIMARY CONDUCTOR, SIZE INDICATED, PERPENDICULAR DASHES INDICATE NUMBER OF CONDUCTORS
1/0	UNDERGROUND PRIMARY LINE, SIZE INDICATED, PERPENDICULAR DASHES INDICATE NUMBER OF CONDUCTORS
D101	DISCONNECT SWITCH, SWITCH NO. (N.O. INDICATES NORMALLY OPEN)
	FUSED CUTOUT
300T	PRIMARY CAPACITOR BANK, SIZE IN KVA / CONTROL (F-FIXED, C-CLOCK, R-VAR, T-TEMPERATURE, V-VOLTAGE)
(3) 167 KVA	VOLTAGE REGULATOR
114 ■	OIL / VACUUM 15KV CIRCUIT BREAKER, CIRCUIT NUMBER
M	PRIMARY METER
123	CONDUCTOR PHASING
▲15Ø1	POLE MOUNTED TRANSFORMER, SIZE IN KVA, PHASE
	OPEN POINT

CITY OF ITTA BENA ELECTRIC

ITTA BENA, MISSISSIPPI

ELECTRIC DISTRIBUTION SYSTEM MAP
EXISTING 2018 ELECTRIC SYSTEM

SCALE: 1" = 300'

SCALE IS APPROXIMATE - USE FOR PLANNING PURPOSES ONLY

Atwell & Gent, P.A.
Electrical & Consulting Engineers

Appendix B

Electric System Map for Recommended 2019 System

LEGEND

2	OVERHEAD PRIMARY CONDUCTOR, SIZE INDICATED, PERPENDICULAR DASHES INDICATE NUMBER OF CONDUCTORS
1/0	UNDERGROUND PRIMARY LINE, SIZE INDICATED, PERPENDICULAR DASHES INDICATE NUMBER OF CONDUCTORS
D101	DISCONNECT SWITCH, SWITCH NO. (N.O. INDICATES NORMALLY OPEN)
	FUSED CUTOUT
300T	PRIMARY CAPACITOR BANK, SIZE IN KVA / CONTROL (F-FIXED, C-CLOCK, R-VAR, T-TEMPERATURE, V-VOLTAGE)
(3) 167 KVA	VOLTAGE REGULATOR
114 ■	OIL / VACUUM 15KV CIRCUIT BREAKER, CIRCUIT NUMBER
M	PRIMARY METER
123	CONDUCTOR PHASING
▲15Ø1	POLE MOUNTED TRANSFORMER, SIZE IN KVA, PHASE
	OPEN POINT

CITY OF ITTA BENA ELECTRIC

ITTA BENA, MISSISSIPPI

ELECTRIC DISTRIBUTION SYSTEM MAP
RECOMMENDED 2019 ELECTRIC SYSTEM

SCALE: 1" = 300'

SCALE IS APPROXIMATE - USE FOR PLANNING PURPOSES ONLY

Atwell & Gent, P.A.
Electrical & Consulting Engineers

NUMBERED NOTES

1. REMOVE EXISTING 13/4 KV SUBSTATION IN ITS ENTIRETY. CONVERT EXISTING 4 KV FEEDER CIRCUITS TO 13 KV.
2. CONVERT EXISTING 4 KV CIRCUIT TO 13 KV. INSTALL FUSED CUTOUT. FUSE 75A QR.
3. INSTALL DISCONNECT SWITCHES. MAKE NORMAL OPEN.
4. CONVERT EXISTING 4 KV CIRCUIT TO 13 KV. INSTALL ELECTRONIC RECLOSER AND RECLOSER CONTROL.
5. REPLACE EXISTING #2 ACSR PHASE CONDUCTORS WITH 336.4 KCMIL ACSR PHASE CONDUCTORS.
6. REMOVE EXISTING 4 KV CIRCUITS.
7. REMOVE FUSED CUTOUTS.
8. REPLACE EXISTING #2/0 ACSR PHASE CONDUCTORS WITH 336.4 KCMIL ACSR PHASE CONDUCTORS.
9. INSTALL 600 KVAR SWITCHED CAPACITOR BANK.
10. INSTALL 300 KVAR FIXED CAPACITOR BANK.
11. REPLACE EXISTING 3-167 KVA VOLTAGE REGULATORS WITH 3-250 KVA VOLTAGE REGULATORS.
12. REPLACE EXISTING 3-#1/0 AL UNDERGROUND CABLES WITH 3-750 KCMIL AL UNDERGROUND CABLES.

Appendix C

Load Flow Report for Existing 2018 System

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

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Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru	
	VCB214		A	Delta EPA	7.65Y	120.5	1.53	1.53	175.46	0	1271	482	94	26.36	0.7	0.000	0.000	0	0	0	0	
			B		7.64Y	120.3	1.68	1.68	181.52	0	1282	578	91					0	0	0	0	
			C		7.62Y	120.1	1.94	1.94	211.05	0	1490	674	91					0	0	0	0	
	UG7	VCB214	A	1/0URD	7.65Y	120.4	0.04	1.57	175.46	77	1263	454	94	1.67	0.0	0.014	0.014	0	0	0	0	
			B		7.64Y	120.3	0.04	1.72	181.52	80	1274	548	92					0	0	0	0	
C			C		7.62Y	120.0	0.06	2.00	211.05	93	1479	634	92					0	0	0	0	C
	SW9-A	UG7	A	Closed	7.65Y	120.4	0.00	1.57	175.46	0	1263	454	94	0.00	0.0	0.014	0.000	0	0	0	0	
			B		7.64Y	120.3	0.00	1.72	181.53	0	1274	548	92					0	0	0	0	
			C		7.62Y	120.0	0.00	2.00	211.05	0	1478	634	92					0	0	0	0	
	SW9-B	SW9-A	A	Closed	7.65Y	120.4	0.00	1.57	175.46	0	1263	454	94	0.00	0.0	0.014	0.000	0	0	0	0	
			B		7.64Y	120.3	0.00	1.72	181.53	0	1274	548	92					0	0	0	0	
			C		7.62Y	120.0	0.00	2.00	211.05	0	1478	634	92					0	0	0	0	
	OH10	SW9-B	A	#1/0 ACSR	7.65Y	120.4	0.03	1.60	175.46	76	1263	454	94	1.32	0.0	0.027	0.014	0	0	0	0	
			B		7.64Y	120.2	0.04	1.76	181.53	79	1274	548	92					0	0	0	0	
C			C		7.62Y	119.9	0.05	2.05	211.05	92	1478	634	92					0	0	0	0	C
	REG11	OH10	A	167 kVA	7.65Y	120.4	0.00	1.60	175.47	0	1262	454	94	percent Boost= 0.00 Tap= 0.0							0	
			B		7.64Y	120.2	0.00	1.76	181.53	0	1273	548	92	percent Boost= 0.00 Tap= 0.0							0	
			C		7.62Y	119.9	0.00	2.05	211.05	0	1478	633	92	percent Boost= 0.00 Tap= 0.0							0	
	OH12	REG11	A	#1/0 ACSR	7.64Y	120.3	0.06	1.66	175.47	76	1262	454	94	2.33	0.1	0.051	0.024	0	0	0	0	
			B		7.63Y	120.2	0.07	1.83	181.53	79	1273	548	92					0	0	0	0	
C			C		7.61Y	119.9	0.09	2.14	211.05	92	1478	633	92					0	0	0	0	C
	OH13	OH12	A	#1/0 ACSR	7.64Y	120.3	0.00	1.67	21.21	9	151	60	93	0.02	0.0	0.062	0.011	0	0	0	0	
			B		7.63Y	120.2	0.00	1.84	24.90	11	175	75	92					0	0	0	0	
			C		7.61Y	119.9	0.00	2.14	27.56	12	193	82	92					0	0	0	0	
	OCD741	OH13	A	50A QR	7.64Y	120.3	0.00	1.67	21.21	42	151	60	93	0.00	0.0	0.062	0.000	0	0	0	0	
			B		7.63Y	120.2	0.00	1.84	24.91	50	175	75	92					0	0	0	0	
			C		7.61Y	119.9	0.00	2.14	27.56	55	193	82	92					0	0	0	0	
	OH716	OCD741	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.68	21.21	12	151	60	93	0.07	0.0	0.090	0.028	0	0	0	0	
			B		7.63Y	120.1	0.02	1.85	24.91	14	175	75	92					0	0	0	0	
			C		7.61Y	119.8	0.02	2.16	27.56	15	193	82	92					0	0	0	0	
	OCD718	OH716	A	50A QR	7.64Y	120.3	0.00	1.68	0.00	0	0	0	100	0.00	0.0	0.090	0.000	0	0	0	0	
			B		7.63Y	120.1	0.00	1.85	0.00	0	0	0	100					0	0	0	0	
			C		7.61Y	119.8	0.00	2.16	0.00	0	0	0	100					0	0	0	0	
	OH719	OH716	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.69	21.21	12	151	60	93	0.07	0.0	0.117	0.027	0	0	0	0	
			B		7.63Y	120.1	0.02	1.87	24.91	14	175	75	92					0	0	0	0	
			C		7.61Y	119.8	0.02	2.18	27.56	15	193	82	92					0	0	0	0	
	OH721	OH719	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.70	19.09	11	136	54	93	0.09	0.0	0.153	0.035	0	0	0	0	
			B		7.63Y	120.1	0.02	1.89	24.91	14	175	75	92					5	2	0	0	
			C		7.61Y	119.8	0.02	2.20	27.56	15	193	82	92					0	0	0	0	
	OH722	OH721	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.71	19.09	11	136	54	93	0.06	0.0	0.179	0.026	0	0	0	0	
			B		7.63Y	120.1	0.02	1.91	24.22	13	170	73	92					0	0	0	0	
			C		7.61Y	119.8	0.02	2.22	27.56	15	193	82	92					0	0	0	0	
	OH723	OH722	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.72	15.91	9	113	45	93	0.05	0.0	0.211	0.033	23	9	0	0	
			B		7.62Y	120.1	0.02	1.93	24.22	13	170	73	92					36	16	0	0	
			C		7.60Y	119.8	0.01	2.24	22.70	13	159	68	92					34	15	0	0	
	OH724	OH723	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.74	12.73	7	90	36	93	0.05	0.0	0.260	0.049	15	6	0	0	
			B		7.62Y	120.0	0.02	1.95	19.03	11	133	57	92					24	10	0	0	
			C		7.60Y	119.7	0.02	2.25	17.84	10	125	53	92					23	10	0	0	
	OH725	OH724	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.75	10.60	6	75	30	93	0.04	0.0	0.312	0.053	0	0	0	0	
			B		7.62Y	120.0	0.02	1.97	15.57	9	109	47	92					0	0	0	0	
			C		7.60Y	119.7	0.02	2.27	14.59	8	102	44	92					0	0	0	0	
	OH726	OH725	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	5.30	3	38	15	93	0.00	0.0	0.346	0.034	23	9	0	0	
			B		7.62Y	120.0	0.01	1.98	8.65	5	61	26	92					36	16	0	0	
			C		7.60Y	119.7	0.00	2.28	8.11	5	57	24	92					34	15	0	0	
	OH727	OH726	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	2.12	1	15	6	93	0.00	0.0	0.353	0.007	0	0	0	0	
			B		7.62Y	120.0	0.00	1.98	3.46	2	24	10	92					0	0	0	0	
			C		7.60Y	119.7	0.00	2.28	3.24	2	23	10	92					0	0	0	0	

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH728	OH727	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	2.12	1	15	6	93	0.00	0.0	0.368	0.015	15	6	0	0
		B		7.62Y	120.0	0.00	1.98	3.46	2	24	10	92					24	10	0	0
		C		7.60Y	119.7	0.00	2.28	3.24	2	23	10	92					23	10	0	0
OH729	OH725	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	5.30	3	38	15	93	0.00	0.0	0.339	0.027	0	0	0	0
		B		7.62Y	120.0	0.00	1.98	6.92	4	49	21	92					0	0	0	0
		C		7.60Y	119.7	0.00	2.28	6.49	4	45	19	92					0	0	0	0
OH732	OH729	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	4.24	2	30	12	93	0.00	0.0	0.367	0.028	15	6	0	0
		B		7.62Y	120.0	0.00	1.98	6.92	4	49	21	92					24	10	0	0
		C		7.60Y	119.7	0.00	2.28	6.49	4	45	19	92					23	10	0	0
OH733	OH732	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	2.12	1	15	6	93	0.00	0.0	0.369	0.002	0	0	0	0
		B		7.62Y	120.0	0.00	1.98	3.46	2	24	10	92					0	0	0	0
		C		7.60Y	119.7	0.00	2.28	3.24	2	23	10	92					0	0	0	0
OH734	OH733	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	2.12	1	15	6	93	0.00	0.0	0.382	0.013	15	6	0	0
		B		7.62Y	120.0	0.00	1.98	3.46	2	24	10	92					24	10	0	0
		C		7.60Y	119.7	0.00	2.28	3.24	2	23	10	92					23	10	0	0
OH735	OH729	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	1.06	1	8	3	94	0.00	0.0	0.367	0.028	8	3	0	0
		B		7.62Y	120.0	-0.00	1.98	-0.00	0	0	0						0	0	0	0
		C		7.60Y	119.7	0.00	2.28	-0.00	0	0	0						0	0	0	0
OCD731	OH725	A	50A QR	7.64Y	120.3	0.00	1.75	0.00	0	0	0	100	0.00	0.0	0.312	0.000	0	0	0	0
		B		7.62Y	120.0	0.00	1.97	0.00	0	0	0	100					0	0	0	0
		C		7.60Y	119.7	0.00	2.27	0.00	0	0	0	100					0	0	0	0
OH737	OH722	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.72	3.18	2	23	9	93	0.00	0.0	0.216	0.038	23	9	0	0
		C		7.61Y	119.8	0.00	2.23	4.86	3	34	15	92					34	15	0	0
OH736	OH719	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.69	2.12	1	15	6	93	0.00	0.0	0.133	0.016	15	6	0	0
OH14	OH12	A	#1/0 ACSR	7.64Y	120.3	0.07	1.73	154.27	67	1111	394	94	2.39	0.1	0.084	0.033	0	0	0	0
		B		7.63Y	120.1	0.08	1.91	156.62	68	1098	473	92					0	0	0	0
		C		7.60Y	119.8	0.10	2.24	183.50	80	1284	550	92					0	0	0	0
OH16	OH14	A	#1/0 ACSR	7.63Y	120.2	0.07	1.81	154.27	67	1111	393	94	2.44	0.1	0.117	0.033	0	0	0	0
		B		7.62Y	120.0	0.08	2.00	156.63	68	1097	473	92					0	0	0	0
		C		7.60Y	119.6	0.11	2.35	183.50	80	1283	550	92					0	0	0	0
OH17	OH16	A	#1/0 ACSR	7.63Y	120.1	0.07	1.88	154.27	67	1110	393	94	2.42	0.1	0.150	0.033	0	0	0	0
		B		7.61Y	119.9	0.08	2.08	156.63	68	1096	472	92					0	0	0	0
		C		7.59Y	119.5	0.11	2.46	183.50	80	1282	549	92					0	0	0	0
OH18	OH17	A	#1/0 ACSR	7.62Y	120.1	0.05	1.93	154.28	67	1109	392	94	1.54	0.0	0.171	0.021	0	0	0	0
		B		7.61Y	119.9	0.05	2.13	156.63	68	1095	472	92					0	0	0	0
		C		7.59Y	119.5	0.07	2.52	183.50	80	1281	548	92					0	0	0	0
OH19	OH18	A	#1/0 ACSR	7.62Y	120.0	0.08	2.01	154.28	67	1109	392	94	2.61	0.1	0.207	0.036	0	0	0	0
		B		7.61Y	119.8	0.09	2.23	156.63	68	1095	472	92					0	0	0	0
		C		7.58Y	119.4	0.11	2.64	183.50	80	1280	548	92					0	0	0	0
OH20	OH19	A	#1/0 ACSR	7.61Y	119.9	0.08	2.09	154.28	67	1108	392	94	2.68	0.1	0.243	0.037	0	0	0	0
		B		7.60Y	119.7	0.09	2.32	156.63	68	1094	472	92					0	0	0	0
		C		7.57Y	119.2	0.12	2.76	183.50	80	1279	547	92					0	0	0	0
OH21	OH20	A	#1/0 ACSR	7.61Y	119.8	0.09	2.18	154.28	67	1108	391	94	3.06	0.1	0.285	0.042	0	0	0	0
		B		7.59Y	119.6	0.11	2.42	156.63	68	1093	472	92					0	0	0	0
		C		7.56Y	119.1	0.13	2.89	183.50	80	1278	546	92					0	0	0	0
OH22	OH21	A	#1/0 ACSR	7.60Y	119.7	0.11	2.29	154.28	67	1107	391	94	3.66	0.1	0.335	0.050	0	0	0	0
		B		7.59Y	119.4	0.13	2.55	156.63	68	1092	471	92					0	0	0	0
		C		7.55Y	118.9	0.16	3.05	183.50	80	1276	545	92					0	0	0	0
OH23	OH22	A	#1/0 ACSR	7.60Y	119.6	0.08	2.37	154.28	67	1106	390	94	2.75	0.1	0.373	0.038	0	0	0	0
		B		7.58Y	119.4	0.10	2.65	156.64	68	1091	471	92					0	0	0	0
		C		7.55Y	118.8	0.12	3.17	183.50	80	1275	544	92					0	0	0	0
OH24	OH23	A	#1/0 ACSR	7.59Y	119.5	0.08	2.46	154.28	67	1105	389	94	2.69	0.1	0.409	0.037	0	0	0	0
		B		7.57Y	119.3	0.09	2.74	156.64	68	1090	471	92					0	0	0	0
		C		7.54Y	118.7	0.12	3.29	183.50	80	1274	543	92					0	0	0	0
OH25	OH24	A	#1/0 ACSR	7.59Y	119.5	0.07	2.53	154.29	67	1105	389	94	2.36	0.1	0.441	0.032	0	0	0	0
		B		7.57Y	119.2	0.08	2.82	156.64	68	1089	470	92					0	0	0	0
		C		7.53Y	118.6	0.10	3.39	183.50	80	1272	542	92					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	OH26	OH25	A	#1/0 ACSR	7.58Y	119.4	0.08	2.61	154.29	67	1104	389	94	2.75	0.1	0.479	0.037	0	0	0	0	
			B		7.56Y	119.1	0.10	2.92	156.64	68	1088	470	92					0	0	0	0	
			C		7.52Y	118.5	0.12	3.52	183.51	80	1271	542	92					0	0	0	0	
	OH27	OH26	A	#1/0 ACSR	7.58Y	119.3	0.08	2.69	154.29	67	1103	388	94	2.55	0.1	0.514	0.035	0	0	0	0	
			B		7.56Y	119.0	0.09	3.01	156.64	68	1087	470	92					0	0	0	0	
			C		7.52Y	118.4	0.11	3.63	183.51	80	1270	541	92					0	0	0	0	
	OH46	OH27	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.01	0	0	0		0.00	0.0	0.553	0.039	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.01	0	0	0						0	0	0	0	
			C		7.52Y	118.4	-0.00	3.63	-0.01	0	0	0						0	0	0	0	
	OH49	OH46	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.01	0	0	0		0.00	0.0	0.583	0.030	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.01	0	0	0						0	0	0	0	
			C		7.52Y	118.4	0.00	3.63	-0.01	0	0	0						0	0	0	0	
	OH50	OH49	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.00	0	0	0		0.00	0.0	0.591	0.009	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0	
			C		7.52Y	118.4	0.00	3.63	-0.00	0	0	0						0	0	0	0	
	OH51	OH50	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.00	0	0	0		0.00	0.0	0.611	0.020	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0	
			C		7.52Y	118.4	0.00	3.63	-0.00	0	0	0						0	0	0	0	
	OH52	OH51	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.00	0	0	0		0.00	0.0	0.630	0.019	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0	
			C		7.52Y	118.4	0.00	3.63	-0.00	0	0	0						0	0	0	0	
	OH28	OH27	A	#1/0 ACSR	7.57Y	119.3	0.05	2.74	154.29	67	1103	388	94	1.67	0.0	0.536	0.023	0	0	0	0	
			B		7.55Y	118.9	0.06	3.06	156.65	68	1086	470	92					0	0	0	0	
			C		7.51Y	118.3	0.07	3.70	183.51	80	1269	540	92					0	0	0	0	
	OH53	OH28	A	#2 ACSR 6/	7.57Y	119.3	0.01	2.74	13.04	7	94	31	95	0.01	0.0	0.573	0.037	94	31	0	0	
			B		7.55Y	118.9	0.01	3.07	16.14	9	116	38	95					116	38	0	0	
			C		7.51Y	118.3	0.00	3.70	12.71	7	91	30	95					91	30	0	0	
	OH29	OH28	A	#2/0 ACSR	7.57Y	119.3	0.00	2.74	19.56	7	141	46	95	0.00	0.0	0.539	0.003	0	0	0	0	
			B		7.55Y	118.9	0.00	3.06	24.22	9	174	57	95					0	0	0	0	
			C		7.51Y	118.3	0.00	3.70	31.79	12	227	75	95					0	0	0	0	
	OH32	OH29	A	#2 ACSR 6/	7.57Y	119.3	0.01	2.75	19.56	11	141	46	95	0.07	0.0	0.563	0.024	0	0	0	0	
			B		7.55Y	118.9	0.02	3.08	24.22	13	174	57	95					0	0	0	0	
			C		7.51Y	118.3	0.02	3.72	31.79	18	227	75	95					0	0	0	0	
	OH33	OH32	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.76	19.57	11	141	46	95	0.08	0.0	0.589	0.027	0	0	0	0	
			B		7.55Y	118.9	0.02	3.10	24.22	13	174	57	95					0	0	0	0	
			C		7.51Y	118.3	0.02	3.74	31.79	18	227	75	95					0	0	0	0	
	OH54	OH33	A	#4 ACSR 6/	7.57Y	119.2	-0.00	2.75	-0.00	0	0	0		0.00	0.0	0.605	0.016	0	0	0	0	
			B		7.55Y	118.9	0.00	3.10	-0.00	0	0	0						0	0	0	0	
			C		7.51Y	118.3	0.00	3.75	12.72	9	91	30	95					91	30	0	0	
	OH34	OH33	A	#2 ACSR 6/	7.57Y	119.2	0.02	2.77	19.57	11	141	46	95	0.07	0.0	0.626	0.036	0	0	0	0	
			B		7.55Y	118.9	0.02	3.12	24.22	13	174	57	95					0	0	0	0	
			C		7.51Y	118.2	0.01	3.76	19.08	11	136	45	95					0	0	0	0	
	OCD36	OH34	A	75A QA	7.57Y	119.2	0.00	2.77	19.57	26	141	46	95	0.00	0.0	0.626	0.000	0	0	0	0	
			B		7.55Y	118.9	0.00	3.12	24.23	32	174	57	95					0	0	0	0	
			C		7.51Y	118.2	0.00	3.76	19.08	25	136	45	95					0	0	0	0	
	OH37	OCD36	A	#4 ACSR 6/	7.57Y	119.2	0.01	2.78	19.57	14	141	46	95	0.02	0.0	0.650	0.025	141	46	0	0	
			B		7.55Y	118.9	0.01	3.13	24.23	17	174	57	95					174	57	0	0	
			C		7.51Y	118.2	0.01	3.76	19.08	14	136	45	95					136	45	0	0	
	OH30	OH28	A	#1/0 ACSR	7.57Y	119.2	0.07	2.81	121.70	53	868	310	94	1.65	0.1	0.576	0.040	28	9	0	0	
			B		7.55Y	118.9	0.07	3.13	116.51	51	796	374	90					35	11	0	0	
			C		7.51Y	118.2	0.10	3.80	139.22	61	951	435	91					45	15	0	0	
	OH31	OH30	A	#1/0 ACSR	7.57Y	119.2	0.03	2.83	117.79	51	839	301	94	0.62	0.0	0.592	0.016	0	0	0	0	
			B		7.55Y	118.8	0.03	3.16	111.70	49	761	363	90					0	0	0	0	
			C		7.50Y	118.2	0.04	3.84	132.90	58	905	420	91					0	0	0	0	
	XFMR38	OH31	A	Transforme	2.48Y	116.6	2.59	5.42	117.79	72	839	301	94	24.29	1.0	0.592	0.000	0	0	0	0	
L			B		2.47Y	116.0	2.87	6.03	111.70	68	761	363	90					0	0	0	0	L
L			C		2.44Y	114.8	3.35	7.19	132.90	81	905	420	91					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	OH40	XFMR38	A	500 MCM Hd	2.48Y	116.5	0.03	5.45	351.76	42	831	263	95	0.38	0.0	0.600	0.008	0	0	0	0	
L			B		2.47Y	115.9	0.03	6.06	333.59	40	754	329	92					0	0	0	0	L
L			C		2.44Y	114.8	0.04	7.23	396.90	47	895	372	92					0	0	0	0	L
	OH42	OH40	A	500 MCM Hd	2.48Y	116.5	0.01	5.46	237.96	28	551	212	93	0.03	0.0	0.602	0.002	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	201.83	24	461	187	93					0	0	0	0	L
L			C		2.44Y	114.8	0.01	7.23	234.64	28	508	265	89					0	0	0	0	L

----------- Feeder No. 154 (CB 154) Beginning with Device CB 154 -----------

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	CB 154	OH42	A	560 VWE	2.48Y	116.5	0.00	5.46	133.89	0	312	113	94	0.00	0.0	0.602	0.000	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	132.82	0	308	112	94					0	0	0	0	L
L			C		2.44Y	114.8	0.00	7.23	80.93	0	174	94	88					0	0	0	0	L
	OH82	CB 154	A	#2 ACSR 6/	2.48Y	116.5	0.08	5.54	133.89	74	312	113	94	0.43	0.1	0.609	0.007	0	0	0	0	
L			B		2.46Y	115.9	0.06	6.12	132.82	74	308	112	94					0	0	0	0	L
L			C		2.44Y	114.7	0.03	7.26	80.93	45	174	94	88					0	0	0	0	L
	OH84	OH82	A	#2 ACSR 6/	2.47Y	116.3	0.19	5.73	133.89	74	312	113	94	1.02	0.1	0.626	0.017	0	0	0	0	
L			B		2.46Y	115.7	0.15	6.27	132.82	74	307	112	94					0	0	0	0	L
L			C		2.44Y	114.7	0.08	7.34	80.93	45	174	94	88					0	0	0	0	L
	OH85	OH84	A	#2 ACSR 6/	2.47Y	116.1	0.20	5.94	133.89	74	311	113	94	1.08	0.1	0.643	0.018	0	0	0	0	
L			B		2.46Y	115.6	0.15	6.42	132.82	74	307	112	94					0	0	0	0	L
L			C		2.44Y	114.6	0.08	7.42	80.93	45	174	94	88					0	0	0	0	L
L	OH86	OH85	A	#2 ACSR 6/	2.47Y	116.0	0.09	6.02	133.89	74	311	113	94	0.45	0.1	0.651	0.007	0	0	0	0	L
L			B		2.46Y	115.5	0.06	6.49	132.82	74	307	112	94					0	0	0	0	L
L			C		2.44Y	114.5	0.03	7.46	80.93	45	174	94	88					0	0	0	0	L
L	OH87	OH86	A	#2 ACSR 6/	2.46Y	115.6	0.33	6.35	133.89	74	310	113	94	1.75	0.2	0.680	0.029	0	0	0	0	L
L			B		2.45Y	115.3	0.25	6.74	132.82	74	307	112	94					0	0	0	0	L
L			C		2.43Y	114.4	0.13	7.59	80.93	45	173	94	88					0	0	0	0	L
L	OH88	OH87	A	#2 ACSR 6/	2.46Y	115.5	0.19	6.54	133.89	74	310	112	94	1.00	0.1	0.696	0.017	0	0	0	0	L
L			B		2.45Y	115.1	0.14	6.88	132.82	74	306	111	94					0	0	0	0	L
L			C		2.43Y	114.3	0.07	7.66	80.93	45	173	94	88					7	4	0	0	L
L	OH89	OH88	A	#2 ACSR 6/	2.45Y	115.2	0.23	6.77	133.89	74	309	112	94	1.17	0.1	0.716	0.020	0	0	0	0	L
L			B		2.44Y	115.0	0.17	7.05	132.82	74	306	111	94					0	0	0	0	L
L			C		2.43Y	114.3	0.08	7.74	77.85	43	167	90	88					13	7	0	0	L
L	OH90	OH89	A	#2 ACSR 6/	2.44Y	115.0	0.26	7.03	133.89	74	308	112	94	1.30	0.2	0.738	0.022	0	0	0	0	L
L			B		2.44Y	114.8	0.19	7.24	132.82	74	305	111	94					0	0	0	0	L
L			C		2.43Y	114.2	0.08	7.82	71.68	40	153	83	88					0	0	0	0	L
L	OH91	OH90	A	#2 ACSR 6/	2.44Y	114.9	0.11	7.15	133.89	74	308	112	94	0.57	0.1	0.748	0.010	0	0	0	0	L
L			B		2.44Y	114.7	0.08	7.32	132.82	74	305	111	94					0	0	0	0	L
L			C		2.43Y	114.1	0.04	7.86	71.68	40	153	83	88					0	0	0	0	L
L	OCD182	OH91	A	50A QR	2.44Y	114.9	0.00	7.15	92.40	185	212	77	94	0.00	0.0	0.748	0.000	0	0	0	0	L
L			B		2.44Y	114.7	0.00	7.32	126.41	253	290	105	94					0	0	0	0	L
L			C		2.43Y	114.1	0.00	7.86	65.50	131	140	76	88					0	0	0	0	L
L	OH183	OCD182	A	#2 ACSR 6/	2.44Y	114.8	0.10	7.24	92.40	51	212	77	94	0.51	0.1	0.760	0.012	0	0	0	0	L
L			B		2.44Y	114.6	0.12	7.44	126.41	70	290	105	94					0	0	0	0	L
L			C		2.43Y	114.1	0.04	7.89	65.50	36	140	76	88					0	0	0	0	L
L	OH185	OH183	A	#2 ACSR 6/	2.44Y	114.5	0.24	7.48	92.40	51	212	77	94	1.25	0.2	0.791	0.030	0	0	0	0	L
L			B		2.43Y	114.3	0.28	7.72	126.41	70	290	105	94					4	2	0	0	L
L			C		2.42Y	114.0	0.09	7.98	65.50	36	140	76	88					0	0	0	0	L
L	OH186	OH185	A	#2 ACSR 6/	2.44Y	114.5	0.00	7.48	-0.00	0	0	0		0.00	0.0	0.824	0.033	0	0	0	0	L
L			B		2.43Y	114.3	0.00	7.72	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.00	7.98	-0.00	0	0	0						0	0	0	0	L
L	OH188	OH185	A	#2 ACSR 6/	2.43Y	114.4	0.12	7.60	92.40	51	212	77	94	0.63	0.1	0.806	0.016	0	0	0	0	L
L			B		2.43Y	114.1	0.14	7.86	124.57	69	285	103	94					0	0	0	0	L
L			C		2.42Y	114.0	0.05	8.03	65.50	36	140	76	88					0	0	0	0	L
L	OH189	OH188	A	#2 ACSR 6/	2.43Y	114.2	0.22	7.82	92.41	51	211	77	94	1.13	0.2	0.834	0.028	0	0	0	0	L
L			B		2.42Y	113.9	0.25	8.12	124.57	69	284	103	94					0	0	0	0	L
L			C		2.42Y	113.9	0.08	8.11	65.50	36	140	76	88					0	0	0	0	L

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Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH190	OH189	A	#2 ACSR 6/	2.43Y	114.2	0.00	7.82	-0.00	0	0	0		0.00	0.0	0.858	0.025	0	0	0	0	L
L			B		2.42Y	113.9	0.00	8.12	-0.00	0	0	0						0	0	0	0	L
L	OH192	OH189	B	#2 ACSR 6/	2.42Y	113.9	0.00	8.12	1.85	1	4	2	89	0.00	0.0	0.856	0.022	4	2	0	0	L
L	OH193	OH189	A	#2 ACSR 6/	2.42Y	114.0	0.23	8.05	92.41	51	211	76	94	1.18	0.2	0.863	0.030	9	3	0	0	L
L			B		2.42Y	113.6	0.27	8.38	122.73	68	280	101	94					0	0	0	0	L
L			C		2.42Y	113.8	0.09	8.21	65.50	36	139	76	88					0	0	0	0	L
L	OH194	OH193	C	#2 ACSR 6/	2.42Y	113.8	0.01	8.21	9.29	5	20	11	88	0.00	0.0	0.882	0.019	20	11	0	0	L
L	OH195	OH193	A	#2 ACSR 6/	2.42Y	113.8	0.19	8.24	88.53	49	202	73	94	0.95	0.2	0.889	0.025	0	0	0	0	L
L			B		2.41Y	113.4	0.23	8.61	122.73	68	279	101	94					0	0	0	0	L
L			C		2.42Y	113.7	0.05	8.26	56.21	31	120	65	88					0	0	0	0	L
L	OH196	OH195	A	#2 ACSR 6/	2.42Y	113.8	0.01	8.25	7.77	4	18	6	95	0.00	0.0	0.908	0.019	18	6	0	0	L
L			C		2.42Y	113.7	0.01	8.26	6.20	3	13	7	88					13	7	0	0	L
L	OCD197	OH195	B	50A QR	2.41Y	113.4	0.00	8.61	18.56	37	42	15	94	0.00	0.0	0.889	0.000	0	0	0	0	L
L	OH198	OCD197	B	#2 ACSR 6/	2.41Y	113.3	0.04	8.65	18.56	10	42	15	94	0.01	0.0	0.913	0.025	11	4	0	0	L
L	OH199	OH198	B	#2 ACSR 6/	2.41Y	113.3	0.03	8.68	13.92	8	32	11	95	0.01	0.0	0.935	0.022	0	0	0	0	L
L	OH200	OH199	B	#2 ACSR 6/	2.41Y	113.3	0.02	8.70	13.92	8	32	11	95	0.00	0.0	0.954	0.019	11	4	0	0	L
L	OH201	OH200	B	#2 ACSR 6/	2.41Y	113.3	0.01	8.71	9.28	5	21	8	93	0.00	0.0	0.967	0.013	0	0	0	0	L
L	OH202	OH201	B	#2 ACSR 6/	2.41Y	113.3	0.01	8.72	4.64	3	11	4	94	0.00	0.0	0.995	0.028	11	4	0	0	L
L	OH204	OH201	B	#2 ACSR 6/	2.41Y	113.3	0.01	8.72	4.64	3	11	4	94	0.00	0.0	0.996	0.030	11	4	0	0	L
L	OH205	OH195	A	#2 ACSR 6/	2.42Y	113.6	0.18	8.42	80.76	45	184	67	94	0.70	0.1	0.913	0.025	0	0	0	0	L
L			B		2.41Y	113.2	0.18	8.79	104.17	58	236	85	94					11	4	0	0	L
L			C		2.42Y	113.7	0.05	8.31	50.01	28	106	58	88					7	4	0	0	L
L	OH206	OH205	A	#2 ACSR 6/	2.41Y	113.5	0.06	8.48	80.76	45	183	67	94	0.24	0.0	0.922	0.009	4	1	0	0	L
L			B		2.41Y	113.1	0.06	8.86	99.53	55	225	81	94					0	0	0	0	L
L			C		2.42Y	113.7	0.02	8.33	46.91	26	100	54	88					0	0	0	0	L
L	OH207	OH206	A	#2 ACSR 6/	2.41Y	113.3	0.23	8.71	79.21	44	180	65	94	0.90	0.2	0.956	0.034	0	0	0	0	L
L			B		2.40Y	112.9	0.24	9.10	99.53	55	225	81	94					0	0	0	0	L
L			C		2.42Y	113.6	0.06	8.39	46.91	26	100	54	88					0	0	0	0	L
L	OH208	OH207	A	#2 ACSR 6/	2.41Y	113.2	0.12	8.84	79.21	44	179	65	94	0.49	0.1	0.975	0.019	18	6	0	0	L
L			B		2.40Y	112.8	0.14	9.24	99.53	55	225	81	94					0	0	0	0	L
L			C		2.42Y	113.6	0.04	8.42	46.91	26	100	54	88					0	0	0	0	L
L	OH219	OH208	A	#2 ACSR 6/	2.40Y	113.0	0.14	8.98	40.13	22	91	33	94	0.26	0.1	1.011	0.036	0	0	0	0	L
L			B		2.39Y	112.6	0.14	9.38	53.73	30	121	44	94					0	0	0	0	L
L			C		2.42Y	113.6	0.00	8.43	15.52	9	33	18	88					0	0	0	0	L
L	OH220	OH219	A	#2 ACSR 6/	2.40Y	112.9	0.11	9.09	40.13	22	91	33	94	0.21	0.1	1.042	0.031	9	3	0	0	L
L			B		2.39Y	112.5	0.12	9.50	53.73	30	121	44	94					0	0	0	0	L
L			C		2.42Y	113.6	0.00	8.43	15.52	9	33	18	88					0	0	0	0	L
L	OCD221	OH220	C	50A QR	2.42Y	113.6	0.00	8.43	9.32	19	20	11	88	0.00	0.0	1.042	0.000	0	0	0	0	L
L	OH222	OCD221	C	#2 ACSR 6/	2.41Y	113.5	0.04	8.46	9.32	5	20	11	88	0.01	0.0	1.079	0.038	0	0	0	0	L
L	OH225	OH222	C	#2 ACSR 6/	2.41Y	113.5	0.02	8.48	9.32	5	20	11	88	0.00	0.0	1.098	0.018	0	0	0	0	L
L	OH226	OH225	C	#2 ACSR 6/	2.41Y	113.5	0.02	8.50	9.32	5	20	11	88	0.00	0.0	1.120	0.022	7	4	0	0	L
L	OH227	OH226	C	#2 ACSR 6/	2.41Y	113.5	0.00	8.50	3.11	2	7	4	87	0.00	0.0	1.147	0.027	7	4	0	0	L
L	OH229	OH226	C	#2 ACSR 6/	2.41Y	113.5	0.00	8.50	3.11	2	7	4	87	0.00	0.0	1.140	0.021	7	4	0	0	L
L	OH230	OH220	A	#2 ACSR 6/	2.40Y	112.8	0.08	9.17	36.22	20	82	30	94	0.14	0.1	1.063	0.021	0	0	0	0	L
L			B		2.39Y	112.4	0.09	9.59	53.73	30	121	44	94					0	0	0	0	L
L			C		2.42Y	113.6	-0.02	8.41	6.20	3	13	7	88					0	0	0	0	L
L	OH231	OH230	A	#2 ACSR 6/	2.40Y	112.7	0.10	9.27	36.22	20	82	30	94	0.18	0.1	1.090	0.027	0	0	0	0	L
L			B		2.39Y	112.3	0.11	9.70	53.73	30	121	44	94					0	0	0	0	L
L			C		2.42Y	113.6	-0.02	8.38	6.20	3	13	7	88					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH232	OH231	A	#2 ACSR 6/	2.40Y	112.6	0.10	9.36	36.22	20	82	30	94	0.17	0.1	1.116	0.026	0	0	0	0	L
L			B		2.39Y	112.2	0.10	9.80	53.73	30	121	43	94					0	0	0	0	L
L			C		2.42Y	113.7	-0.03	8.35	6.20	3	13	7	88					13	7	0	0	L
L	SW550-A	OH232	A	Open	2.40Y	112.6	0.00	9.36	0.00	0	0	0	100	0.00	0.0	1.116	0.000	0	0	0	0	L
L			B		2.39Y	112.2	0.00	9.80	0.00	0	0	0	100					0	0	0	0	L
L			C		2.42Y	113.7	0.00	8.35	0.00	0	0	0	100					0	0	0	0	L
L	OH233	OH232	A	#2 ACSR 6/	2.39Y	112.5	0.10	9.46	36.22	20	82	30	94	0.17	0.1	1.141	0.025	0	0	0	0	L
L			B		2.38Y	112.1	0.10	9.90	53.73	30	121	43	94					0	0	0	0	L
L			C		2.42Y	113.7	-0.04	8.31	-0.00	0	0	0						0	0	0	0	L
L	OH234	OH233	A	#2 ACSR 6/	2.39Y	112.4	0.13	9.59	36.22	20	81	30	94	0.23	0.1	1.176	0.035	9	3	0	0	L
L			B		2.38Y	112.0	0.14	10.05	53.73	30	121	43	94					0	0	0	0	L
L			C		2.42Y	113.7	-0.05	8.25	-0.00	0	0	0						0	0	0	0	L
L	OH235	OH234	A	#2 ACSR 6/	2.39Y	112.3	0.10	9.69	32.29	18	73	26	94	0.17	0.1	1.204	0.027	0	0	0	0	L
L			B		2.38Y	111.8	0.11	10.16	53.73	30	120	43	94					0	0	0	0	L
L			C		2.42Y	113.8	-0.04	8.21	-0.00	0	0	0						0	0	0	0	L
L	OCD236	OH235	A	50A QR	2.39Y	112.3	0.00	9.69	12.60	25	28	10	94	0.00	0.0	1.204	0.000	0	0	0	0	L
L			B		2.38Y	111.8	0.00	10.16	39.59	79	89	32	94					0	0	0	0	L
L	OH238	OCD236	A	#2 ACSR 6/	2.39Y	112.3	0.03	9.72	12.60	7	28	10	94	0.07	0.1	1.227	0.023	0	0	0	0	L
L			B		2.38Y	111.8	0.08	10.24	39.59	22	89	32	94					0	0	0	0	L
L	OH239	OH238	A	#2 ACSR 6/	2.39Y	112.2	0.03	9.76	12.60	7	28	10	94	0.06	0.1	1.249	0.022	0	0	0	0	L
L			B		2.38Y	111.7	0.08	10.32	39.59	22	89	32	94					0	0	0	0	L
L	OH240	OH239	A	#2 ACSR 6/	2.39Y	112.2	0.03	9.79	10.24	6	23	8	94	0.01	0.0	1.279	0.031	0	0	0	0	L
L			B		2.37Y	111.7	0.01	10.33	7.53	4	17	6	94					0	0	0	0	L
L	OH241	OH240	A	#2 ACSR 6/	2.39Y	112.2	0.03	9.81	6.30	4	14	5	94	0.00	0.0	1.320	0.040	0	0	0	0	L
L			B		2.37Y	111.7	0.01	10.34	4.71	3	11	4	94					0	0	0	0	L
L	OH242	OH241	A	#2 ACSR 6/	2.39Y	112.2	0.01	9.83	6.30	4	14	5	94	0.00	0.0	1.350	0.031	9	3	0	0	L
L			B		2.37Y	111.6	0.01	10.35	4.71	3	11	4	94					0	0	0	0	L
L	OH247	OH242	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.83	2.36	1	5	2	93	0.00	0.0	1.378	0.028	5	2	0	0	L
L	OH248	OH242	B	#2 ACSR 6/	2.37Y	111.6	0.01	10.36	4.71	3	11	4	94	0.00	0.0	1.366	0.016	0	0	0	0	L
L	OH250	OH248	B	#2 ACSR 6/	2.37Y	111.6	0.01	10.37	4.71	3	11	4	94	0.00	0.0	1.400	0.034	11	4	0	0	L
L	OH251	OH250	B	#2 ACSR 6/	2.37Y	111.6	0.00	10.37	-0.00	0	0	0		0.00	0.0	1.419	0.019	0	0	0	0	L
L	OH252	OH240	A	#2 ACSR 6/	2.39Y	112.2	0.01	9.79	3.94	2	9	3	95	0.00	0.0	1.306	0.027	9	3	0	0	L
L	OH253	OH252	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	-0.00	0	0	0	100	0.00	0.0	1.332	0.026	0	0	0	0	L
L	OH254	OH240	B	#2 ACSR 6/	2.37Y	111.7	0.00	10.33	2.82	2	6	2	95	0.00	0.0	1.299	0.019	6	2	0	0	L
L	OH255	OH239	A	#2 ACSR 6/	2.39Y	112.2	0.01	9.76	2.36	1	5	2	93	0.01	0.0	1.276	0.028	5	2	0	0	L
L			B		2.37Y	111.6	0.04	10.35	13.66	8	31	11	94					0	0	0	0	L
L	OH256	OH255	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.76	-0.00	0	0	0		0.01	0.0	1.306	0.029	0	0	0	0	L
L			B		2.37Y	111.6	0.04	10.39	13.67	8	31	11	94					0	0	0	0	L
L	OH257	OH256	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.76	-0.00	0	0	0		0.01	0.0	1.335	0.029	0	0	0	0	L
L			B		2.37Y	111.6	0.04	10.43	13.67	8	31	11	94					4	2	0	0	L
L	OH258	OH257	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.77	-0.00	0	0	0		0.00	0.0	1.354	0.019	0	0	0	0	L
L			B		2.37Y	111.6	0.02	10.45	11.78	7	26	9	94					11	4	0	0	L
L	OH259	OH258	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.77	-0.00	0	0	0		0.00	0.0	1.365	0.010	0	0	0	0	L
L			B		2.37Y	111.5	0.01	10.45	7.07	4	16	6	94					0	0	0	0	L
L	OH260	OH259	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.77	-0.00	0	0	0		0.00	0.0	1.393	0.029	0	0	0	0	L
L			B		2.37Y	111.5	0.01	10.46	7.07	4	16	6	94					16	6	0	0	L
L	OH261	OH239	A	#2 ACSR 6/	2.39Y	112.2	0.01	9.76	-0.00	0	0	0		0.03	0.1	1.301	0.052	0	0	0	0	L
L			B		2.37Y	111.6	0.09	10.41	18.40	10	41	15	94					3	1	0	0	L
L	OH262	OH261	B	#2 ACSR 6/	2.37Y	111.6	0.00	10.41	16.98	9	38	14	94	0.00	0.0	1.302	0.000	0	0	0	0	L
L	OH263	OH262	B	#2 ACSR 6/	2.37Y	111.5	0.06	10.46	16.98	9	38	14	94	0.02	0.0	1.341	0.039	11	4	0	0	L

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH264	OH263	B	#2 ACSR 6/	2.37Y	111.5	0.04	10.51	12.27	7	27	10	94	0.01	0.0	1.378	0.037	0	0	0	0	L
L	OH265	OH264	B	#2 ACSR 6/	2.37Y	111.4	0.06	10.57	12.27	7	27	10	94	0.01	0.0	1.425	0.047	0	0	0	0	L
L	OH266	OH265	B	#2 ACSR 6/	2.37Y	111.4	0.04	10.61	12.27	7	27	10	94	0.01	0.0	1.464	0.039	6	2	0	0	L
L	OH267	OH266	B	#2 ACSR 6/	2.37Y	111.4	0.03	10.63	9.44	5	21	8	93	0.00	0.0	1.503	0.039	11	4	0	0	L
L	OH268	OH267	B	#2 ACSR 6/	2.37Y	111.3	0.02	10.65	4.72	3	11	4	94	0.00	0.0	1.537	0.033	0	0	0	0	L
L	OH269	OH268	B	#2 ACSR 6/	2.37Y	111.3	0.01	10.66	4.72	3	11	4	94	0.00	0.0	1.579	0.042	11	4	0	0	L
L	OCD270	OH235	A	50A QR	2.39Y	112.3	0.00	9.69	19.69	39	44	16	94	0.00	0.0	1.204	0.000	0	0	0	0	L
L			B		2.38Y	111.8	0.00	10.16	14.14	28	32	11	94					0	0	0	0	L
L	OH271	OCD270	A	#2 ACSR 6/	2.39Y	112.3	0.01	9.70	19.69	11	44	16	94	0.01	0.0	1.210	0.007	0	0	0	0	L
L			B		2.38Y	111.8	0.01	10.17	14.14	8	32	11	94					0	0	0	0	L
L	OH272	OH271	A	#2 ACSR 6/	2.39Y	112.2	0.05	9.76	19.69	11	44	16	94	0.02	0.0	1.240	0.029	9	3	0	0	L
L			B		2.38Y	111.8	0.02	10.19	14.14	8	32	11	94					0	0	0	0	L
L	OH274	OH272	A	#2 ACSR 6/	2.39Y	112.2	0.03	9.79	15.76	9	35	13	94	0.01	0.0	1.258	0.018	0	0	0	0	L
L			B		2.38Y	111.8	0.02	10.21	14.14	8	32	11	94					0	0	0	0	L
L	OH275	OH274	A	#2 ACSR 6/	2.39Y	112.2	0.05	9.84	15.76	9	35	13	94	0.02	0.0	1.299	0.041	18	6	0	0	L
L			B		2.38Y	111.8	0.04	10.25	14.14	8	32	11	94					0	0	0	0	L
L	OH276	OH275	A	#2 ACSR 6/	2.38Y	112.1	0.02	9.85	7.88	4	18	6	95	0.00	0.0	1.319	0.021	0	0	0	0	L
L	OH277	OH276	A	#2 ACSR 6/	2.38Y	112.1	0.02	9.87	7.88	4	18	6	95	0.00	0.0	1.344	0.025	0	0	0	0	L
L	OH278	OH277	A	#2 ACSR 6/	2.38Y	112.1	0.01	9.88	7.88	4	18	6	95	0.00	0.0	1.371	0.026	18	6	0	0	L
L	OCD279	OH275	B	25A QA	2.38Y	111.8	0.00	10.25	14.14	57	32	11	95	0.00	0.0	1.299	0.000	0	0	0	0	L
L	OH280	OCD279	B	#2 ACSR 6/	2.38Y	111.7	0.04	10.29	14.14	8	32	11	95	0.01	0.0	1.329	0.031	0	0	0	0	L
L	OH281	OH280	B	#2 ACSR 6/	2.38Y	111.7	0.02	10.31	14.14	8	32	11	95	0.01	0.0	1.344	0.015	0	0	0	0	L
L	OH282	OH281	B	#2 ACSR 6/	2.37Y	111.7	0.04	10.35	14.14	8	32	11	95	0.01	0.0	1.376	0.031	11	4	0	0	L
L	OH283	OH282	B	#2 ACSR 6/	2.37Y	111.6	0.03	10.38	9.43	5	21	8	93	0.00	0.0	1.407	0.031	0	0	0	0	L
L	OH284	OH283	B	#2 ACSR 6/	2.37Y	111.6	0.02	10.39	9.43	5	21	8	93	0.00	0.0	1.428	0.021	0	0	0	0	L
L	OH285	OH284	B	#2 ACSR 6/	2.37Y	111.6	0.02	10.41	9.43	5	21	8	93	0.00	0.0	1.445	0.017	0	0	0	0	L
L	OH286	OH285	B	#2 ACSR 6/	2.37Y	111.6	0.02	10.43	9.43	5	21	8	93	0.00	0.0	1.466	0.021	0	0	0	0	L
L	OH287	OH286	B	#2 ACSR 6/	2.37Y	111.5	0.02	10.45	9.43	5	21	8	93	0.00	0.0	1.489	0.023	0	0	0	0	L
L	OH288	OH287	B	#2 ACSR 6/	2.37Y	111.5	0.03	10.49	9.43	5	21	8	93	0.01	0.0	1.526	0.038	0	0	0	0	L
L	OH289	OH288	B	#2 ACSR 6/	2.37Y	111.5	0.03	10.51	9.43	5	21	8	93	0.00	0.0	1.554	0.028	0	0	0	0	L
L	OH290	OH289	B	#2 ACSR 6/	2.37Y	111.5	0.02	10.53	9.43	5	21	8	93	0.00	0.0	1.586	0.033	21	8	0	0	L
L	OH291	OH208	A	#2 ACSR 6/	2.40Y	113.1	0.07	8.91	23.46	13	53	19	94	0.20	0.1	1.017	0.042	0	0	0	0	L
L			B		2.39Y	112.6	0.14	9.38	43.01	24	97	35	94					0	0	0	0	L
L			C		2.41Y	113.5	0.07	8.50	31.40	17	67	36	88					7	4	0	0	L
L	OH292	OH291	A	#2 ACSR 6/	2.40Y	113.1	0.03	8.94	7.82	4	18	6	95	0.01	0.0	1.064	0.048	0	0	0	0	L
L			B		2.39Y	112.6	0.03	9.41	9.34	5	21	8	94					0	0	0	0	L
L			C		2.41Y	113.5	0.01	8.51	4.66	3	10	5	88					0	0	0	0	L
L	OH293	OH292	A	#2 ACSR 6/	2.40Y	113.1	0.00	8.94	7.82	4	18	6	95	0.00	0.0	1.078	0.014	18	6	0	0	L
L			B		2.39Y	112.6	0.00	9.42	9.34	5	21	8	94					21	8	0	0	L
L			C		2.41Y	113.5	0.00	8.51	4.66	3	10	5	88					10	5	0	0	L
L	OH294	OH293	A	#2 ACSR 6/	2.40Y	113.1	0.00	8.94	-0.00	0	0	0		0.00	0.0	1.100	0.022	0	0	0	0	L
L			B		2.39Y	112.6	0.00	9.42	-0.00	0	0	0						0	0	0	0	L
L			C		2.41Y	113.5	0.00	8.51	-0.00	0	0	0						0	0	0	0	L
L	OH295	OH291	A	#2 ACSR 6/	2.40Y	113.1	0.03	8.94	15.64	9	35	13	94	0.09	0.1	1.048	0.032	0	0	0	0	L
L			B		2.39Y	112.5	0.09	9.47	33.67	19	76	27	94					0	0	0	0	L
L			C		2.41Y	113.5	0.04	8.54	23.63	13	50	27	88					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L OH296	OH295	A	#2 ACSR 6/	2.40Y	113.0	0.02	8.96	15.64	9	35	13	94	0.03	0.0	1.066	0.018	0	0	0	0	L
L		B		2.39Y	112.5	0.03	9.49	19.66	11	44	16	94					0	0	0	0	L
L		C		2.41Y	113.4	0.03	8.57	23.63	13	50	27	88					0	0	0	0	L
L OH302	OH296	A	#2 ACSR 6/	2.40Y	113.0	0.02	8.97	15.64	9	35	13	94	0.01	0.0	1.085	0.019	18	6	0	0	L
L		C		2.41Y	113.4	0.02	8.59	9.32	5	20	11	88					0	0	0	0	L
L OH303	OH302	A	#2 ACSR 6/	2.40Y	113.0	0.02	9.00	7.82	4	18	6	95	0.01	0.0	1.124	0.040	0	0	0	0	L
L		C		2.41Y	113.4	0.03	8.62	9.32	5	20	11	88					13	7	0	0	L
L OH304	OH303	A	#2 ACSR 6/	2.40Y	113.0	0.02	9.01	7.82	4	18	6	95	0.00	0.0	1.151	0.026	0	0	0	0	L
L		C		2.41Y	113.4	0.01	8.63	3.11	2	7	4	88					0	0	0	0	L
L OH305	OH304	A	#2 ACSR 6/	2.40Y	113.0	0.02	9.03	7.82	4	18	6	95	0.00	0.0	1.180	0.029	0	0	0	0	L
L		C		2.41Y	113.4	0.01	8.64	3.11	2	7	4	88					0	0	0	0	L
L OH306	OH305	A	#2 ACSR 6/	2.40Y	112.9	0.02	9.05	7.82	4	18	6	95	0.00	0.0	1.216	0.036	9	3	0	0	L
L		C		2.41Y	113.4	0.01	8.65	3.11	2	7	4	88					0	0	0	0	L
L OH307	OH306	A	#2 ACSR 6/	2.40Y	112.9	0.01	9.06	3.91	2	9	3	95	0.00	0.0	1.245	0.029	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.66	3.11	2	7	4	88					0	0	0	0	L
L OH308	OH307	A	#2 ACSR 6/	2.40Y	112.9	0.01	9.07	3.91	2	9	3	95	0.00	0.0	1.271	0.026	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.67	3.11	2	7	4	88					0	0	0	0	L
L OH309	OH308	A	#2 ACSR 6/	2.40Y	112.9	0.01	9.07	3.91	2	9	3	95	0.00	0.0	1.288	0.017	0	0	0	0	L
L		C		2.41Y	113.3	0.00	8.67	3.11	2	7	4	88					7	4	0	0	L
L OH310	OH309	A	#2 ACSR 6/	2.40Y	112.9	0.01	9.08	3.91	2	9	3	95	0.00	0.0	1.305	0.017	0	0	0	0	L
L		C		2.41Y	113.3	0.00	8.67	-0.00	0	0	0						0	0	0	0	L
L OH311	OH310	A	#2 ACSR 6/	2.40Y	112.9	0.00	9.08	3.91	2	9	3	95	0.00	0.0	1.318	0.013	9	3	0	0	L
L		C		2.41Y	113.3	0.00	8.67	-0.00	0	0	0						0	0	0	0	L
L OH312	OH311	A	#2 ACSR 6/	2.40Y	112.9	0.00	9.08	-0.00	0	0	0		0.00	0.0	1.331	0.012	0	0	0	0	L
L		C		2.41Y	113.3	0.00	8.67	-0.00	0	0	0						0	0	0	0	L
L OH313	OH296	B	#2 ACSR 6/	2.39Y	112.4	0.07	9.57	19.66	11	44	16	94	0.03	0.0	1.104	0.038	0	0	0	0	L
L		C		2.41Y	113.4	0.03	8.60	14.31	8	30	17	88					0	0	0	0	L
L OH314	OH313	B	#2 ACSR 6/	2.39Y	112.4	0.05	9.62	19.66	11	44	16	94	0.02	0.0	1.140	0.036	21	8	0	0	L
L		C		2.41Y	113.4	0.03	8.63	14.31	8	30	17	88					4	2	0	0	L
L OH315	OH314	B	#2 ACSR 6/	2.39Y	112.4	0.02	9.64	10.30	6	23	8	94	0.01	0.0	1.159	0.019	0	0	0	0	L
L		C		2.41Y	113.3	0.02	8.65	12.45	7	26	14	88					0	0	0	0	L
L OH316	OH315	B	#2 ACSR 6/	2.39Y	112.3	0.03	9.66	10.30	6	23	8	94	0.01	0.0	1.185	0.026	0	0	0	0	L
L		C		2.41Y	113.3	0.02	8.68	12.45	7	26	14	88					0	0	0	0	L
L OH317	OH316	B	#2 ACSR 6/	2.39Y	112.3	0.02	9.68	10.30	6	23	8	94	0.01	0.0	1.204	0.019	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.69	12.45	7	26	14	88					13	7	0	0	L
L OH318	OH317	B	#2 ACSR 6/	2.39Y	112.3	0.02	9.71	10.30	6	23	8	94	0.01	0.0	1.227	0.023	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.69	6.22	3	13	7	88					0	0	0	0	L
L OH319	OH318	B	#2 ACSR 6/	2.39Y	112.3	0.02	9.73	10.30	6	23	8	94	0.00	0.0	1.245	0.018	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.70	6.22	3	13	7	88					0	0	0	0	L
L OH320	OH319	B	#2 ACSR 6/	2.39Y	112.2	0.03	9.75	10.30	6	23	8	94	0.01	0.0	1.274	0.028	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.71	6.22	3	13	7	88					0	0	0	0	L
L OH321	OH320	B	#2 ACSR 6/	2.39Y	112.2	0.02	9.78	10.30	6	23	8	94	0.00	0.0	1.295	0.022	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.71	6.22	3	13	7	88					0	0	0	0	L
L OH322	OH321	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.78	2.81	2	6	2	95	0.00	0.0	1.310	0.015	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.72	6.22	3	13	7	88					0	0	0	0	L
L OH323	OH322	B	#2 ACSR 6/	2.39Y	112.2	0.01	9.79	2.81	2	6	2	95	0.00	0.0	1.335	0.025	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.74	6.22	3	13	7	88					0	0	0	0	L
L OH324	OH323	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	2.81	2	6	2	95	0.00	0.0	1.349	0.014	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.74	6.22	3	13	7	88					0	0	0	0	L
L OH325	OH324	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	2.81	2	6	2	95	0.00	0.0	1.373	0.024	6	2	0	0	L
L		C		2.41Y	113.3	-0.00	8.74	-0.00	0	0	0						0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
L OH326	OH325	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	-0.00	0	0	0		0.00	0.0	1.399	0.025	0	0	0	0	L
L		C		2.41Y	113.3	0.00	8.74	-0.00	0	0	0						0	0	0	0	L
L OH327	OH324	C	#2 ACSR 6/	2.41Y	113.2	0.01	8.75	6.23	3	13	7	88	0.00	0.0	1.369	0.020	7	4	0	0	L
L OH328	OH327	C	#2 ACSR 6/	2.41Y	113.2	0.01	8.76	3.11	2	7	4	87	0.00	0.0	1.407	0.037	0	0	0	0	L
L OH329	OH328	C	#2 ACSR 6/	2.41Y	113.2	0.00	8.77	3.11	2	7	4	87	0.00	0.0	1.422	0.015	7	4	0	0	L
L OH330	OH321	B	#2 ACSR 6/	2.39Y	112.2	0.01	9.79	7.49	4	17	6	94	0.00	0.0	1.317	0.022	11	4	0	0	L
L OH331	OH330	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	2.81	2	6	2	95	0.00	0.0	1.336	0.019	6	2	0	0	L
L OH298	OH295	B	#2 ACSR 6/	2.39Y	112.5	0.02	9.49	14.02	8	32	11	95	0.00	0.0	1.067	0.018	21	8	0	0	L
L OH300	OH298	B	#2 ACSR 6/	2.39Y	112.5	0.02	9.50	4.67	3	11	4	94	0.00	0.0	1.109	0.043	0	0	0	0	L
L OH301	OH300	B	#2 ACSR 6/	2.39Y	112.5	0.00	9.51	4.67	3	11	4	94	0.00	0.0	1.125	0.016	11	4	0	0	L
L OCD209	OH208	A	50A QR	2.41Y	113.2	0.00	8.84	7.81	16	18	6	95	0.00	0.0	0.975	0.000	0	0	0	0	L
L		B		2.40Y	112.8	0.00	9.24	2.80	6	6	2	94					0	0	0	0	L
L OH211	OCD209	A	#2 ACSR 6/	2.41Y	113.2	0.00	8.84	7.81	4	18	6	95	0.00	0.0	0.980	0.005	0	0	0	0	L
L		B		2.40Y	112.8	0.00	9.24	2.80	2	6	2	94					0	0	0	0	L
L OH212	OH211	A	#2 ACSR 6/	2.41Y	113.1	0.03	8.87	7.81	4	18	6	95	0.00	0.0	1.013	0.033	0	0	0	0	L
L		B		2.40Y	112.8	-0.00	9.23	2.80	2	6	2	94					6	2	0	0	L
L OH213	OH212	A	#2 ACSR 6/	2.41Y	113.1	0.01	8.88	7.81	4	18	6	95	0.00	0.0	1.046	0.033	18	6	0	0	L
L		B		2.40Y	112.8	-0.00	9.23	-0.00	0	0	0						0	0	0	0	L
L OH214	OH213	A	#2 ACSR 6/	2.41Y	113.1	0.00	8.88	-0.00	0	0	0		0.00	0.0	1.056	0.009	0	0	0	0	L
L		B		2.40Y	112.8	0.00	9.23	-0.00	0	0	0						0	0	0	0	L
L OH215	OH214	A	#2 ACSR 6/	2.41Y	113.1	0.00	8.88	-0.00	0	0	0		0.00	0.0	1.081	0.025	0	0	0	0	L
L		B		2.40Y	112.8	0.00	9.23	-0.00	0	0	0						0	0	0	0	L
L OH92	OH91	A	#2 ACSR 6/	2.44Y	114.8	0.03	7.18	41.49	23	95	35	94	0.02	0.0	0.756	0.008	3	1	0	0	L
L		B		2.44Y	114.7	-0.01	7.32	6.41	4	15	5	94					0	0	0	0	L
L		C		2.43Y	114.1	0.01	7.86	6.17	3	13	7	88					0	0	0	0	L
L OH93	OH92	A	#2 ACSR 6/	2.44Y	114.7	0.12	7.30	40.33	22	92	34	94	0.09	0.1	0.788	0.032	0	0	0	0	L
L		B		2.44Y	114.7	-0.02	7.29	6.41	4	15	5	94					0	0	0	0	L
L		C		2.43Y	114.1	0.02	7.88	6.17	3	13	7	88					0	0	0	0	L
L OH332	OH93	C	#2 ACSR 6/	2.43Y	114.1	0.00	7.89	1.85	1	4	2	89	0.00	0.0	0.817	0.028	4	2	0	0	L
L OH94	OH93	A	#2 ACSR 6/	2.44Y	114.6	0.10	7.40	40.33	22	92	34	94	0.07	0.1	0.815	0.027	9	3	0	0	L
L		B		2.44Y	114.7	-0.02	7.28	6.41	4	15	5	94					0	0	0	0	L
L		C		2.43Y	114.1	0.01	7.90	4.32	2	9	5	88					0	0	0	0	L
L OH95	OH94	A	#2 ACSR 6/	2.44Y	114.5	0.09	7.49	36.48	20	83	31	94	0.06	0.1	0.841	0.026	0	0	0	0	L
L		B		2.44Y	114.7	-0.02	7.26	6.41	4	15	5	94					0	0	0	0	L
L		C		2.43Y	114.1	0.01	7.91	4.32	2	9	5	88					0	0	0	0	L
L OH334	OH95	A	#2 ACSR 6/	2.43Y	114.4	0.08	7.57	36.48	20	83	31	94	0.05	0.0	0.864	0.023	0	0	0	0	L
L		B		2.44Y	114.8	-0.02	7.24	6.41	4	15	5	94					11	4	0	0	L
L		C		2.43Y	114.1	0.01	7.92	4.32	2	9	5	88					0	0	0	0	L
L OH335	OH334	A	#2 ACSR 6/	2.43Y	114.3	0.10	7.67	36.48	20	83	30	94	0.06	0.1	0.892	0.028	0	0	0	0	L
L		B		2.44Y	114.8	-0.03	7.21	1.83	1	4	1	94					0	0	0	0	L
L		C		2.43Y	114.1	0.02	7.94	4.32	2	9	5	88					0	0	0	0	L
L OH336	OH335	A	#2 ACSR 6/	2.43Y	114.3	0.08	7.74	36.48	20	83	30	94	0.05	0.1	0.917	0.025	18	6	0	0	L
L		B		2.44Y	114.8	-0.02	7.19	1.83	1	4	1	94					0	0	0	0	L
L		C		2.43Y	114.0	0.01	7.95	4.32	2	9	5	88					0	0	0	0	L
L OH337	OH336	A	#2 ACSR 6/	2.43Y	114.2	0.03	7.78	28.75	16	66	24	94	0.02	0.0	0.929	0.012	0	0	0	0	L
L		B		2.44Y	114.8	-0.01	7.18	1.83	1	4	1	94					0	0	0	0	L
L		C		2.43Y	114.0	0.01	7.96	4.32	2	9	5	88					0	0	0	0	L
L OH338	OH337	A	#2 ACSR 6/	2.43Y	114.2	0.03	7.80	28.75	16	66	24	94	0.02	0.0	0.940	0.011	0	0	0	0	L
L		B		2.44Y	114.8	-0.01	7.17	1.83	1	4	1	94					0	0	0	0	L
L		C		2.43Y	114.0	0.01	7.97	4.32	2	9	5	88					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH339	OH338	A	#2 ACSR 6/	2.43Y	114.1	0.13	7.93	28.75	16	66	24	94	0.07	0.1	0.989	0.049	4	1	0	0	L
L			B		2.44Y	114.9	-0.04	7.13	1.83	1	4	1	94					4	2	0	0	L
L			C		2.42Y	114.0	0.03	7.99	4.32	2	9	5	88					3	1	0	0	L
L	OH340	OH339	A	#2 ACSR 6/	2.43Y	114.1	0.00	7.94	3.87	2	9	3	95	0.00	0.0	1.004	0.015	9	3	0	0	L
L			C		2.42Y	114.0	0.00	7.99	-0.00	0	0	0						0	0	0	0	L
L	OH341	OH339	A	#2 ACSR 6/	2.42Y	114.0	0.05	7.98	23.32	13	53	19	94	0.02	0.0	1.011	0.023	0	0	0	0	L
L			B		2.44Y	114.9	-0.02	7.12	-0.01	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.01	8.00	3.09	2	7	4	88					0	0	0	0	L
L	OH342	OH341	A	#2 ACSR 6/	2.42Y	114.0	0.06	8.04	23.32	13	53	19	94	0.03	0.0	1.038	0.026	0	0	0	0	L
L			B		2.44Y	114.9	-0.02	7.09	-0.01	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.01	8.01	3.09	2	7	4	88					0	0	0	0	L
L	OH343	OH342	A	#2 ACSR 6/	2.42Y	113.9	0.06	8.10	23.32	13	53	19	94	0.03	0.0	1.064	0.026	0	0	0	0	L
L			B		2.44Y	114.9	-0.02	7.07	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.01	8.03	3.09	2	7	4	88					0	0	0	0	L
L	OH344	OH343	A	#2 ACSR 6/	2.42Y	113.8	0.07	8.17	23.32	13	53	19	94	0.03	0.1	1.097	0.033	0	0	0	0	L
L			B		2.44Y	115.0	-0.03	7.05	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.01	8.04	3.09	2	7	4	88					7	4	0	0	L
L	OH345	OH344	A	#2 ACSR 6/	2.42Y	113.8	0.05	8.22	23.33	13	53	19	94	0.02	0.0	1.119	0.022	0	0	0	0	L
L			B		2.44Y	115.0	-0.02	7.03	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.04	-0.01	0	0	0						0	0	0	0	L
L	OH346	OH345	A	#2 ACSR 6/	2.42Y	113.7	0.07	8.29	19.44	11	44	16	94	0.03	0.1	1.157	0.038	0	0	0	0	L
L			B		2.45Y	115.0	-0.02	7.01	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.04	-0.00	0	0	0						0	0	0	0	L
L	OH347	OH346	A	#2 ACSR 6/	2.42Y	113.7	0.05	8.34	19.44	11	44	16	94	0.02	0.0	1.185	0.028	9	3	0	0	L
L			B		2.45Y	115.0	-0.02	6.99	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L	OH348	OH347	A	#2 ACSR 6/	2.42Y	113.7	0.00	8.34	-0.00	0	0	0		0.00	0.0	1.218	0.033	0	0	0	0	L
L			B		2.45Y	115.0	0.00	6.99	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0	0					0	0	0	0	L
L	OH349	OH347	A	#2 ACSR 6/	2.42Y	113.6	0.02	8.36	7.78	4	18	6	95	0.00	0.0	1.212	0.027	0	0	0	0	L
L	OH350	OH349	A	#2 ACSR 6/	2.42Y	113.6	0.02	8.38	7.78	4	18	6	95	0.00	0.0	1.233	0.021	0	0	0	0	L
L	OH352	OH350	A	#2 ACSR 6/	2.42Y	113.6	0.02	8.40	7.78	4	18	6	95	0.00	0.0	1.267	0.034	9	3	0	0	L
L	OH353	OH352	A	#2 ACSR 6/	2.42Y	113.6	0.00	8.40	3.89	2	9	3	95	0.00	0.0	1.290	0.022	9	3	0	0	L
L	OH354	OH347	A	#2 ACSR 6/	2.42Y	113.6	0.03	8.37	7.78	4	18	6	95	0.00	0.0	1.223	0.038	0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L	OH355	OH354	A	#2 ACSR 6/	2.42Y	113.6	0.01	8.38	7.78	4	18	6	95	0.00	0.0	1.252	0.029	18	6	0	0	L
L			C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L	OH358	OH355	A	#2 ACSR 6/	2.42Y	113.6	0.00	8.38	-0.00	0	0	0		0.00	0.0	1.265	0.013	0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L	OH359	OH358	A	#2 ACSR 6/	2.42Y	113.6	0.00	8.38	-0.00	0	0	0		0.00	0.0	1.293	0.028	0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L	OH360	OH345	A	#2 ACSR 6/	2.42Y	113.8	0.00	8.23	3.88	2	9	3	95	0.00	0.0	1.142	0.022	9	3	0	0	L
L			C		2.42Y	114.0	0.00	8.04	-0.00	0	0	0						0	0	0	0	L
L	OH361	OH360	A	#2 ACSR 6/	2.42Y	113.8	0.00	8.23	-0.00	0	0	0		0.00	0.0	1.205	0.063	0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.04	-0.00	0	0	0						0	0	0	0	L

----------- Feeder No. 124 (CB 124) Beginning with Device CB 124 -----------

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	CB 124	OH42	A	560 VWE	2.48Y	116.5	0.00	5.46	22.98	0	55	16	96	0.00	0.0	0.602	0.000	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	44.44	0	95	54	87					0	0	0	0	L
L			C		2.44Y	114.8	0.00	7.23	44.21	0	100	40	93					0	0	0	0	L
	OH126	CB 124	A	#2 ACSR 6/	2.48Y	116.5	0.01	5.47	22.98	13	55	16	96	0.11	0.0	0.618	0.016	0	0	0	0	
L			B		2.46Y	115.9	0.06	6.13	44.44	25	95	54	87					0	0	0	0	L
L			C		2.44Y	114.7	0.05	7.28	44.21	25	100	40	93					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH129	OH126	A	#2 ACSR 6/	2.48Y	116.5	0.02	5.49	22.98	13	55	16	96	0.20	0.1	0.649	0.031	0	0	0	0
L		B		2.46Y	115.8	0.12	6.25	44.44	25	95	54	87					0	0	0	0 L
L		C		2.44Y	114.6	0.10	7.38	44.21	25	100	40	93					0	0	0	0 L
OH130	OH129	A	#2 ACSR 6/	2.48Y	116.5	0.03	5.52	22.98	13	55	16	96	0.25	0.1	0.687	0.038	0	0	0	0
L		B		2.46Y	115.6	0.15	6.40	44.44	25	95	54	87					0	0	0	0 L
L		C		2.43Y	114.5	0.12	7.50	44.21	25	100	40	93					0	0	0	0 L
OH455	OH130	A	#2 ACSR 6/	2.48Y	116.5	0.00	5.52	0.71	0	2	0	100	0.00	0.0	0.715	0.028	2	0	0	0
OH138	OH130	A	#2 ACSR 6/	2.48Y	116.5	0.03	5.55	22.27	12	53	15	96	0.22	0.1	0.722	0.034	0	0	0	0
L		B		2.46Y	115.5	0.14	6.53	44.44	25	95	54	87					0	0	0	0 L
L		C		2.43Y	114.4	0.11	7.61	44.21	25	100	40	93					0	0	0	0 L
OH139	OH138	A	#2 ACSR 6/	2.48Y	116.4	0.06	5.61	22.27	12	53	15	96	0.51	0.2	0.800	0.078	0	0	0	0
L		B		2.45Y	115.2	0.31	6.84	44.44	25	95	54	87					0	0	0	0 L
L		C		2.43Y	114.1	0.25	7.86	44.21	25	100	40	93					0	0	0	0 L
OCD141	OH139	A	50A QR	2.48Y	116.4	0.00	5.61	22.28	45	53	15	96	0.00	0.0	0.800	0.000	0	0	0	0
L		B		2.45Y	115.2	0.00	6.84	44.44	89	95	54	87					0	0	0	0 L
L		C		2.43Y	114.1	0.00	7.86	44.21	88	100	39	93					0	0	0	0 L
OH142	OCD141	A	#2 ACSR 6/	2.47Y	116.4	0.02	5.62	22.28	12	53	15	96	0.17	0.1	0.825	0.026	0	0	0	0
L		B		2.45Y	115.1	0.10	6.94	44.44	25	95	54	87					0	0	0	0 L
L		C		2.43Y	114.1	0.08	7.94	44.21	25	100	39	93					0	0	0	0 L
OH143	OH142	A	#2 ACSR 6/	2.47Y	116.4	0.02	5.64	22.28	12	53	15	96	0.18	0.1	0.853	0.027	0	0	0	0
L		B		2.44Y	115.0	0.11	7.05	44.44	25	95	54	87					0	0	0	0 L
L		C		2.42Y	114.0	0.09	8.03	44.21	25	100	39	93					0	0	0	0 L
OH144	OH143	A	#2 ACSR 6/	2.47Y	116.3	0.02	5.67	22.28	12	53	15	96	0.21	0.1	0.885	0.033	0	0	0	0
L		B		2.44Y	114.8	0.13	7.18	44.44	25	94	54	87					0	0	0	0 L
L		C		2.42Y	113.9	0.10	8.13	44.21	25	100	39	93					0	0	0	0 L
OH456	OH144	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	1.77	1	4	1	97	0.00	0.0	0.906	0.021	0	0	0	0
L		B		2.44Y	114.8	0.00	7.18	1.75	1	4	2	87					4	2	0	0 L
OH457	OH456	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.68	1.77	1	4	1	97	0.00	0.0	0.933	0.027	0	0	0	0
L		B		2.44Y	114.8	-0.00	7.18	-0.00	0	0	0						0	0	0	0 L
OH458	OH457	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.68	1.77	1	4	1	97	0.00	0.0	0.954	0.021	4	1	0	0
OH459	OH144	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.67	5.31	3	13	4	96	0.00	0.0	0.895	0.010	0	0	0	0
L		B		2.44Y	114.8	-0.00	7.18	1.17	1	2	1	87					2	1	0	0 L
OH460	OH459	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.68	5.31	3	13	4	96	0.00	0.0	0.915	0.020	0	0	0	0
L		B		2.44Y	114.8	-0.00	7.17	-0.00	0	0	0						0	0	0	0 L
OH461	OH460	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.69	5.31	3	13	4	96	0.00	0.0	0.940	0.025	4	1	0	0
L		B		2.44Y	114.8	-0.00	7.17	-0.00	0	0	0						0	0	0	0 L
OH462	OH461	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.70	3.54	2	8	2	97	0.00	0.0	0.965	0.025	0	0	0	0
OH463	OH462	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.71	3.54	2	8	2	97	0.00	0.0	0.990	0.026	0	0	0	0
OH465	OH463	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.71	1.77	1	4	1	97	0.00	0.0	1.012	0.022	4	1	0	0
OH466	OH463	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.71	1.77	1	4	1	97	0.00	0.0	1.001	0.011	0	0	0	0
OH467	OH466	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.72	1.77	1	4	1	97	0.00	0.0	1.039	0.038	4	1	0	0
OH145	OH144	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	15.20	8	36	11	96	0.22	0.1	0.923	0.037	0	0	0	0
L		B		2.44Y	114.7	0.14	7.32	41.52	23	88	50	87					6	4	0	0 L
L		C		2.42Y	113.7	0.12	8.25	44.21	25	100	39	93					0	0	0	0 L
OH146	OH145	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	15.20	8	36	11	96	0.19	0.1	0.957	0.034	0	0	0	0
L		B		2.44Y	114.6	0.12	7.44	38.59	21	82	47	87					2	1	0	0 L
L		C		2.42Y	113.6	0.11	8.36	44.21	25	99	39	93					0	0	0	0 L
OH147	OH146	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	15.20	8	36	11	96	0.16	0.1	0.986	0.029	0	0	0	0
L		B		2.43Y	114.5	0.10	7.54	37.42	21	79	45	87					0	0	0	0 L
L		C		2.41Y	113.5	0.10	8.46	44.21	25	99	39	93					0	0	0	0 L
OH468	OH147	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.68	1.77	1	4	1	97	0.00	0.0	1.008	0.022	0	0	0	0
OH469	OH468	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.68	1.77	1	4	1	97	0.00	0.0	1.036	0.028	4	1	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OCD470	OH147	B	50A QR	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.00	0.0	0.986	0.000	0	0	0	0	L
L			C		2.41Y	113.5	0.00	8.46	13.93	28	31	12	93					0	0	0	0	L
L	OH471	OCD470	B	#2 ACSR 6/	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.01	0.0	1.021	0.036	0	0	0	0	L
L			C		2.41Y	113.5	0.05	8.51	13.93	8	31	12	93					0	0	0	0	L
L	OH472	OH471	C	#2 ACSR 6/	2.41Y	113.5	0.00	8.51	-0.00	0	0	0		0.00	0.0	1.039	0.017	0	0	0	0	L
L	OH473	OH471	B	#2 ACSR 6/	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.01	0.0	1.051	0.029	0	0	0	0	L
L			C		2.41Y	113.5	0.04	8.55	13.93	8	31	12	93					0	0	0	0	L
L	OH474	OH473	C	#2 ACSR 6/	2.41Y	113.4	0.00	8.55	2.32	1	5	2	93	0.00	0.0	1.076	0.026	5	2	0	0	L
L	OH475	OH473	B	#2 ACSR 6/	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.00	0.0	1.062	0.011	0	0	0	0	L
L			C		2.41Y	113.4	0.01	8.56	11.61	6	26	10	93					0	0	0	0	L
L	OH476	OH475	B	#2 ACSR 6/	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.01	0.0	1.105	0.043	0	0	0	0	L
L			C		2.41Y	113.4	0.05	8.61	11.61	6	26	10	93					0	0	0	0	L
L	OH477	OH476	C	#2 ACSR 6/	2.41Y	113.3	0.07	8.68	11.61	6	26	10	93	0.01	0.0	1.189	0.085	13	5	0	0	L
L	OH478	OH477	C	#2 ACSR 6/	2.41Y	113.3	0.02	8.70	5.80	3	13	5	93	0.00	0.0	1.216	0.027	0	0	0	0	L
L	OH479	OH478	C	#2 ACSR 6/	2.41Y	113.3	0.01	8.71	5.81	3	13	5	93	0.00	0.0	1.247	0.030	13	5	0	0	L
	OH148	OH147	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.68	13.43	7	32	9	96	0.06	0.0	1.003	0.017	2	0	0	0	
L			B		2.43Y	114.4	0.06	7.60	37.43	21	79	45	87					0	0	0	0	L
L			C		2.41Y	113.5	0.03	8.49	30.29	17	68	27	93					0	0	0	0	L
	OH149	OH148	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.69	12.73	7	30	9	96	0.13	0.1	1.037	0.034	0	0	0	0	
L			B		2.43Y	114.3	0.12	7.72	37.43	21	79	45	87					0	0	0	0	L
L			C		2.41Y	113.4	0.07	8.56	30.29	17	68	27	93					0	0	0	0	L
	OH150	OH149	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.70	12.73	7	30	9	96	0.13	0.1	1.072	0.034	0	0	0	0	
L			B		2.43Y	114.2	0.12	7.84	37.43	21	79	45	87					0	0	0	0	L
L			C		2.41Y	113.4	0.07	8.63	30.29	17	68	27	93					0	0	0	0	L
	OH480	OH150	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.70	6.02	3	14	4	96	0.00	0.0	1.086	0.015	0	0	0	0	
	OH481	OH480	A	#2 ACSR 6/	2.47Y	116.3	0.02	5.72	6.02	3	14	4	96	0.00	0.0	1.136	0.050	8	2	0	0	
	OH482	OH481	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.73	2.48	1	6	2	95	0.00	0.0	1.161	0.025	2	0	0	0	
	OH483	OH482	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.73	1.77	1	4	1	97	0.00	0.0	1.183	0.022	0	0	0	0	
	OH484	OH483	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.74	1.77	1	4	1	97	0.00	0.0	1.208	0.025	4	1	0	0	
	OH151	OH150	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.69	6.71	4	16	5	95	0.07	0.0	1.090	0.018	2	0	0	0	
L			B		2.43Y	114.1	0.07	7.90	37.43	21	79	45	87					0	0	0	0	L
L			C		2.41Y	113.3	0.03	8.66	30.29	17	68	27	93					5	2	0	0	L
	OH152	OH151	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.68	6.00	3	14	4	96	0.09	0.1	1.114	0.025	0	0	0	0	
L			B		2.42Y	114.0	0.09	7.99	37.43	21	79	45	87					0	0	0	0	L
L			C		2.41Y	113.3	0.04	8.70	27.97	16	63	25	93					0	0	0	0	L
	OH153	OH152	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.68	6.00	3	14	4	96	0.09	0.1	1.140	0.026	0	0	0	0	
L			B		2.42Y	113.9	0.10	8.09	37.43	21	79	45	87					0	0	0	0	L
L			C		2.41Y	113.3	0.04	8.74	27.97	16	63	25	93					0	0	0	0	L
	OH485	OH153	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.68	0.71	0	2	0	100	0.00	0.0	1.150	0.009	2	0	0	0	
L			B		2.42Y	113.9	0.00	8.09	2.95	2	6	4	87					6	4	0	0	L
	OH154	OH153	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.67	5.30	3	13	4	96	0.08	0.1	1.166	0.026	0	0	0	0	
L			B		2.42Y	113.8	0.09	8.18	34.48	19	73	41	87					6	4	0	0	L
L			C		2.41Y	113.2	0.05	8.78	27.97	16	63	25	93					0	0	0	0	L
	OH156	OH154	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.65	5.30	3	13	4	96	0.08	0.1	1.194	0.028	3	1	0	0	
L			B		2.42Y	113.7	0.09	8.26	31.53	18	66	38	87					0	0	0	0	L
L			C		2.41Y	113.2	0.05	8.83	27.97	16	63	25	93					0	0	0	0	L
	OH157	OH156	A	#2 ACSR 6/	2.47Y	116.4	-0.01	5.64	4.24	2	10	3	96	0.08	0.1	1.221	0.027	0	0	0	0	
L			B		2.42Y	113.7	0.09	8.35	31.53	18	66	38	87					0	0	0	0	L
L			C		2.41Y	113.1	0.05	8.88	27.97	16	63	25	93					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	OH158	OH157	A	#2 ACSR 6/	2.47Y	116.4	-0.01	5.63	4.24	2	10	3	96	0.06	0.0	1.246	0.025	0	0	0	0	
L			B		2.42Y	113.6	0.08	8.43	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	113.1	0.04	8.92	27.97	16	63	25	93					13	5	0	0	L
	OH159	OH158	A	#2 ACSR 6/	2.47Y	116.4	-0.01	5.63	4.24	2	10	3	96	0.05	0.0	1.268	0.022	0	0	0	0	
L			B		2.41Y	113.5	0.07	8.50	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	113.1	0.03	8.95	22.15	12	50	19	93					0	0	0	0	L
	OH160	OH159	A	#2 ACSR 6/	2.47Y	116.4	-0.01	5.62	4.24	2	10	3	96	0.06	0.0	1.293	0.025	0	0	0	0	
L			B		2.41Y	113.4	0.08	8.57	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	113.0	0.03	8.98	22.15	12	50	19	93					0	0	0	0	L
	OH161	OH160	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.61	4.24	2	10	3	96	0.05	0.0	1.314	0.021	2	0	0	0	
L			B		2.41Y	113.4	0.07	8.64	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	113.0	0.03	9.00	22.15	12	50	19	93					0	0	0	0	L
	OH163	OH161	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.61	-0.00	0	0	0		0.00	0.0	1.322	0.008	0	0	0	0	
L			B		2.41Y	113.4	0.00	8.64	-0.00	0	0	0						0	0	0	0	L
L			C		2.40Y	113.0	0.00	9.00	-0.00	0	0	0						0	0	0	0	L
	OH164	OH163	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.61	-0.00	0	0	0		0.00	0.0	1.329	0.007	0	0	0	0	
L			B		2.41Y	113.4	0.00	8.64	-0.00	0	0	0						0	0	0	0	L
L			C		2.40Y	113.0	0.00	9.00	-0.00	0	0	0						0	0	0	0	L
	OH165	OH161	A	#2 ACSR 6/	2.48Y	116.4	-0.02	5.60	3.53	2	8	2	97	0.10	0.1	1.357	0.043	0	0	0	0	
L			B		2.41Y	113.2	0.14	8.78	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	112.9	0.05	9.06	22.15	12	50	19	93					0	0	0	0	L
	OH166	OH165	A	#2 ACSR 6/	2.48Y	116.4	-0.00	5.59	3.53	2	8	2	97	0.02	0.0	1.367	0.010	0	0	0	0	
L			B		2.41Y	113.2	0.03	8.81	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	112.9	0.01	9.07	22.15	12	50	19	93					4	2	0	0	L
	OH167	OH166	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.59	-0.00	0	0	0		0.00	0.0	1.392	0.026	0	0	0	0	
L			B		2.41Y	113.2	0.01	8.82	6.53	4	14	8	87					6	4	0	0	L
L			C		2.40Y	112.9	-0.00	9.06	-0.00	0	0	0						0	0	0	0	L
L	OH168	OH167	B	#2 ACSR 6/	2.41Y	113.2	0.01	8.82	3.56	2	7	4	87	0.00	0.0	1.412	0.020	4	2	0	0	L
L	OH712	OH168	B	#2 ACSR 6/	2.41Y	113.2	0.00	8.83	1.78	1	4	2	89	0.00	0.0	1.452	0.040	4	2	0	0	L
	OH169	OH166	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.59	3.53	2	8	2	97	0.03	0.0	1.387	0.021	0	0	0	0	
L			B		2.41Y	113.1	0.05	8.86	25.01	14	52	30	87					0	0	0	0	L
L			C		2.40Y	112.9	0.03	9.09	20.41	11	46	18	93					0	0	0	0	L
	OH170	OH169	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.58	3.53	2	8	2	97	0.04	0.0	1.414	0.027	0	0	0	0	
L			B		2.40Y	113.1	0.07	8.93	25.01	14	52	30	87					0	0	0	0	L
L			C		2.40Y	112.9	0.03	9.13	20.41	11	46	18	93					0	0	0	0	L
L	OH486	OH170	B	#2 ACSR 6/	2.40Y	113.1	0.00	8.93	1.19	1	2	1	89	0.00	0.0	1.444	0.030	2	1	0	0	L
	OH171	OH170	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.57	3.53	2	8	2	97	0.04	0.0	1.439	0.025	0	0	0	0	
L			B		2.40Y	113.0	0.06	8.98	23.82	13	50	28	87					0	0	0	0	L
L			C		2.40Y	112.8	0.03	9.16	20.41	11	46	18	93					0	0	0	0	L
	OH172	OH171	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.57	3.53	2	8	2	97	0.03	0.0	1.458	0.019	0	0	0	0	
L			B		2.40Y	113.0	0.04	9.03	23.82	13	50	28	87					4	2	0	0	L
L			C		2.40Y	112.8	0.02	9.18	20.41	11	46	18	93					0	0	0	0	L
L	OCD488	OH172	C	50A QR	2.40Y	112.8	0.00	9.18	14.58	29	33	13	93	0.00	0.0	1.458	0.000	0	0	0	0	L
L	OH489	OCD488	C	#2 ACSR 6/	2.40Y	112.8	0.03	9.21	14.58	8	33	13	93	0.01	0.0	1.484	0.026	13	5	0	0	L
L	OH490	OH489	C	#2 ACSR 6/	2.40Y	112.8	0.02	9.23	8.75	5	20	8	93	0.00	0.0	1.509	0.025	4	2	0	0	L
L	OH491	OH490	C	#2 ACSR 6/	2.40Y	112.8	0.01	9.24	7.00	4	16	6	94	0.00	0.0	1.530	0.021	8	3	0	0	L
L	OH492	OH491	C	#2 ACSR 6/	2.40Y	112.8	0.00	9.25	3.50	2	8	3	94	0.00	0.0	1.548	0.018	8	3	0	0	L
	OH173	OH172	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.57	3.53	2	8	2	97	0.02	0.0	1.485	0.027	0	0	0	0	
L			B		2.40Y	112.9	0.06	9.08	22.04	12	46	26	87					0	0	0	0	L
L			C		2.40Y	112.8	-0.00	9.18	5.83	3	13	5	93					0	0	0	0	L
	OH174	OH173	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.57	3.53	2	8	2	97	0.01	0.0	1.497	0.012	0	0	0	0	
L			B		2.40Y	112.9	0.03	9.11	22.04	12	46	26	87					0	0	0	0	L
L			C		2.40Y	112.8	-0.00	9.18	5.83	3	13	5	93					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
OH175	OH174	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.57	3.53	2	8	2	97	0.01	0.0	1.507	0.010	0	0	0	0	
L		B		2.40Y	112.9	0.02	9.13	22.04	12	46	26	87					0	0	0	0	L
L		C		2.40Y	112.8	-0.00	9.18	5.83	3	13	5	93					0	0	0	0	L
OH176	OH175	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	3.53	2	8	2	97	0.02	0.0	1.526	0.019	0	0	0	0	
L		B		2.40Y	112.8	0.04	9.17	22.04	12	46	26	87					0	0	0	0	L
L		C		2.40Y	112.8	-0.00	9.18	5.83	3	13	5	93					0	0	0	0	L
OH493	OH176	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	2.83	2	7	2	96	0.00	0.0	1.552	0.026	4	1	0	0	
L		B		2.40Y	112.8	0.01	9.18	5.95	3	12	7	87					6	4	0	0	L
L		C		2.40Y	112.8	0.00	9.18	5.83	3	13	5	93					13	5	0	0	L
OH494	OH493	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	1.06	1	3	1	95	0.00	0.0	1.576	0.024	0	0	0	0	
L		B		2.40Y	112.8	0.01	9.19	2.98	2	6	4	87					0	0	0	0	L
L		C		2.40Y	112.8	-0.00	9.18	-0.00	0	0	0						0	0	0	0	L
OH495	OH494	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	1.06	1	3	1	95	0.00	0.0	1.599	0.023	3	1	0	0	
L		B		2.40Y	112.8	0.01	9.19	2.98	2	6	4	87					0	0	0	0	L
OH496	OH495	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.617	0.018	0	0	0	0	
L		B		2.40Y	112.8	0.01	9.20	2.98	2	6	4	87					0	0	0	0	L
OH497	OH496	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.629	0.012	0	0	0	0	
L		B		2.40Y	112.8	0.00	9.20	2.98	2	6	4	87					6	4	0	0	L
OH498	OH176	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	0.71	0	2	0	100	0.01	0.0	1.563	0.037	2	0	0	0	
L		B		2.40Y	112.8	0.05	9.23	16.09	9	33	19	87					6	4	0	0	L
L		C		2.40Y	112.8	-0.02	9.16	-0.00	0	0	0						0	0	0	0	L
OH502	OH498	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.01	0.0	1.599	0.035	0	0	0	0	
L		B		2.40Y	112.7	0.04	9.27	13.11	7	27	16	87					6	4	0	0	L
L		C		2.40Y	112.9	-0.01	9.15	-0.00	0	0	0						0	0	0	0	L
L OH507	OH502	B	#2 ACSR 6/	2.40Y	112.7	0.04	9.30	10.13	6	21	12	87	0.01	0.0	1.636	0.037	2	1	0	0	L
L OH508	OH507	B	#2 ACSR 6/	2.40Y	112.7	0.01	9.32	8.94	5	19	11	87	0.00	0.0	1.655	0.019	6	4	0	0	L
L OH509	OH508	B	#2 ACSR 6/	2.40Y	112.7	0.01	9.32	5.96	3	12	7	86	0.00	0.0	1.667	0.013	0	0	0	0	L
L OH510	OH509	B	#2 ACSR 6/	2.40Y	112.7	0.01	9.33	5.96	3	12	7	86	0.00	0.0	1.700	0.032	12	7	0	0	L
OH177	OH176	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.548	0.022	0	0	0	0	
L		B		2.40Y	112.8	0.00	9.17	-0.00	0	0	0						0	0	0	0	L
L		C		2.40Y	112.8	0.00	9.18	-0.00	0	0	0						0	0	0	0	L
OH178	OH177	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.568	0.020	0	0	0	0	
L		B		2.40Y	112.8	0.00	9.17	-0.00	0	0	0						0	0	0	0	L
L		C		2.40Y	112.8	0.00	9.18	-0.00	0	0	0						0	0	0	0	L
OH179	OH178	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.583	0.015	0	0	0	0	
L		B		2.40Y	112.8	0.00	9.17	-0.00	0	0	0						0	0	0	0	L
L		C		2.40Y	112.8	0.00	9.18	-0.00	0	0	0						0	0	0	0	L
OH43	OH42	A	500 MCM Hd	2.48Y	116.5	0.00	5.46	81.32	10	184	82	91	0.01	0.0	0.604	0.002	0	0	0	0	
L		B		2.47Y	115.9	-0.00	6.06	25.05	3	58	21	94					0	0	0	0	L
L		C		2.44Y	114.8	0.01	7.24	109.80	13	233	132	87					0	0	0	0	L

----------- Feeder No. 164 (CB 164) Beginning with Device CB 164 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
CB 164	OH43	A	560 VWE	2.48Y	116.5	0.00	5.46	52.12	0	119	51	92	0.00	0.0	0.604	0.000	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.06	14.89	0	34	14	92					0	0	0	0	L
L		C		2.44Y	114.8	0.00	7.24	74.35	0	156	92	86					0	0	0	0	L
OH99	CB 164	A	#2 ACSR 6/	2.48Y	116.5	0.02	5.48	52.12	29	119	51	92	0.09	0.0	0.611	0.007	0	0	0	0	
L		B		2.47Y	115.9	-0.00	6.06	14.89	8	34	14	92					0	0	0	0	L
L		C		2.44Y	114.7	0.05	7.29	74.35	41	156	92	86					0	0	0	0	L
OH100	OH99	A	#2 ACSR 6/	2.48Y	116.5	0.05	5.53	52.12	29	119	51	92	0.21	0.1	0.627	0.016	0	0	0	0	
L		B		2.47Y	115.9	-0.00	6.06	14.89	8	34	14	92					0	0	0	0	L
L		C		2.44Y	114.6	0.11	7.40	74.35	41	156	92	86					9	6	0	0	L
OH101	OH100	A	#2 ACSR 6/	2.48Y	116.4	0.06	5.58	52.12	29	119	51	92	0.22	0.1	0.646	0.018	0	0	0	0	
L		B		2.47Y	115.9	-0.00	6.05	14.89	8	34	14	92					0	0	0	0	L
L		C		2.43Y	114.5	0.13	7.53	69.81	39	146	87	86					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element----- KW	KVAR	Cons On	Cons Thru	
OH102	OH101	A	#2 ACSR 6/	2.48Y	116.4	0.02	5.61	52.12	29	119	51	92	0.09	0.0	0.653	0.007	0	0	0	0	
L		B		2.47Y	115.9	-0.00	6.05	14.89	8	34	14	92					0	0	0	0	L
L		C		2.43Y	114.4	0.05	7.58	69.81	39	146	87	86					0	0	0	0	L
OH103	OH102	A	#2 ACSR 6/	2.47Y	116.3	0.09	5.70	52.12	29	119	51	92	0.35	0.1	0.682	0.029	0	0	0	0	
L		B		2.47Y	116.0	-0.01	6.04	14.89	8	34	14	92					0	0	0	0	L
L		C		2.43Y	114.2	0.20	7.77	69.81	39	146	86	86					0	0	0	0	L
OH104	OH103	A	#2 ACSR 6/	2.47Y	116.3	0.05	5.75	52.12	29	119	51	92	0.20	0.1	0.698	0.016	0	0	0	0	
L		B		2.47Y	116.0	-0.00	6.04	14.89	8	34	14	92					0	0	0	0	L
L		C		2.43Y	114.1	0.11	7.89	69.81	39	146	86	86					0	0	0	0	L
OH105	OH104	A	#2 ACSR 6/	2.47Y	116.2	0.06	5.81	52.12	29	119	51	92	0.24	0.1	0.718	0.020	0	0	0	0	
L		B		2.47Y	116.0	-0.00	6.03	14.89	8	34	14	92					0	0	0	0	L
L		C		2.42Y	114.0	0.13	8.02	69.81	39	146	86	86					0	0	0	0	L
OH106	OH105	A	#2 ACSR 6/	2.47Y	116.1	0.07	5.88	52.12	29	118	50	92	0.27	0.1	0.740	0.022	0	0	0	0	
L		B		2.47Y	116.0	-0.01	6.03	14.89	8	34	14	92					0	0	0	0	L
L		C		2.42Y	113.8	0.15	8.17	69.81	39	146	86	86					0	0	0	0	L
OH107	OH106	A	#2 ACSR 6/	2.47Y	116.1	0.03	5.91	52.12	29	118	50	92	0.13	0.0	0.751	0.010	0	0	0	0	
L		B		2.47Y	116.0	-0.00	6.03	14.89	8	34	14	92					0	0	0	0	L
L		C		2.42Y	113.8	0.07	8.24	69.81	39	145	86	86					0	0	0	0	L
OH108	OH107	A	#2 ACSR 6/	2.47Y	116.0	0.07	5.98	52.12	29	118	50	92	0.29	0.1	0.775	0.024	3	1	0	0	
L		B		2.47Y	116.0	-0.01	6.02	14.89	8	34	14	92					0	0	0	0	L
L		C		2.42Y	113.6	0.16	8.41	69.81	39	145	86	86					0	0	0	0	L
L OH109	OH108	A	#2 ACSR 6/	2.47Y	116.0	0.05	6.04	50.63	28	115	49	92	0.21	0.1	0.793	0.018	0	0	0	0	L
L		B		2.47Y	116.0	-0.00	6.02	14.89	8	34	14	92					0	0	0	0	L
L		C		2.41Y	113.5	0.12	8.52	69.81	39	145	86	86					9	6	0	0	L
L OH110	OH109	A	#2 ACSR 6/	2.47Y	115.9	0.03	6.07	50.63	28	115	49	92	0.11	0.0	0.803	0.011	0	0	0	0	L
L		B		2.47Y	116.0	-0.00	6.01	14.89	8	34	14	92					0	0	0	0	L
L		C		2.41Y	113.4	0.07	8.59	65.23	36	135	80	86					0	0	0	0	L
L OH111	OH110	A	#4 ACSR 6/	2.46Y	115.8	0.10	6.17	38.30	27	87	37	92	0.25	0.1	0.831	0.028	0	0	0	0	L
L		B		2.47Y	116.0	0.02	6.03	14.89	11	34	14	92					0	0	0	0	L
L		C		2.41Y	113.2	0.17	8.76	46.84	33	97	57	86					0	0	0	0	L
L OH371	OH111	A	#4 ACSR 6/	2.46Y	115.8	0.05	6.22	38.30	27	87	37	92	0.13	0.1	0.846	0.015	0	0	0	0	L
L		B		2.47Y	116.0	0.00	6.03	14.89	11	34	15	92					17	7	0	0	L
L		C		2.41Y	113.1	0.09	8.85	46.85	33	97	57	86					0	0	0	0	L
L OH372	OH371	A	#4 ACSR 6/	2.46Y	115.7	0.10	6.33	38.30	27	87	37	92	0.26	0.1	0.875	0.029	0	0	0	0	L
L		B		2.47Y	116.0	-0.01	6.02	7.44	5	17	7	92					0	0	0	0	L
L		C		2.40Y	113.0	0.19	9.04	46.85	33	97	57	86					0	0	0	0	L
L OH373	OH372	A	#4 ACSR 6/	2.46Y	115.6	0.03	6.36	38.30	27	87	37	92	0.08	0.0	0.883	0.009	0	0	0	0	L
L		B		2.47Y	116.0	-0.00	6.02	7.44	5	17	7	92					0	0	0	0	L
L		C		2.40Y	112.9	0.06	9.10	46.85	33	97	57	86					0	0	0	0	L
L OH374	OH373	A	#4 ACSR 6/	2.46Y	115.5	0.10	6.45	38.30	27	87	37	92	0.23	0.1	0.910	0.027	0	0	0	0	L
L		B		2.47Y	116.0	-0.01	6.01	7.44	5	17	7	92					0	0	0	0	L
L		C		2.40Y	112.7	0.17	9.27	46.85	33	97	57	86					6	3	0	0	L
L OH375	OH374	A	#4 ACSR 6/	2.46Y	115.4	0.10	6.55	38.30	27	87	37	92	0.23	0.1	0.937	0.027	0	0	0	0	L
L		B		2.47Y	116.0	-0.01	6.00	7.44	5	17	7	92					0	0	0	0	L
L		C		2.39Y	112.6	0.17	9.43	44.08	31	91	54	86					0	0	0	0	L
L OH376	OH375	A	#4 ACSR 6/	2.45Y	115.3	0.12	6.67	38.30	27	87	37	92	0.26	0.1	0.969	0.032	0	0	0	0	L
		B		2.47Y	116.0	-0.03	5.97	7.44	5	17	7	92					17	7	0	0	
L		C		2.39Y	112.4	0.20	9.63	44.08	31	91	54	86					0	0	0	0	L
L OH377	OH376	A	#4 ACSR 6/	2.45Y	115.2	0.09	6.76	38.30	27	86	37	92	0.20	0.1	0.994	0.025	0	0	0	0	L
		B		2.47Y	116.1	-0.03	5.94	-0.02	0	0	0						0	0	0	0	
L		C		2.39Y	112.2	0.15	9.79	44.08	31	91	54	86					6	3	0	0	L
L OH378	OH377	A	#4 ACSR 6/	2.45Y	115.1	0.09	6.85	38.30	27	86	37	92	0.19	0.1	1.019	0.025	0	0	0	0	L
		B		2.47Y	116.1	-0.03	5.90	-0.02	0	0	0						0	0	0	0	
L		C		2.38Y	112.1	0.15	9.94	41.30	29	85	50	86					0	0	0	0	L
L OH379	OH378	A	#4 ACSR 6/	2.45Y	115.1	0.09	6.94	38.30	27	86	37	92	0.19	0.1	1.044	0.025	5	2	0	0	L
		B		2.47Y	116.1	-0.03	5.87	-0.02	0	0	0						0	0	0	0	
L		C		2.38Y	111.9	0.15	10.09	41.30	29	85	50	86					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
L OH380	OH379	A	#4 ACSR 6/	2.45Y	115.1	-0.00	6.94	-0.00	0	0	0		0.00	0.0	1.051	0.007	0	0	0	0 L
		B		2.47Y	116.1	0.00	5.87	-0.00	0	0	0						0	0	0	0
L		C		2.38Y	111.9	0.00	10.09	2.79	2	6	3	86					6	3	0	0 L
L OH381	OH379	A	#4 ACSR 6/	2.45Y	115.0	0.07	7.01	36.04	26	81	34	92	0.13	0.1	1.063	0.019	0	0	0	0 L
		B		2.47Y	116.2	-0.03	5.84	-0.02	0	0	0						0	0	0	0
L		C		2.38Y	111.8	0.11	10.19	38.51	28	79	47	86					0	0	0	0 L
L OH382	OH381	A	#4 ACSR 6/	2.44Y	114.9	0.05	7.06	36.04	26	81	34	92	0.09	0.1	1.076	0.013	0	0	0	0 L
		B		2.47Y	116.2	-0.02	5.83	-0.02	0	0	0						0	0	0	0
L		C		2.38Y	111.7	0.08	10.27	38.51	28	79	47	86					0	0	0	0 L
L OH383	OH382	A	#4 ACSR 6/	2.44Y	114.9	-0.00	7.05	-0.00	0	0	0		0.00	0.0	1.087	0.011	0	0	0	0 L
L		C		2.38Y	111.7	0.02	10.29	12.12	9	25	15	86					0	0	0	0 L
L OH386	OH383	A	#4 ACSR 6/	2.44Y	115.0	-0.01	7.05	-0.00	0	0	0		0.01	0.0	1.104	0.016	0	0	0	0 L
L		C		2.38Y	111.7	0.02	10.31	12.12	9	25	15	86					4	2	0	0 L
L OH387	OH386	A	#4 ACSR 6/	2.44Y	115.0	-0.01	7.04	-0.00	0	0	0		0.00	0.0	1.118	0.014	0	0	0	0 L
L		C		2.37Y	111.7	0.02	10.33	10.25	7	21	13	86					0	0	0	0 L
L OH388	OH387	C	#4 ACSR 6/	2.37Y	111.7	0.00	10.34	2.80	2	6	3	89	0.00	0.0	1.136	0.018	6	3	0	0 L
L OH389	OH387	A	#4 ACSR 6/	2.44Y	115.0	-0.01	7.03	-0.00	0	0	0		0.00	0.0	1.145	0.027	0	0	0	0 L
L		C		2.37Y	111.6	0.03	10.36	7.46	5	15	9	86					0	0	0	0 L
L OH390	OH389	A	#4 ACSR 6/	2.44Y	115.0	-0.00	7.03	-0.00	0	0	0		0.00	0.0	1.163	0.018	0	0	0	0 L
L		C		2.37Y	111.6	0.02	10.38	7.46	5	15	9	86					3	2	0	0 L
L OH391	OH390	A	#4 ACSR 6/	2.45Y	115.0	-0.00	7.02	-0.00	0	0	0		0.00	0.0	1.189	0.026	0	0	0	0 L
L		C		2.37Y	111.6	0.02	10.40	6.06	4	12	7	86					3	2	0	0 L
L OH392	OH391	A	#4 ACSR 6/	2.45Y	115.0	-0.00	7.02	-0.00	0	0	0		0.00	0.0	1.219	0.030	0	0	0	0 L
L		C		2.37Y	111.6	0.01	10.41	4.66	3	9	6	86					9	6	0	0 L
L OH385	OH382	A	#4 ACSR 6/	2.44Y	114.8	0.12	7.18	36.05	26	81	34	92	0.14	0.1	1.106	0.029	0	0	0	0 L
		B		2.47Y	116.2	-0.04	5.79	-0.02	0	0	0						0	0	0	0
L		C		2.37Y	111.6	0.11	10.38	26.40	19	54	32	86					4	2	0	0 L
L OH393	OH385	A	#4 ACSR 6/	2.44Y	114.8	0.07	7.25	36.05	26	81	34	92	0.09	0.1	1.125	0.019	3	1	0	0 L
		B		2.47Y	116.2	-0.03	5.76	-0.02	0	0	0						0	0	0	0
L		C		2.37Y	111.5	0.07	10.45	24.53	18	50	30	86					0	0	0	0 L
L OH394	OH393	A	#4 ACSR 6/	2.44Y	114.6	0.10	7.35	34.54	25	78	33	92	0.12	0.1	1.152	0.027	0	0	0	0 L
		B		2.47Y	116.3	-0.04	5.73	-0.02	0	0	0						0	0	0	0
L		C		2.37Y	111.4	0.10	10.55	24.53	18	50	30	86					0	0	0	0 L
L OH395	OH394	A	#4 ACSR 6/	2.44Y	114.6	0.09	7.44	34.54	25	78	33	92	0.11	0.1	1.178	0.027	13	5	0	0 L
		B		2.47Y	116.3	-0.03	5.69	-0.01	0	0	0						0	0	0	0
L		C		2.37Y	111.4	0.10	10.65	24.53	18	50	30	86					0	0	0	0 L
L OH396	OH395	A	#4 ACSR 6/	2.43Y	114.5	0.09	7.53	28.87	21	65	27	92	0.10	0.1	1.206	0.028	0	0	0	0 L
		B		2.47Y	116.3	-0.03	5.66	-0.01	0	0	0						0	0	0	0
L		C		2.37Y	111.3	0.10	10.75	24.53	18	50	30	86					0	0	0	0 L
L OH397	OH396	A	#4 ACSR 6/	2.43Y	114.4	0.02	7.55	28.87	21	65	27	92	0.03	0.0	1.213	0.007	0	0	0	0 L
		B		2.47Y	116.3	-0.01	5.66	-0.01	0	0	0						0	0	0	0
L		C		2.37Y	111.2	0.03	10.78	24.53	18	50	30	86					0	0	0	0 L
L OH398	OH397	A	#4 ACSR 6/	2.43Y	114.3	0.13	7.68	28.87	21	65	27	92	0.16	0.1	1.260	0.047	8	4	0	0 L
		B		2.48Y	116.4	-0.05	5.61	-0.01	0	0	0						0	0	0	0
L		C		2.36Y	111.1	0.17	10.94	24.53	18	50	30	86					0	0	0	0 L
L OH399	OH398	A	#4 ACSR 6/	2.43Y	114.3	0.01	7.69	3.79	3	8	4	89	0.00	0.0	1.298	0.038	8	4	0	0 L
		B		2.48Y	116.4	-0.00	5.61	-0.00	0	0	0						0	0	0	0
L		C		2.36Y	111.0	0.01	10.95	2.81	2	6	3	86					6	3	0	0 L
L OH400	OH398	A	#4 ACSR 6/	2.43Y	114.3	0.05	7.73	21.30	15	48	20	92	0.05	0.1	1.284	0.023	0	0	0	0 L
		B		2.48Y	116.4	-0.02	5.59	-0.01	0	0	0						0	0	0	0
L		C		2.36Y	111.0	0.07	11.02	21.72	16	44	26	86					0	0	0	0 L
L OH401	OH400	A	#4 ACSR 6/	2.43Y	114.3	0.00	7.73	-0.00	0	0	0	100	0.00	0.0	1.309	0.025	0	0	0	0 L
L OH403	OH400	A	#4 ACSR 6/	2.43Y	114.2	0.09	7.82	21.30	15	48	20	92	0.09	0.1	1.324	0.041	0	0	0	0 L
		B		2.48Y	116.4	-0.03	5.56	-0.01	0	0	0						0	0	0	0
L		C		2.36Y	110.9	0.13	11.15	21.72	16	44	26	86					0	0	0	0 L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element----- KW	KVAR	Cons On	Cons Thru	
L	OH404	OH403	A	#4 ACSR 6/	2.43Y	114.1	0.05	7.87	21.30	15	48	20	92	0.06	0.1	1.348	0.024	0	0	0	0	L
			B		2.48Y	116.5	-0.02	5.54	-0.01	0	0	0						0	0	0	0	
L			C		2.36Y	110.8	0.08	11.22	21.72	16	44	26	86					0	0	0	0	L
L	OH405	OH404	A	#4 ACSR 6/	2.43Y	114.1	0.08	7.95	21.30	15	48	20	92	0.08	0.1	1.385	0.037	0	0	0	0	L
			B		2.48Y	116.5	-0.03	5.51	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.7	0.12	11.34	21.72	16	44	26	86					0	0	0	0	L
L	OH406	OH405	A	#4 ACSR 6/	2.42Y	114.0	0.05	7.99	21.30	15	48	20	92	0.05	0.1	1.406	0.021	0	0	0	0	L
			B		2.48Y	116.5	-0.02	5.49	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.6	0.07	11.41	21.72	16	44	26	86					0	0	0	0	L
L	OH407	OH406	A	#4 ACSR 6/	2.42Y	114.0	0.04	8.03	19.02	14	42	18	92	0.04	0.1	1.429	0.023	3	1	0	0	L
			B		2.48Y	116.5	-0.02	5.48	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.5	0.07	11.48	21.72	16	44	26	86					4	2	0	0	L
L	OH410	OH407	A	#4 ACSR 6/	2.42Y	113.9	0.04	8.07	17.50	13	39	16	93	0.04	0.1	1.454	0.025	0	0	0	0	L
			B		2.48Y	116.5	-0.02	5.46	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.5	0.07	11.54	19.84	14	40	24	86					6	3	0	0	L
L	OH411	OH410	A	#4 ACSR 6/	2.42Y	113.9	0.04	8.11	17.50	13	39	16	93	0.03	0.0	1.475	0.021	0	0	0	0	L
			B		2.48Y	116.5	-0.01	5.45	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.4	0.05	11.60	17.02	12	34	21	86					0	0	0	0	L
L	OH412	OH411	A	#4 ACSR 6/	2.42Y	113.9	0.00	8.11	-0.00	0	0	0	100	0.00	0.0	1.485	0.010	0	0	0	0	L
L	OH413	OH411	A	#4 ACSR 6/	2.42Y	113.9	0.00	8.11	2.28	2	5	2	93	0.00	0.0	1.496	0.021	5	2	0	0	L
L	OH414	OH411	A	#4 ACSR 6/	2.42Y	113.9	0.04	8.15	15.22	11	34	14	92	0.03	0.0	1.501	0.026	0	0	0	0	L
			B		2.48Y	116.6	-0.01	5.44	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.3	0.06	11.66	17.02	12	34	21	86					0	0	0	0	L
L	OH415	OH414	A	#4 ACSR 6/	2.42Y	113.8	0.04	8.19	15.22	11	34	14	92	0.03	0.1	1.529	0.028	3	1	0	0	L
			B		2.48Y	116.6	-0.01	5.42	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.3	0.07	11.73	17.02	12	34	21	86					0	0	0	0	L
L	OH416	OH415	A	#4 ACSR 6/	2.42Y	113.8	0.01	8.19	2.28	2	5	2	93	0.00	0.0	1.557	0.028	0	0	0	0	L
L			C		2.34Y	110.3	0.00	11.73	-0.00	0	0	0						0	0	0	0	L
L	OH417	OH416	A	#4 ACSR 6/	2.42Y	113.8	0.00	8.20	2.28	2	5	2	93	0.00	0.0	1.581	0.025	5	2	0	0	L
L			C		2.34Y	110.3	0.00	11.73	-0.00	0	0	0						0	0	0	0	L
L	OH418	OH417	A	#4 ACSR 6/	2.42Y	113.8	0.00	8.20	-0.00	0	0	0		0.00	0.0	1.597	0.015	0	0	0	0	L
L			C		2.34Y	110.3	0.00	11.73	-0.00	0	0	0						0	0	0	0	L
L	OH419	OH415	A	#4 ACSR 6/	2.42Y	113.8	0.02	8.21	11.42	8	25	11	92	0.02	0.0	1.551	0.022	0	0	0	0	L
			B		2.48Y	116.6	-0.01	5.41	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.2	0.05	11.78	17.02	12	34	21	86					0	0	0	0	L
L	OH420	OH419	A	#4 ACSR 6/	2.42Y	113.8	0.03	8.23	11.42	8	25	11	92	0.03	0.1	1.581	0.030	0	0	0	0	L
			B		2.48Y	116.6	-0.01	5.40	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.1	0.07	11.86	17.02	12	34	21	86					0	0	0	0	L
L	OH421	OH420	A	#4 ACSR 6/	2.42Y	113.8	0.01	8.24	3.81	3	8	4	89	0.00	0.0	1.604	0.023	8	4	0	0	L
L	OH422	OH420	A	#4 ACSR 6/	2.42Y	113.8	0.01	8.24	7.61	5	17	7	92	0.02	0.0	1.612	0.031	8	4	0	0	L
			B		2.48Y	116.6	-0.01	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.1	0.06	11.92	17.02	12	34	21	86					9	6	0	0	L
L	OH423	OH422	A	#4 ACSR 6/	2.42Y	113.7	0.01	8.25	3.81	3	8	4	89	0.00	0.0	1.636	0.024	0	0	0	0	L
			B		2.48Y	116.6	-0.00	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.1	0.02	11.94	4.73	3	9	6	86					0	0	0	0	L
L	OH424	OH423	A	#4 ACSR 6/	2.42Y	113.7	0.00	8.25	3.81	3	8	4	89	0.00	0.0	1.654	0.018	8	4	0	0	L
			B		2.48Y	116.6	-0.00	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.1	0.01	11.95	4.73	3	9	6	86					0	0	0	0	L
L	OH425	OH424	A	#4 ACSR 6/	2.42Y	113.8	-0.00	8.25	-0.00	0	0	0		0.00	0.0	1.687	0.033	0	0	0	0	L
			B		2.48Y	116.6	0.00	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.0	0.01	11.96	4.73	3	9	6	86					9	6	0	0	L
L	OH426	OH425	A	#4 ACSR 6/	2.42Y	113.8	0.00	8.25	-0.00	0	0	0		0.00	0.0	1.719	0.033	0	0	0	0	L
			B		2.48Y	116.6	0.00	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.0	0.00	11.96	-0.00	0	0	0						0	0	0	0	L
L	OH427	OH422	C	#4 ACSR 6/	2.34Y	110.0	0.05	11.97	7.57	5	15	9	86	0.01	0.0	1.658	0.047	0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
L	OH428	OH427	C	#4 ACSR 6/	2.34Y	110.0	0.02	11.98	7.57	5	15	9	86	0.00	0.0	1.674	0.015	0	0	0	0	L
L	OH429	OH428	C	#4 ACSR 6/	2.34Y	110.0	0.04	12.02	7.57	5	15	9	86	0.00	0.0	1.724	0.050	9	6	0	0	L
L	OH430	OH429	C	#4 ACSR 6/	2.34Y	110.0	0.01	12.03	2.84	2	6	3	89	0.00	0.0	1.774	0.050	6	3	0	0	L
L	OH408	OH406	A	#4 ACSR 6/	2.42Y	114.0	0.00	7.99	2.28	2	5	2	93	0.00	0.0	1.425	0.019	5	2	0	0	L
			B		2.48Y	116.5	-0.00	5.49	-0.00	0	0	0						0	0	0	0	
L	OH112	OH110	A	#4 ACSR 6/	2.46Y	115.9	0.03	6.09	12.33	9	28	12	92	0.03	0.0	0.830	0.026	0	0	0	0	L
L			B		2.47Y	116.0	-0.01	6.00	-0.00	0	0	0						0	0	0	0	L
L			C		2.41Y	113.3	0.07	8.66	18.39	13	38	23	86					0	0	0	0	L
L	OH362	OH112	A	#4 ACSR 6/	2.46Y	115.9	0.01	6.10	11.21	8	25	11	92	0.01	0.0	0.840	0.010	0	0	0	0	L
			B		2.47Y	116.0	-0.00	6.00	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.3	0.03	8.69	18.39	13	38	23	86					0	0	0	0	L
L	OH363	OH362	A	#4 ACSR 6/	2.46Y	115.9	0.01	6.12	11.21	8	25	11	92	0.02	0.0	0.857	0.017	0	0	0	0	L
			B		2.47Y	116.0	-0.01	5.99	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.3	0.05	8.73	18.39	13	38	23	86					0	0	0	0	L
L	OH364	OH363	A	#4 ACSR 6/	2.46Y	115.9	0.02	6.14	11.21	8	25	11	92	0.02	0.0	0.879	0.022	0	0	0	0	L
			B		2.47Y	116.0	-0.01	5.98	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.2	0.04	8.78	18.39	13	38	23	86					19	11	0	0	L
L	OH365	OH364	A	#4 ACSR 6/	2.46Y	115.8	0.03	6.17	11.21	8	25	11	92	0.02	0.0	0.927	0.048	17	7	0	0	L
			B		2.47Y	116.0	-0.01	5.97	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.2	0.06	8.84	9.20	7	19	11	86					0	0	0	0	L
L	OH366	OH365	A	#4 ACSR 6/	2.46Y	115.8	-0.00	6.17	3.74	3	8	4	89	0.01	0.0	0.965	0.038	8	4	0	0	L
			B		2.47Y	116.0	-0.00	5.97	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.1	0.05	8.89	9.20	7	19	11	86					0	0	0	0	L
L	OH367	OH366	C	#4 ACSR 6/	2.41Y	113.1	0.01	8.90	4.60	3	9	6	83	0.00	0.0	0.987	0.022	9	6	0	0	L
L	OH368	OH366	A	#4 ACSR 6/	2.46Y	115.8	-0.00	6.17	-0.00	0	0	0		0.00	0.0	1.002	0.036	0	0	0	0	L
			B		2.47Y	116.0	0.00	5.97	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.1	0.01	8.90	4.60	3	9	6	86					9	6	0	0	L
L	OH369	OH112	A	#4 ACSR 6/	2.46Y	115.9	0.00	6.10	1.12	1	3	1	95	0.00	0.0	0.864	0.034	3	1	0	0	L

----------- Feeder No. 134 (CB134) Beginning with Device CB134 -----------

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	CB134	OH43	A	560 VWE	2.48Y	116.5	0.00	5.46	29.22	0	65	32	90	0.00	0.0	0.604	0.000	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	10.24	0	24	6	97					0	0	0	0	L
L			C		2.44Y	114.8	0.00	7.24	35.50	0	77	39	89					0	0	0	0	L
	OH115	CB134	A	#2 ACSR 6/	2.48Y	116.5	0.03	5.49	29.22	16	65	32	90	0.05	0.0	0.620	0.016	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	10.24	6	24	6	97					0	0	0	0	L
L			C		2.44Y	114.7	0.05	7.29	35.50	20	77	39	89					0	0	0	0	L
	OH116	OH115	A	#2 ACSR 6/	2.48Y	116.5	0.05	5.54	29.22	16	65	32	90	0.09	0.1	0.646	0.026	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.07	10.24	6	24	6	97					0	0	0	0	L
L			C		2.44Y	114.6	0.09	7.38	35.50	20	77	39	89					0	0	0	0	L
	OH117	OH116	A	#2 ACSR 6/	2.48Y	116.4	0.06	5.60	29.22	16	65	32	90	0.11	0.1	0.679	0.033	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.07	10.24	6	24	6	97					0	0	0	0	L
L			C		2.44Y	114.5	0.11	7.49	35.50	20	77	39	89					0	0	0	0	L
	OH118	OH117	A	#2 ACSR 6/	2.47Y	116.3	0.05	5.65	29.22	16	65	32	90	0.09	0.1	0.707	0.028	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.07	10.24	6	24	6	97					0	0	0	0	L
L			C		2.43Y	114.4	0.09	7.58	35.50	20	77	39	89					0	0	0	0	L
	OH433	OH118	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.66	5.15	3	11	6	88	0.00	0.0	0.731	0.024	4	2	0	0	
L			B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.4	0.02	7.59	7.21	4	16	8	89					3	2	0	0	L
	OH434	OH433	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.66	3.44	2	8	4	89	0.00	0.0	0.745	0.014	0	0	0	0	
L			B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.4	0.00	7.60	5.77	3	12	6	89					12	6	0	0	L
	OH435	OH434	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	3.44	2	8	4	89	0.00	0.0	0.773	0.028	8	4	0	0	
L			B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.4	0.00	7.60	-0.00	0	0	0						0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	OH436	OH118	A	#2 ACSR 6/	2.47Y	116.3	0.03	5.68	13.75	8	31	15	90	0.01	0.0	0.733	0.025	0	0	0	0	
L			B		2.47Y	115.9	0.01	6.08	6.82	4	16	4	97					0	0	0	0	L
L			C		2.43Y	114.4	0.02	7.60	8.65	5	19	10	89					0	0	0	0	L
	OH437	OH436	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.69	13.75	8	31	15	90	0.00	0.0	0.745	0.012	15	7	0	0	
L			B		2.47Y	115.9	0.00	6.08	6.83	4	16	4	97					8	2	0	0	L
L			C		2.43Y	114.4	0.01	7.60	8.65	5	19	10	89					0	0	0	0	L
	OH438	OH437	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.69	6.88	4	15	7	91	0.00	0.0	0.747	0.002	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.08	3.41	2	8	2	97					0	0	0	0	L
L			C		2.43Y	114.4	0.00	7.61	8.65	5	19	10	89					0	0	0	0	L
	OH439	OH438	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.70	6.88	4	15	7	91	0.00	0.0	0.764	0.017	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.08	3.41	2	8	2	97					0	0	0	0	L
L			C		2.43Y	114.4	0.01	7.62	8.65	5	19	10	89					0	0	0	0	L
	OH440	OH439	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.70	-0.00	0	0	0		0.00	0.0	0.769	0.005	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.08	-0.00	0	0	0						0	0	0	0	L
	OH441	OH440	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.70	-0.00	0	0	0		0.00	0.0	0.783	0.014	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.08	-0.00	0	0	0						0	0	0	0	L
	OH442	OH439	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.71	6.88	4	15	7	91	0.00	0.0	0.780	0.016	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.09	3.41	2	8	2	97					0	0	0	0	L
L			C		2.43Y	114.4	0.01	7.63	8.65	5	19	10	89					0	0	0	0	L
	OH443	OH442	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.71	6.88	4	15	7	91	0.00	0.0	0.795	0.015	15	7	0	0	
L			B		2.46Y	115.9	0.00	6.09	3.41	2	8	2	97					8	2	0	0	L
L			C		2.43Y	114.4	0.01	7.64	8.65	5	19	10	89					19	10	0	0	L
	OH444	OH443	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.71	-0.00	0	0	0		0.00	0.0	0.797	0.002	0	0	0	0	
L			B		2.46Y	115.9	0.00	6.09	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.4	0.00	7.64	-0.00	0	0	0						0	0	0	0	L
	OH445	OH444	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.71	-0.00	0	0	0		0.00	0.0	0.841	0.044	0	0	0	0	
L			B		2.46Y	115.9	0.00	6.09	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.4	0.00	7.64	-0.00	0	0	0						0	0	0	0	L
	OH119	OH118	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.66	10.31	6	23	11	90	0.02	0.0	0.729	0.022	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.07	3.41	2	8	2	97					0	0	0	0	L
L			C		2.43Y	114.4	0.04	7.62	19.63	11	43	22	89					0	0	0	0	L
	OH120	OH119	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.67	10.31	6	23	11	90	0.01	0.0	0.742	0.012	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.07	3.41	2	8	2	97					0	0	0	0	L
L			C		2.43Y	114.4	0.02	7.64	19.64	11	42	22	89					0	0	0	0	L
	OH121	OH120	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	10.31	6	23	11	90	0.01	0.0	0.751	0.010	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.07	3.41	2	8	2	97					0	0	0	0	L
L			C		2.43Y	114.3	0.02	7.66	19.64	11	42	22	89					0	0	0	0	L
	OH122	OH121	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.68	10.31	6	23	11	90	0.02	0.0	0.778	0.027	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.08	3.41	2	8	2	97					0	0	0	0	L
L			C		2.43Y	114.3	0.05	7.71	19.64	11	42	22	89					0	0	0	0	L
	OH123	OH122	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.69	10.31	6	23	11	90	0.00	0.0	0.782	0.004	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.08	3.41	2	8	2	97					0	0	0	0	L
L			C		2.43Y	114.3	0.01	7.72	19.64	11	42	22	89					0	0	0	0	L
	OH446	OH123	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.70	10.31	6	23	11	90	0.01	0.0	0.806	0.023	15	7	0	0	
L			B		2.47Y	115.9	-0.00	6.07	3.41	2	8	2	97					8	2	0	0	L
L			C		2.43Y	114.3	0.02	7.74	12.71	7	27	14	89					12	6	0	0	L
	OH447	OH446	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.70	3.44	2	8	4	89	0.00	0.0	0.829	0.023	0	0	0	0	
L			B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.2	0.02	7.76	6.93	4	15	8	89					0	0	0	0	L
	OH448	OH447	A	#2 ACSR 6/	2.47Y	116.3	-0.00	5.70	3.44	2	8	4	89	0.00	0.0	0.844	0.015	8	4	0	0	
L			B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.2	0.01	7.77	6.93	4	15	8	89					2	1	0	0	L
	OH449	OH448	A	#2 ACSR 6/	2.47Y	116.3	-0.00	5.70	-0.00	0	0	0		0.00	0.0	0.855	0.011	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.2	0.00	7.77	5.78	3	12	6	89					12	6	0	0	L
L	OH450	OH123	C	#2 ACSR 6/	2.43Y	114.3	0.01	7.73	4.04	2	9	4	91	0.00	0.0	0.810	0.027	2	1	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

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Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
L	OH451	OH450	C	#2 ACSR 6/	2.43Y	114.3	0.01	7.74	2.89	2	6	3	89	0.00	0.0	0.832	0.022	0	0	0	0	L
L	OH452	OH451	C	#2 ACSR 6/	2.43Y	114.3	0.00	7.74	2.89	2	6	3	89	0.00	0.0	0.854	0.022	6	3	0	0	L
L	OH453	OH452	C	#2 ACSR 6/	2.43Y	114.3	0.00	7.74	-0.00	0	0	0	100	0.00	0.0	0.874	0.020	0	0	0	0	L
L	OH454	OH453	C	#2 ACSR 6/	2.43Y	114.3	0.00	7.74	-0.00	0	0	0	100	0.00	0.0	0.928	0.053	0	0	0	0	L
	OH124	OH123	A	#2 ACSR 6/	2.47Y	116.3	-0.00	5.69	-0.00	0	0	0		0.00	0.0	0.797	0.015	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.08	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.3	0.00	7.72	2.89	2	6	3	89					6	3	0	0	L

----------- Feeder No. 114 (CB 114) Beginning with Device CB 114 -----------

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	CB 114	OH40	A	560 VWE	2.48Y	116.5	0.00	5.45	73.34	0	174	51	96	0.00	0.0	0.600	0.000	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	114.58	0	252	129	89					0	0	0	0	L
L			C		2.44Y	114.8	0.00	7.23	125.20	0	287	106	94					0	0	0	0	L
	OH113	CB 114	A	336ACSR	2.48Y	116.6	-0.01	5.44	73.34	14	174	51	96	0.18	0.0	0.617	0.017	0	0	0	0	
L			B		2.46Y	115.9	0.06	6.12	114.58	22	252	129	89					0	0	0	0	L
L			C		2.44Y	114.7	0.04	7.27	125.20	24	287	106	94					0	0	0	0	L
	OH131	OH113	A	2/0ACSR	2.48Y	116.5	0.02	5.47	73.34	27	174	51	96	0.76	0.1	0.646	0.030	0	0	0	0	
L			B		2.46Y	115.7	0.19	6.31	114.58	42	251	129	89					0	0	0	0	L
L			C		2.44Y	114.6	0.16	7.43	125.20	46	287	106	94					0	0	0	0	L
	OH132	OH131	A	2/0ACSR	2.48Y	116.5	0.03	5.50	73.34	27	174	51	96	0.97	0.1	0.685	0.038	0	0	0	0	
L			B		2.46Y	115.5	0.24	6.55	114.58	42	251	128	89					0	0	0	0	L
L			C		2.43Y	114.4	0.20	7.63	125.20	46	286	106	94					0	0	0	0	L
	OH133	OH132	A	2/0ACSR	2.48Y	116.5	0.03	5.53	73.34	27	174	51	96	0.87	0.1	0.719	0.034	0	0	0	0	
L			B		2.45Y	115.2	0.21	6.76	114.58	42	250	128	89					0	0	0	0	L
L			C		2.43Y	114.2	0.18	7.81	125.20	46	286	105	94					0	0	0	0	L
	OH134	OH133	A	2/0ACSR	2.48Y	116.4	0.06	5.59	73.34	27	174	51	96	1.99	0.3	0.797	0.078	0	0	0	0	
L			B		2.44Y	114.7	0.49	7.25	114.58	42	250	128	89					0	0	0	0	L
L			C		2.42Y	113.8	0.41	8.23	125.20	46	285	105	94					0	0	0	0	L
	OCD511	OH134	A	50A QR	2.48Y	116.4	0.00	5.59	3.66	7	9	3	95	0.00	0.0	0.797	0.000	0	0	0	0	
	OH512	OCD511	A	2ACSR	2.48Y	116.4	0.01	5.60	3.66	2	9	3	95	0.00	0.0	0.831	0.034	9	3	0	0	
	OH135	OH134	A	2/0ACSR	2.47Y	116.4	0.03	5.63	69.68	26	166	48	96	1.49	0.2	0.856	0.059	0	0	0	0	
L			B		2.43Y	114.4	0.38	7.63	114.58	42	249	128	89					0	0	0	0	L
L			C		2.41Y	113.5	0.31	8.54	125.20	46	285	103	94					0	0	0	0	L
	OCD513	OH135	A	50A QR	2.47Y	116.4	0.00	5.63	2.20	4	5	2	93	0.00	0.0	0.856	0.000	0	0	0	0	
L			C		2.41Y	113.5	0.00	8.54	5.56	11	13	4	94					0	0	0	0	L
	OH514	OCD513	A	2ACSR	2.47Y	116.4	0.00	5.63	2.20	1	5	2	93	0.00	0.0	0.878	0.022	0	0	0	0	
L			C		2.41Y	113.4	0.01	8.55	5.56	3	13	4	94					0	0	0	0	L
	OH516	OH514	A	2ACSR	2.47Y	116.4	-0.00	5.63	2.20	1	5	2	93	0.00	0.0	0.891	0.013	5	2	0	0	
L			C		2.41Y	113.4	0.01	8.56	5.56	3	13	4	94					0	0	0	0	L
L	OH517	OH516	C	2ACSR	2.41Y	113.4	0.00	8.56	2.78	2	6	2	95	0.00	0.0	0.917	0.026	6	2	0	0	L
	OH518	OH516	A	2ACSR	2.47Y	116.4	-0.00	5.62	-0.00	0	0	0		0.00	0.0	0.911	0.020	0	0	0	0	
L			C		2.41Y	113.4	0.01	8.56	2.78	2	6	2	94					0	0	0	0	L
	OH519	OH518	A	2ACSR	2.47Y	116.4	-0.00	5.62	-0.00	0	0	0		0.00	0.0	0.939	0.029	0	0	0	0	
L			C		2.41Y	113.4	0.00	8.57	2.78	2	6	2	94					6	2	0	0	L
	OH136	OH135	A	2/0ACSR	2.47Y	116.4	0.02	5.65	67.48	25	160	47	96	0.82	0.1	0.890	0.034	0	0	0	0	
L			B		2.43Y	114.2	0.22	7.85	114.58	42	248	127	89					0	0	0	0	L
L			C		2.41Y	113.3	0.17	8.70	119.64	44	271	98	94					0	0	0	0	L
L	OH520	OH136	C	2/0ACSR	2.41Y	113.3	0.00	8.71	4.64	2	11	4	94	0.00	0.0	0.919	0.029	11	4	0	0	L
	OH522	OH136	A	2/0ACSR	2.47Y	116.3	0.03	5.68	67.48	25	160	47	96	0.87	0.1	0.928	0.038	0	0	0	0	
L			B		2.42Y	113.9	0.24	8.09	114.58	42	247	127	89					0	0	0	0	L
L			C		2.41Y	113.1	0.17	8.88	115.01	43	261	94	94					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
OH523	OH522	A	2/0ACSR	2.47Y	116.3	0.01	5.68	65.29	24	155	45	96	0.25	0.0	0.938	0.011	3	1	0	0	
L		B		2.42Y	113.8	0.07	8.16	114.58	42	247	127	89					0	0	0	0	L
L		C		2.40Y	113.1	0.05	8.93	115.01	43	260	94	94					0	0	0	0	L
OH524	OH523	A	2/0ACSR	2.47Y	116.3	0.02	5.70	63.82	24	152	44	96	0.69	0.1	0.968	0.030	3	1	0	0	
L		B		2.42Y	113.6	0.20	8.36	114.58	42	247	127	89					0	0	0	0	L
L		C		2.40Y	112.9	0.14	9.06	115.01	43	260	94	94					0	0	0	0	L
OH525	OH524	A	2/0ACSR	2.47Y	116.3	0.01	5.71	62.72	23	149	43	96	0.70	0.1	0.999	0.031	0	0	0	0	
L		B		2.41Y	113.4	0.20	8.56	114.58	42	246	127	89					0	0	0	0	L
L		C		2.40Y	112.8	0.14	9.20	115.01	43	260	93	94					0	0	0	0	L
OH526	OH525	A	2/0ACSR	2.47Y	116.3	0.02	5.73	62.73	23	149	43	96	0.53	0.1	1.031	0.032	3	1	0	0	
L		B		2.41Y	113.3	0.13	8.69	80.37	30	173	88	89					0	0	0	0	L
L		C		2.40Y	112.6	0.16	9.36	107.55	40	243	87	94					0	0	0	0	L
OH527	OH526	A	2/0ACSR	2.47Y	116.2	0.02	5.75	61.63	23	146	43	96	0.52	0.1	1.063	0.031	0	0	0	0	
L		B		2.41Y	113.2	0.13	8.82	80.37	30	172	88	89					0	0	0	0	L
L		C		2.39Y	112.5	0.16	9.52	107.55	40	243	87	94					0	0	0	0	L
OH528	OH527	A	2/0ACSR	2.47Y	116.2	0.01	5.76	57.23	21	136	40	96	0.53	0.1	1.096	0.034	3	1	0	0	
L		B		2.40Y	113.0	0.15	8.97	80.37	30	172	88	89					0	0	0	0	L
L		C		2.39Y	112.3	0.17	9.69	107.55	40	242	86	94					11	4	0	0	L
OH529	OH528	A	2/0ACSR	2.47Y	116.2	0.01	5.77	55.77	21	132	39	96	0.47	0.1	1.127	0.031	0	0	0	0	
L		B		2.40Y	112.9	0.13	9.10	80.37	30	172	88	89					0	0	0	0	L
L		C		2.39Y	112.2	0.15	9.84	102.88	38	231	82	94					0	0	0	0	L
OH530	OH529	A	2/0ACSR	2.47Y	116.2	-0.01	5.76	42.56	16	101	29	96	0.37	0.1	1.158	0.030	0	0	0	0	
L		B		2.40Y	112.8	0.12	9.22	70.28	26	150	77	89					7	4	0	0	L
L		C		2.38Y	112.0	0.14	9.97	95.37	35	214	76	94					0	0	0	0	L
OH531	OH530	A	2/0ACSR	2.47Y	116.2	-0.01	5.76	42.56	16	101	29	96	0.36	0.1	1.188	0.030	0	0	0	0	
L		B		2.40Y	112.7	0.11	9.34	66.92	25	143	73	89					0	0	0	0	L
L		C		2.38Y	111.9	0.14	10.11	95.37	35	214	76	94					0	0	0	0	L
OH532	OH531	A	2/0ACSR	2.47Y	116.3	-0.01	5.75	42.56	16	101	29	96	0.35	0.1	1.217	0.029	0	0	0	0	
L		B		2.39Y	112.6	0.11	9.45	66.92	25	143	73	89					0	0	0	0	L
L		C		2.38Y	111.8	0.13	10.24	95.37	35	214	76	94					0	0	0	0	L
OH533	OH532	A	2/0ACSR	2.47Y	116.3	-0.02	5.73	33.40	12	79	23	96	0.35	0.1	1.251	0.034	0	0	0	0	
L		B		2.39Y	112.4	0.14	9.58	66.92	25	142	73	89					0	0	0	0	L
L		C		2.37Y	111.6	0.13	10.37	85.96	32	193	68	94					0	0	0	0	L
OH710	OH533	A	2/0ACSR	2.47Y	116.3	0.00	5.73	3.66	1	9	3	95	0.00	0.0	1.278	0.027	9	3	0	0	
OH616	OH533	A	2/0ACSR	2.47Y	116.3	-0.02	5.71	29.73	11	71	20	96	0.30	0.1	1.281	0.030	0	0	0	0	
L		B		2.39Y	112.3	0.12	9.71	66.92	25	142	73	89					0	0	0	0	L
L		C		2.37Y	111.5	0.11	10.49	85.96	32	192	68	94					0	0	0	0	L
OH617	OH616	A	2/0ACSR	2.47Y	116.3	-0.03	5.68	29.73	11	71	20	96	0.35	0.1	1.316	0.035	0	0	0	0	
L		B		2.38Y	112.1	0.14	9.85	66.92	25	142	73	89					0	0	0	0	L
L		C		2.37Y	111.4	0.13	10.62	85.96	32	192	68	94					0	0	0	0	L
OH618	OH617	A	2/0ACSR	2.47Y	116.4	-0.04	5.64	29.73	11	71	20	96	0.47	0.1	1.362	0.046	0	0	0	0	
L		B		2.38Y	112.0	0.19	10.05	66.92	25	142	73	89					0	0	0	0	L
L		C		2.36Y	111.2	0.17	10.79	85.96	32	192	67	94					0	0	0	0	L
OH619	OH618	A	2/0ACSR	2.48Y	116.4	-0.03	5.61	29.73	11	71	21	96	0.38	0.1	1.399	0.038	0	0	0	0	
L		B		2.38Y	111.8	0.16	10.20	66.92	25	142	73	89					0	0	0	0	L
L		C		2.36Y	111.1	0.14	10.94	85.96	32	192	67	94					0	0	0	0	L
L OCD620	OH619	B	50A QR	2.38Y	111.8	0.00	10.20	6.80	14	14	7	89	0.00	0.0	1.399	0.000	0	0	0	0	L
L		C		2.36Y	111.1	0.00	10.94	47.46	95	106	37	94					0	0	0	0	L
L OH621	OCD620	B	2ACSR	2.38Y	111.8	0.03	10.23	6.80	4	14	7	89	0.14	0.1	1.434	0.035	0	0	0	0	L
L		C		2.36Y	110.9	0.15	11.09	47.46	26	106	37	94					0	0	0	0	L
L OH674	OH621	B	2ACSR	2.38Y	111.8	0.01	10.24	6.80	4	14	7	89	0.00	0.0	1.447	0.013	0	0	0	0	L
L OH675	OH674	B	2ACSR	2.38Y	111.7	0.02	10.26	6.80	4	14	7	89	0.00	0.0	1.476	0.028	0	0	0	0	L
L OH676	OH675	B	2ACSR	2.38Y	111.7	0.01	10.27	6.80	4	14	7	89	0.00	0.0	1.505	0.029	14	7	0	0	L
L OH677	OH676	B	2ACSR	2.38Y	111.7	0.00	10.27	-0.00	0	0	0		0.00	0.0	1.532	0.027	0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L OH679	OH621	C	2ACSR	2.36Y	110.9	0.04	11.13	14.22	8	32	11	95	0.01	0.0	1.476	0.042	21	7	0	0	L
L OH681	OH679	C	2ACSR	2.36Y	110.9	0.01	11.14	4.74	3	11	4	94	0.00	0.0	1.504	0.027	0	0	0	0	L
L OH682	OH681	C	2ACSR	2.36Y	110.9	0.01	11.15	4.74	3	11	4	94	0.00	0.0	1.531	0.028	11	4	0	0	L
L OH683	OH682	C	2ACSR	2.36Y	110.9	0.00	11.15	-0.00	0	0	0		0.00	0.0	1.559	0.028	0	0	0	0	L
L OH684	OH621	B	2ACSR	2.38Y	111.8	0.01	10.24	-0.00	0	0	0		0.12	0.2	1.495	0.061	0	0	0	0	L
L		C		2.35Y	110.7	0.20	11.29	33.24	18	74	26	94					0	0	0	0	L
L OH685	OH684	C	2ACSR	2.35Y	110.7	0.02	11.31	14.25	8	32	11	95	0.01	0.0	1.510	0.014	0	0	0	0	L
L OH686	OH685	C	2ACSR	2.35Y	110.7	0.03	11.33	14.25	8	32	11	95	0.01	0.0	1.538	0.028	21	7	0	0	L
L OH687	OH686	C	2ACSR	2.35Y	110.7	0.01	11.35	4.75	3	11	4	94	0.00	0.0	1.565	0.027	0	0	0	0	L
L OH688	OH687	C	2ACSR	2.35Y	110.6	0.01	11.35	4.75	3	11	4	94	0.00	0.0	1.594	0.029	11	4	0	0	L
L OH689	OH688	C	2ACSR	2.35Y	110.6	0.00	11.35	-0.00	0	0	0	100	0.00	0.0	1.621	0.028	0	0	0	0	L
L OH690	OH684	C	2ACSR	2.35Y	110.7	0.01	11.30	9.50	5	21	7	95	0.00	0.0	1.509	0.014	0	0	0	0	L
L OH691	OH690	C	2ACSR	2.35Y	110.7	0.03	11.33	9.50	5	21	7	95	0.00	0.0	1.537	0.028	0	0	0	0	L
L OH692	OH691	C	2ACSR	2.35Y	110.7	0.01	11.34	9.50	5	21	7	95	0.00	0.0	1.567	0.029	21	7	0	0	L
L OH693	OH692	C	2ACSR	2.35Y	110.7	0.00	11.34	-0.00	0	0	0	100	0.00	0.0	1.595	0.028	0	0	0	0	L
L OH694	OH684	B	2ACSR	2.38Y	111.8	0.00	10.25	-0.00	0	0	0		0.01	0.0	1.554	0.059	0	0	0	0	L
L		C		2.35Y	110.7	0.05	11.34	9.50	5	21	7	94					0	0	0	0	L
L OH696	OH694	C	2ACSR	2.35Y	110.7	0.01	11.35	4.75	3	11	4	94	0.00	0.0	1.568	0.014	0	0	0	0	L
L OH697	OH696	C	2ACSR	2.35Y	110.6	0.01	11.36	4.75	3	11	4	94	0.00	0.0	1.596	0.028	0	0	0	0	L
L OH698	OH697	C	2ACSR	2.35Y	110.6	0.01	11.37	4.75	3	11	4	94	0.00	0.0	1.625	0.028	11	4	0	0	L
L OH699	OH698	C	2ACSR	2.35Y	110.6	0.00	11.37	-0.00	0	0	0	100	0.00	0.0	1.653	0.029	0	0	0	0	L
L OH700	OH699	C	2ACSR	2.35Y	110.6	0.00	11.37	-0.00	0	0	0	100	0.00	0.0	1.669	0.015	0	0	0	0	L
L OH705	OH694	C	2ACSR	2.35Y	110.7	0.01	11.35	4.75	3	11	4	94	0.00	0.0	1.569	0.015	0	0	0	0	L
L OH706	OH705	C	2ACSR	2.35Y	110.6	0.01	11.36	4.75	3	11	4	94	0.00	0.0	1.597	0.028	0	0	0	0	L
L OH707	OH706	C	2ACSR	2.35Y	110.6	0.01	11.38	4.75	3	11	4	94	0.00	0.0	1.626	0.029	0	0	0	0	L
L OH708	OH707	C	2ACSR	2.35Y	110.6	0.01	11.38	4.75	3	11	4	94	0.00	0.0	1.656	0.030	11	4	0	0	L
L OH709	OH708	C	2ACSR	2.35Y	110.6	0.00	11.38	-0.00	0	0	0	100	0.00	0.0	1.683	0.027	0	0	0	0	L
OH622	OH619	A	2/0ACSR	2.47Y	116.4	0.02	5.64	29.73	11	71	21	96	0.13	0.0	1.428	0.029	0	0	0	0	
L		B		2.38Y	111.7	0.10	10.30	60.12	22	127	66	89					0	0	0	0	L
L		C		2.36Y	111.0	0.03	10.96	38.50	14	86	30	94					0	0	0	0	L
OH623	OH622	A	2/0ACSR	2.47Y	116.3	0.03	5.66	29.73	11	71	21	96	0.16	0.1	1.463	0.035	0	0	0	0	
L		B		2.37Y	111.6	0.12	10.42	60.12	22	127	66	89					0	0	0	0	L
L		C		2.36Y	111.0	0.03	10.99	38.50	14	86	30	94					0	0	0	0	L
OH624	OH623	A	2/0ACSR	2.47Y	116.3	0.03	5.69	29.74	11	71	21	96	0.15	0.1	1.497	0.034	0	0	0	0	
L		B		2.37Y	111.5	0.12	10.54	60.13	22	127	65	89					0	0	0	0	L
L		C		2.36Y	111.0	0.03	11.02	38.50	14	86	30	94					0	0	0	0	L
OH625	OH624	A	2/0ACSR	2.47Y	116.3	0.03	5.72	29.74	11	71	21	96	0.14	0.1	1.529	0.032	0	0	0	0	
L		B		2.37Y	111.4	0.11	10.65	60.13	22	127	65	89					0	0	0	0	L
L		C		2.36Y	110.9	0.03	11.05	38.50	14	86	30	94					0	0	0	0	L
OH626	OH625	A	2/0ACSR	2.47Y	116.3	0.03	5.75	29.74	11	71	21	96	0.19	0.1	1.571	0.042	0	0	0	0	
L		B		2.36Y	111.2	0.14	10.79	60.13	22	127	65	89					0	0	0	0	L
L		C		2.36Y	110.9	0.04	11.09	38.50	14	86	30	94					0	0	0	0	L
OCD627	OH626	A	50A QR	2.47Y	116.3	0.00	5.75	11.00	22	26	8	96	0.00	0.0	1.571	0.000	0	0	0	0	
L		B		2.36Y	111.2	0.00	10.79	39.24	78	82	43	89					0	0	0	0	L
L		C		2.36Y	110.9	0.00	11.09	14.22	28	32	11	94					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	OH642	OCD627	A	2ACSR	2.47Y	116.2	0.01	5.76	11.00	6	26	8	96	0.06	0.0	1.593	0.022	0	0	0	0	
L			B		2.36Y	111.1	0.08	10.87	39.24	22	82	43	89					7	4	0	0	L
L			C		2.36Y	110.9	0.01	11.10	14.22	8	32	11	94					0	0	0	0	L
	OH643	OH642	A	2/0ACSR	2.47Y	116.2	0.01	5.77	11.00	4	26	8	96	0.03	0.0	1.612	0.019	0	0	0	0	
L			B		2.36Y	111.1	0.04	10.91	35.82	13	75	39	89					0	0	0	0	L
L			C		2.36Y	110.9	-0.00	11.09	14.22	5	32	11	94					0	0	0	0	L
	OH644	OH643	A	2ACSR	2.47Y	116.2	0.01	5.78	11.00	6	26	8	96	0.06	0.0	1.636	0.024	9	3	0	0	
L			B		2.36Y	111.0	0.08	10.99	35.82	20	75	39	89					0	0	0	0	L
L			C		2.36Y	110.9	0.01	11.10	14.22	8	32	11	94					0	0	0	0	L
	OH645	OH644	A	2ACSR	2.47Y	116.2	0.01	5.79	7.34	4	17	5	96	0.07	0.1	1.663	0.027	0	0	0	0	
L			B		2.36Y	110.9	0.09	11.08	35.82	20	75	39	89					0	0	0	0	L
L			C		2.36Y	110.9	0.01	11.11	14.22	8	32	11	94					0	0	0	0	L
	OH646	OH645	A	2ACSR	2.47Y	116.2	0.01	5.80	7.34	4	17	5	96	0.04	0.0	1.681	0.018	0	0	0	0	
L			B		2.36Y	110.9	0.06	11.15	35.82	20	75	39	89					0	0	0	0	L
L			C		2.36Y	110.9	0.01	11.11	14.22	8	32	11	94					0	0	0	0	L
	OH647	OH646	A	2ACSR	2.47Y	116.2	0.03	5.82	7.34	4	17	5	96	0.09	0.1	1.730	0.048	0	0	0	0	
L			B		2.35Y	110.7	0.15	11.29	32.40	18	68	35	89					0	0	0	0	L
L			C		2.36Y	110.9	-0.01	11.10	9.48	5	21	7	94					11	4	0	0	L
L	OH648	OH647	C	2ACSR	2.36Y	110.9	0.01	11.12	4.74	3	11	4	94	0.00	0.0	1.761	0.031	0	0	0	0	L
L	OH649	OH648	C	2ACSR	2.36Y	110.9	0.01	11.13	4.74	3	11	4	94	0.00	0.0	1.789	0.028	0	0	0	0	L
L	OH650	OH649	C	2ACSR	2.36Y	110.9	0.01	11.14	4.74	3	11	4	94	0.00	0.0	1.820	0.032	11	4	0	0	L
L	OH651	OH650	C	2ACSR	2.36Y	110.9	0.00	11.14	-0.00	0	0	0	100	0.00	0.0	1.855	0.035	0	0	0	0	L
	OH652	OH647	A	2ACSR	2.47Y	116.2	0.02	5.84	7.34	4	17	5	96	0.05	0.1	1.756	0.027	0	0	0	0	
L			B		2.35Y	110.6	0.08	11.37	32.40	18	68	35	89					0	0	0	0	L
	OH653	OH652	A	4ACSR	2.47Y	116.1	0.06	5.90	7.34	5	17	5	96	0.14	0.2	1.808	0.052	0	0	0	0	
L			B		2.35Y	110.4	0.22	11.59	32.40	23	68	35	89					0	0	0	0	L
	OH654	OH653	A	4ACSR	2.47Y	116.1	0.01	5.91	3.67	3	9	3	95	0.00	0.0	1.838	0.029	9	3	0	0	
	OH655	OH653	A	4ACSR	2.47Y	116.1	0.02	5.92	3.67	3	9	3	95	0.08	0.1	1.838	0.030	0	0	0	0	
L			B		2.35Y	110.3	0.13	11.72	32.40	23	68	35	89					0	0	0	0	L
	OH656	OH655	A	4ACSR	2.47Y	116.1	0.01	5.94	3.67	3	9	3	95	0.02	0.0	1.881	0.043	9	3	0	0	
L			B		2.34Y	110.2	0.07	11.79	15.16	11	32	16	89					14	7	0	0	L
L	OH657	OH656	B	4ACSR	2.34Y	110.2	0.04	11.83	8.27	6	17	9	88	0.01	0.0	1.929	0.048	7	4	0	0	L
L	OH659	OH657	B	4ACSR	2.34Y	110.2	0.02	11.85	4.83	3	10	5	89	0.00	0.0	1.960	0.031	0	0	0	0	L
L	OH660	OH659	B	4ACSR	2.34Y	110.1	0.02	11.87	4.83	3	10	5	89	0.00	0.0	1.992	0.033	3	1	0	0	L
L	OH661	OH660	B	4ACSR	2.34Y	110.1	0.02	11.89	3.45	2	7	4	87	0.00	0.0	2.033	0.041	0	0	0	0	L
L	OH662	OH661	B	4ACSR	2.34Y	110.1	0.00	11.89	3.45	2	7	4	87	0.00	0.0	2.048	0.015	7	4	0	0	L
L	OH663	OH655	B	4ACSR	2.34Y	110.2	0.05	11.77	17.24	12	36	19	88	0.02	0.0	1.860	0.022	0	0	0	0	L
L	OH664	OH663	B	4ACSR	2.34Y	110.2	0.01	11.78	3.45	2	7	4	87	0.00	0.0	1.888	0.028	7	4	0	0	L
L	OH666	OH663	B	4ACSR	2.34Y	110.2	0.06	11.83	13.79	10	29	15	89	0.01	0.1	1.896	0.036	7	4	0	0	L
L	OH667	OH666	B	4ACSR	2.34Y	110.1	0.04	11.87	10.35	7	22	11	89	0.01	0.0	1.931	0.035	7	4	0	0	L
L	OH668	OH667	B	4ACSR	2.34Y	110.1	0.02	11.90	6.90	5	14	7	89	0.00	0.0	1.964	0.032	7	4	0	0	L
L	OH669	OH668	B	4ACSR	2.34Y	110.1	0.01	11.91	3.45	2	7	4	87	0.00	0.0	2.009	0.045	7	4	0	0	L
	OH670	OH646	A	2ACSR	2.47Y	116.2	-0.00	5.79	-0.00	0	0	0		0.00	0.0	1.711	0.029	0	0	0	0	
L			B		2.36Y	110.8	0.01	11.16	3.43	2	7	4	89					0	0	0	0	L
L			C		2.36Y	110.9	0.01	11.12	4.74	3	11	4	94					0	0	0	0	L
	OH671	OH670	A	2ACSR	2.47Y	116.2	-0.00	5.79	-0.00	0	0	0		0.00	0.0	1.740	0.030	0	0	0	0	
L			B		2.36Y	110.8	0.01	11.17	3.43	2	7	4	89					0	0	0	0	L
L			C		2.36Y	110.9	0.01	11.13	4.74	3	11	4	94					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH672	OH671	A	2ACSR	2.47Y	116.2	-0.00	5.78	-0.00	0	0	0		0.00	0.0	1.769	0.029	0	0	0	0
L		B		2.36Y	110.8	0.01	11.17	3.43	2	7	4	89					7	4	0	0 L
L		C		2.36Y	110.9	0.01	11.15	4.74	3	11	4	94					0	0	0	0 L
OH673	OH672	A	2ACSR	2.47Y	116.2	-0.00	5.78	-0.00	0	0	0		0.00	0.0	1.784	0.015	0	0	0	0
L		B		2.36Y	110.8	0.00	11.17	-0.00	0	0	0						0	0	0	0 L
L		C		2.36Y	110.8	0.00	11.15	4.74	3	11	4	94					11	4	0	0 L
OCD628	OH626	A	50A QR	2.47Y	116.3	0.00	5.75	18.74	37	44	13	96	0.00	0.0	1.571	0.000	0	0	0	0
L		B		2.36Y	111.2	0.00	10.79	20.89	42	44	23	89					0	0	0	0 L
L		C		2.36Y	110.9	0.00	11.09	24.28	49	54	19	94					0	0	0	0 L
OH629	OCD628	A	4ACSR	2.47Y	116.2	0.06	5.81	18.74	13	44	13	96	0.12	0.1	1.609	0.038	0	0	0	0
L		B		2.36Y	111.1	0.09	10.88	20.89	15	44	23	89					0	0	0	0 L
L		C		2.36Y	110.8	0.10	11.19	24.28	17	54	19	94					0	0	0	0 L
OH630	OH629	A	4ACSR	2.47Y	116.1	0.10	5.91	18.74	13	44	13	96	0.16	0.1	1.666	0.057	0	0	0	0
L		B		2.36Y	111.0	0.11	10.99	17.47	12	37	19	89					0	0	0	0 L
L		C		2.35Y	110.6	0.17	11.36	24.28	17	54	19	94					0	0	0	0 L
OH631	OH630	A	4ACSR	2.47Y	116.0	0.06	5.96	18.74	13	44	13	96	0.09	0.1	1.699	0.034	0	0	0	0
L		B		2.36Y	110.9	0.06	11.05	17.47	12	37	19	89					0	0	0	0 L
L		C		2.35Y	110.5	0.10	11.46	24.28	17	54	19	94					0	0	0	0 L
OH632	OH631	A	4ACSR	2.47Y	116.0	0.02	5.98	5.51	4	13	4	96	0.01	0.0	1.742	0.043	0	0	0	0
L		B		2.36Y	110.9	0.02	11.07	5.14	4	11	6	89					0	0	0	0 L
L		C		2.35Y	110.5	0.04	11.49	7.14	5	16	5	94					0	0	0	0 L
L OH633	OH632	A	4ACSR	2.47Y	116.0	0.02	6.01	5.51	4	13	4	96	0.01	0.0	1.787	0.044	0	0	0	0 L
L		B		2.36Y	110.9	0.02	11.10	5.14	4	11	6	89					0	0	0	0 L
L		C		2.35Y	110.5	0.04	11.53	7.14	5	16	5	94					0	0	0	0 L
L OH711	OH633	A	4ACSR	2.47Y	116.0	0.01	6.01	5.51	4	13	4	96	0.00	0.0	1.811	0.024	13	4	0	0 L
L		B		2.36Y	110.9	0.01	11.11	5.14	4	11	6	89					11	6	0	0 L
L		C		2.35Y	110.5	0.01	11.54	7.14	5	16	5	94					16	5	0	0 L
L OH634	OH631	A	4ACSR	2.47Y	116.0	0.06	6.02	13.23	9	31	9	96	0.07	0.1	1.750	0.051	0	0	0	0 L
L		B		2.36Y	110.9	0.07	11.12	12.34	9	26	13	89					0	0	0	0 L
L		C		2.35Y	110.4	0.11	11.56	17.15	12	38	13	94					0	0	0	0 L
L OH635	OH634	A	4ACSR	2.47Y	115.9	0.05	6.08	13.23	9	31	9	96	0.06	0.1	1.798	0.047	5	2	0	0 L
L		B		2.36Y	110.8	0.06	11.18	12.34	9	26	13	89					4	2	0	0 L
L		C		2.35Y	110.3	0.09	11.65	17.15	12	38	13	94					6	2	0	0 L
L OH636	OH635	A	4ACSR	2.46Y	115.9	0.03	6.10	11.02	8	26	8	96	0.02	0.0	1.838	0.041	17	5	0	0 L
L		B		2.36Y	110.8	0.03	11.21	10.28	7	22	11	89					14	7	0	0 L
L		C		2.35Y	110.3	0.05	11.70	14.29	10	32	11	94					21	7	0	0 L
L OH638	OH636	A	4ACSR	2.46Y	115.9	0.01	6.11	3.68	3	9	3	95	0.00	0.0	1.872	0.034	9	3	0	0 L
L		B		2.36Y	110.8	0.01	11.21	3.43	2	7	4	89					7	4	0	0 L
L		C		2.35Y	110.3	0.01	11.71	4.76	3	11	4	94					11	4	0	0 L
L OH640	OH629	B	4ACSR	2.36Y	111.1	0.03	10.91	3.42	2	7	4	87	0.00	0.0	1.663	0.054	0	0	0	0 L
L OH641	OH640	B	4ACSR	2.36Y	111.1	0.01	10.92	3.42	2	7	4	87	0.00	0.0	1.718	0.055	7	4	0	0 L
OCD600	OH532	A	50A QR	2.47Y	116.3	0.00	5.75	9.16	18	22	6	96	0.00	0.0	1.217	0.000	0	0	0	0
L		C		2.38Y	111.8	0.00	10.24	9.41	19	21	7	94					0	0	0	0 L
OH601	OCD600	A	2ACSR	2.47Y	116.3	0.00	5.75	-0.00	0	0	0		0.00	0.0	1.222	0.005	0	0	0	0
L		C		2.38Y	111.8	0.00	10.24	-0.00	0	0	0						0	0	0	0 L
OH602	OCD600	A	2/0ACSR	2.47Y	116.2	0.01	5.76	9.16	3	22	6	96	0.00	0.0	1.245	0.028	0	0	0	0
L		C		2.38Y	111.7	0.02	10.26	9.41	3	21	7	94					0	0	0	0 L
OH603	OH602	A	2/0ACSR	2.47Y	116.2	0.01	5.76	9.16	3	22	6	96	0.00	0.0	1.272	0.027	0	0	0	0
L		C		2.38Y	111.7	0.02	10.28	9.41	3	21	7	94					0	0	0	0 L
OH604	OH603	A	2/0ACSR	2.47Y	116.2	0.00	5.77	2.20	1	5	2	93	0.00	0.0	1.301	0.028	5	2	0	0
L		C		2.38Y	111.7	0.00	10.28	-0.00	0	0	0						0	0	0	0 L
OH605	OH603	A	2/0ACSR	2.47Y	116.2	0.00	5.77	1.10	0	3	1	95	0.00	0.0	1.302	0.029	3	1	0	0
L		C		2.38Y	111.7	0.00	10.28	-0.00	0	0	0						0	0	0	0 L
OH606	OH605	A	2/0ACSR	2.47Y	116.2	0.00	5.77	-0.00	0	0	0		0.00	0.0	1.329	0.027	0	0	0	0
L		C		2.38Y	111.7	0.00	10.28	-0.00	0	0	0						0	0	0	0 L

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	OH607	OH603	A	2/0ACSR	2.47Y	116.2	0.00	5.76	5.86	2	14	4	96	0.00	0.0	1.305	0.033	5	2	0	0	
L			C		2.38Y	111.7	0.02	10.30	9.41	3	21	7	94					0	0	0	0	L
	OH608	OH607	A	2/0ACSR	2.47Y	116.2	-0.00	5.76	3.66	1	9	3	95	0.00	0.0	1.338	0.033	0	0	0	0	
L			C		2.37Y	111.7	0.02	10.33	9.41	3	21	7	94					0	0	0	0	L
	OH609	OH608	A	2/0ACSR	2.47Y	116.2	0.00	5.77	3.66	1	9	3	95	0.00	0.0	1.362	0.024	9	3	0	0	
L			C		2.37Y	111.7	0.00	10.33	-0.00	0	0	0						0	0	0	0	L
L	OH610	OH608	C	2/0ACSR	2.37Y	111.7	0.00	10.33	4.71	2	11	4	94	0.00	0.0	1.362	0.024	11	4	0	0	L
	OH611	OH608	A	2/0ACSR	2.47Y	116.2	-0.00	5.76	-0.00	0	0	0		0.00	0.0	1.367	0.029	0	0	0	0	
L			C		2.37Y	111.7	0.01	10.33	4.71	2	11	4	94					0	0	0	0	L
	OH612	OH611	A	2/0ACSR	2.47Y	116.2	-0.00	5.76	-0.00	0	0	0		0.00	0.0	1.390	0.023	0	0	0	0	
L			C		2.37Y	111.7	0.00	10.34	4.71	2	11	4	94					11	4	0	0	L
	OH615	OH612	A	2/0ACSR	2.47Y	116.2	0.00	5.76	-0.00	0	0	0		0.00	0.0	1.403	0.013	0	0	0	0	
L			C		2.37Y	111.7	0.00	10.34	-0.00	0	0	0						0	0	0	0	L
	OCD576	OH529	A	50A QR	2.47Y	116.2	0.00	5.77	13.21	26	31	9	96	0.00	0.0	1.127	0.000	0	0	0	0	
L			B		2.40Y	112.9	0.00	9.10	10.09	20	22	11	89					0	0	0	0	L
L			C		2.39Y	112.2	0.00	9.84	7.51	15	17	6	95					0	0	0	0	L
	OH577	OCD576	A	2ACSR	2.47Y	116.2	0.04	5.81	13.21	7	31	9	96	0.01	0.0	1.162	0.034	0	0	0	0	
L			B		2.40Y	112.9	0.01	9.12	10.09	6	22	11	89					7	4	0	0	L
L			C		2.38Y	112.1	0.02	9.86	7.51	4	17	6	95					0	0	0	0	L
	OH578	OH577	A	2ACSR	2.47Y	116.2	0.02	5.83	13.21	7	31	9	96	0.01	0.0	1.181	0.020	0	0	0	0	
L			B		2.40Y	112.9	0.01	9.12	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.1	0.01	9.87	7.51	4	17	6	95					0	0	0	0	L
	OH579	OH578	A	2ACSR	2.47Y	116.2	0.00	5.83	-0.00	0	0	0		0.00	0.0	1.204	0.023	0	0	0	0	
L			B		2.40Y	112.9	0.00	9.12	-0.00	0	0	0						0	0	0	0	L
L			C		2.38Y	112.1	0.00	9.87	-0.00	0	0	0						0	0	0	0	L
	OH580	OH578	A	2ACSR	2.47Y	116.1	0.06	5.88	13.21	7	31	9	96	0.02	0.0	1.235	0.054	0	0	0	0	
L			B		2.40Y	112.9	0.01	9.14	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.1	0.03	9.90	7.51	4	17	6	95					0	0	0	0	L
	OH581	OH580	A	2ACSR	2.47Y	116.1	0.02	5.90	13.21	7	31	9	96	0.01	0.0	1.254	0.019	9	3	0	0	
L			B		2.40Y	112.9	0.01	9.14	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.1	0.01	9.92	7.51	4	17	6	94					0	0	0	0	L
	OH582	OH581	A	2ACSR	2.47Y	116.1	0.02	5.92	9.54	5	23	7	96	0.01	0.0	1.278	0.024	0	0	0	0	
L			B		2.40Y	112.8	0.01	9.15	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.1	0.01	9.93	7.51	4	17	6	94					0	0	0	0	L
	OH583	OH582	A	2ACSR	2.47Y	116.1	0.02	5.94	9.54	5	23	7	96	0.01	0.0	1.311	0.033	0	0	0	0	
L			B		2.40Y	112.8	0.01	9.17	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.0	0.02	9.95	7.51	4	17	6	94					0	0	0	0	L
	OH584	OH583	A	2ACSR	2.47Y	116.1	0.01	5.95	3.67	2	9	3	95	0.00	0.0	1.334	0.023	0	0	0	0	
	OH585	OH584	A	2ACSR	2.47Y	116.0	0.00	5.95	3.67	2	9	3	95	0.00	0.0	1.348	0.014	9	3	0	0	
	OH586	OH583	A	2ACSR	2.47Y	116.0	0.02	5.96	5.87	3	14	4	96	0.01	0.0	1.366	0.055	0	0	0	0	
L			B		2.40Y	112.8	0.02	9.19	6.73	4	14	7	89					7	4	0	0	L
L			C		2.38Y	112.0	0.03	9.99	7.51	4	17	6	94					0	0	0	0	L
	OH587	OH586	A	2ACSR	2.47Y	116.0	0.01	5.96	5.87	3	14	4	96	0.00	0.0	1.394	0.028	5	2	0	0	
L			B		2.40Y	112.8	0.01	9.19	3.36	2	7	4	89					0	0	0	0	L
L			C		2.38Y	112.0	0.02	10.00	7.51	4	17	6	94					0	0	0	0	L
	OH588	OH587	A	2ACSR	2.47Y	116.0	0.00	5.97	3.67	2	9	3	95	0.00	0.0	1.431	0.037	0	0	0	0	
L			B		2.40Y	112.8	0.01	9.20	3.36	2	7	4	89					0	0	0	0	L
L			C		2.38Y	112.0	0.02	10.03	7.51	4	17	6	94					0	0	0	0	L
	OH589	OH588	A	2ACSR	2.47Y	116.0	0.00	5.97	3.67	2	9	3	95	0.00	0.0	1.459	0.028	0	0	0	0	
L			B		2.40Y	112.8	0.00	9.20	3.37	2	7	4	89					7	4	0	0	L
L			C		2.38Y	112.0	0.02	10.05	7.51	4	17	6	94					0	0	0	0	L
	OH590	OH589	A	2ACSR	2.47Y	116.0	-0.01	5.96	-0.00	0	0	0		0.00	0.0	1.482	0.023	0	0	0	0	
L			B		2.40Y	112.8	0.00	9.20	-0.00	0	0	0						0	0	0	0	L
L			C		2.38Y	111.9	0.02	10.07	7.51	4	17	6	94					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	OH591	OH590	A	2ACSR	2.47Y	116.0	-0.00	5.96	-0.00	0	0	0		0.00	0.0	1.493	0.010	0	0	0	0	
L			B		2.40Y	112.8	0.00	9.21	-0.00	0	0	0						0	0	0	0	L
L			C		2.38Y	111.9	0.01	10.07	7.51	4	17	6	94					0	0	0	0	L
	OH593	OH591	A	2ACSR	2.47Y	116.0	-0.00	5.96	-0.00	0	0	0	100	0.00	0.0	1.513	0.020	0	0	0	0	
L			B		2.40Y	112.8	0.00	9.21	-0.00	0	0	0						0	0	0	0	L
L			C		2.38Y	111.9	0.00	10.08	4.70	3	11	4	94					11	4	0	0	L
	OH592	OH593	A	2ACSR	2.47Y	116.0	0.00	5.96	-0.00	0	0	0	100	0.00	0.0	1.530	0.017	0	0	0	0	
L			B		2.40Y	112.8	0.00	9.21	-0.00	0	0	0						0	0	0	0	L
L			C		2.38Y	111.9	0.00	10.08	-0.00	0	0	0						0	0	0	0	L
	OH594	OH591	A	2ACSR	2.47Y	116.0	-0.00	5.96	-0.00	0	0	0		0.00	0.0	1.531	0.038	0	0	0	0	
L			C		2.38Y	111.9	0.01	10.08	2.82	2	6	2	94					0	0	0	0	L
	OH595	OH594	A	2ACSR	2.47Y	116.0	-0.00	5.96	-0.00	0	0	0		0.00	0.0	1.558	0.027	0	0	0	0	
L			C		2.38Y	111.9	0.00	10.09	2.82	2	6	2	94					6	2	0	0	L
L	OH596	OH589	B	2ACSR	2.40Y	112.8	0.00	9.20	-0.00	0	0	0		0.00	0.0	1.469	0.010	0	0	0	0	L
L	OH597	OH596	B	2ACSR	2.40Y	112.8	0.00	9.20	-0.00	0	0	0		0.00	0.0	1.502	0.034	0	0	0	0	L
	OH598	OH589	A	2ACSR	2.47Y	116.0	0.00	5.98	3.67	2	9	3	95	0.00	0.0	1.486	0.027	9	3	0	0	
	OH599	OH598	A	2ACSR	2.47Y	116.0	0.00	5.98	-0.00	0	0	0	100	0.00	0.0	1.514	0.028	0	0	0	0	
	OCD569	OH527	A	50A QR	2.47Y	116.2	0.00	5.75	4.40	9	10	3	96	0.00	0.0	1.063	0.000	0	0	0	0	
	OH570	OCD569	A	2ACSR	2.47Y	116.2	0.01	5.76	4.40	2	10	3	96	0.00	0.0	1.094	0.032	0	0	0	0	
	OH573	OH570	A	2ACSR	2.47Y	116.2	0.01	5.78	4.40	2	10	3	96	0.00	0.0	1.130	0.035	5	2	0	0	
	OH574	OH573	A	2ACSR	2.47Y	116.2	0.01	5.78	2.20	1	5	2	93	0.00	0.0	1.159	0.029	0	0	0	0	
	OH575	OH574	A	2ACSR	2.47Y	116.2	0.00	5.78	2.20	1	5	2	93	0.00	0.0	1.185	0.026	5	2	0	0	
	OCD534	OH525	A	50A QR	2.47Y	116.3	0.00	5.71	-0.01	0	0	0		0.00	0.0	0.999	0.000	0	0	0	0	
L			B		2.41Y	113.4	0.00	8.56	15.42	31	33	17	89					0	0	0	0	L
L			C		2.40Y	112.8	0.00	9.20	7.45	15	17	6	94					0	0	0	0	L
	OH535	OCD534	A	2ACSR	2.47Y	116.3	-0.01	5.71	-0.01	0	0	0		0.02	0.0	1.032	0.033	0	0	0	0	
L			B		2.41Y	113.4	0.05	8.61	15.42	9	33	17	89					0	0	0	0	L
L			C		2.40Y	112.8	0.01	9.21	7.45	4	17	6	94					0	0	0	0	L
	OH536	OH535	A	2ACSR	2.47Y	116.3	-0.01	5.70	-0.01	0	0	0		0.01	0.0	1.068	0.035	0	0	0	0	
L			B		2.41Y	113.3	0.04	8.66	15.42	9	33	17	89					14	7	0	0	L
L			C		2.40Y	112.8	0.01	9.22	7.45	4	17	6	94					0	0	0	0	L
	OH537	OH536	A	2ACSR	2.47Y	116.3	-0.01	5.69	-0.00	0	0	0		0.01	0.0	1.110	0.042	0	0	0	0	
L			B		2.41Y	113.3	0.04	8.69	8.72	5	19	10	89					0	0	0	0	L
L			C		2.40Y	112.8	0.01	9.23	7.46	4	17	6	94					6	2	0	0	L
	OH538	OH537	A	2ACSR	2.47Y	116.3	-0.00	5.69	-0.00	0	0	0		0.00	0.0	1.140	0.030	0	0	0	0	
L			B		2.41Y	113.3	0.03	8.72	8.72	5	19	10	89					0	0	0	0	L
L			C		2.40Y	112.8	0.01	9.24	4.66	3	11	4	94					0	0	0	0	L
	OH539	OH538	A	2ACSR	2.47Y	116.3	-0.00	5.69	-0.00	0	0	0		0.00	0.0	1.166	0.026	0	0	0	0	
L			B		2.41Y	113.3	0.02	8.74	8.72	5	19	10	89					0	0	0	0	L
L			C		2.40Y	112.8	-0.00	9.24	4.66	3	11	4	94					11	4	0	0	L
L	OH540	OH539	B	2ACSR	2.41Y	113.2	0.02	8.77	8.72	5	19	10	88	0.00	0.0	1.193	0.027	0	0	0	0	L
L	OH541	OH540	B	2ACSR	2.41Y	113.2	0.01	8.78	5.37	3	11	6	88	0.00	0.0	1.216	0.023	7	4	0	0	L
L	OH542	OH541	B	2ACSR	2.41Y	113.2	0.00	8.78	2.01	1	4	2	89	0.00	0.0	1.239	0.023	4	2	0	0	L
L	OH543	OH540	B	2ACSR	2.41Y	113.2	0.01	8.77	3.35	2	7	4	87	0.00	0.0	1.233	0.040	7	4	0	0	L
	OH544	OH539	A	2ACSR	2.47Y	116.3	0.00	5.69	-0.00	0	0	0		0.00	0.0	1.193	0.027	0	0	0	0	
L			B		2.41Y	113.3	0.00	8.74	-0.00	0	0	0						0	0	0	0	L
L			C		2.40Y	112.8	0.00	9.24	-0.00	0	0	0						0	0	0	0	L
	OH545	OH544	A	2ACSR	2.47Y	116.3	0.00	5.69	-0.00	0	0	0		0.00	0.0	1.228	0.035	0	0	0	0	
L			B		2.41Y	113.3	0.00	8.74	-0.00	0	0	0						0	0	0	0	L
L			C		2.40Y	112.8	0.00	9.24	-0.00	0	0	0						0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	OH546	OH545	A	2ACSR	2.47Y	116.3	0.00	5.69	-0.00	0	0	0		0.00	0.0	1.254	0.026	0	0	0	0	
L			B		2.41Y	113.3	0.00	8.74	-0.00	0	0	0						0	0	0	0	L
L			C		2.40Y	112.8	0.00	9.24	-0.00	0	0	0						0	0	0	0	L
	SW550-B	OH546	A	Open	2.47Y	116.3	0.00	5.69	0.00	0	0	0	100	0.00	0.0	1.254	0.000	0	0	0	0	
L			B		2.41Y	113.3	0.00	8.74	0.00	0	0	0	100					0	0	0	0	L
L			C		2.40Y	112.8	0.00	9.24	0.00	0	0	0	100					0	0	0	0	L
L	OCD555	OH525	B	50A QR	2.41Y	113.4	0.00	8.56	18.80	38	40	21	89	0.00	0.0	0.999	0.000	0	0	0	0	L
L	OH559	OCD555	B	2ACSR	2.41Y	113.4	0.05	8.61	18.80	10	40	21	89	0.02	0.0	1.027	0.028	0	0	0	0	L
L	OH560	OH559	B	2ACSR	2.41Y	113.3	0.09	8.70	18.80	10	40	21	89	0.03	0.1	1.076	0.049	0	0	0	0	L
L	OH561	OH560	B	2ACSR	2.41Y	113.2	0.06	8.76	18.80	10	40	21	89	0.02	0.0	1.112	0.036	7	4	0	0	L
L	OH562	OH561	B	2ACSR	2.41Y	113.2	0.05	8.82	15.44	9	33	17	89	0.01	0.0	1.147	0.035	4	2	0	0	L
L	OH563	OH562	B	2ACSR	2.41Y	113.1	0.05	8.87	13.43	7	29	15	89	0.01	0.0	1.191	0.044	7	4	0	0	L
L	OH564	OH563	B	2ACSR	2.41Y	113.1	0.00	8.87	-0.00	0	0	0		0.00	0.0	1.220	0.029	0	0	0	0	L
L	OH565	OH563	B	2ACSR	2.40Y	113.1	0.04	8.91	10.08	6	22	11	89	0.01	0.0	1.235	0.044	0	0	0	0	L
L	OH566	OH565	B	2ACSR	2.40Y	113.1	0.02	8.94	10.08	6	22	11	89	0.00	0.0	1.263	0.028	7	4	0	0	L
L	OH567	OH566	B	2ACSR	2.40Y	113.0	0.02	8.95	6.72	4	14	7	89	0.00	0.0	1.300	0.037	7	4	0	0	L
L	OH568	OH567	B	2ACSR	2.40Y	113.0	0.01	8.96	3.36	2	7	4	87	0.00	0.0	1.337	0.037	7	4	0	0	L
	OCD552	OH522	A	50A QR	2.47Y	116.3	0.00	5.68	2.20	4	5	2	93	0.00	0.0	0.928	0.000	0	0	0	0	
	OH553	OCD552	A	2ACSR	2.47Y	116.3	0.01	5.68	2.20	1	5	2	93	0.00	0.0	0.961	0.034	0	0	0	0	
	OH554	OH553	A	2ACSR	2.47Y	116.3	0.00	5.69	2.20	1	5	2	93	0.00	0.0	0.978	0.016	5	2	0	0	

----------- Feeder No. 144 (CB 144) Beginning with Device CB 144 -----------

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	CB 144	OH40	A	560 VWE	2.48Y	116.5	0.00	5.45	42.90	0	106	0	100	0.00	0.0	0.600	0.000	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	17.54	0	41	13	95					0	0	0	0	L
L			C		2.44Y	114.8	0.00	7.23	41.21	0	101	0	100					0	0	0	0	L
	OH59	CB 144	A	#2 ACSR 6/	2.48Y	116.5	0.02	5.47	42.90	24	106	0	100	0.04	0.0	0.607	0.007	0	0	0	0	
L			B		2.47Y	115.9	0.01	6.07	17.54	10	41	13	95					0	0	0	0	L
L			C		2.44Y	114.7	0.03	7.25	41.21	23	101	0	100					0	0	0	0	L
L	OH61	OH59	B	#2 ACSR 6/	2.47Y	115.9	0.00	6.07	0.83	0	2	1	89	0.00	0.0	0.620	0.012	2	1	0	0	L
L			C		2.44Y	114.7	0.00	7.25	1.49	1	4	0	-100					4	0	0	0	L
	OH63	OH59	A	#2 ACSR 6/	2.48Y	116.5	0.04	5.51	42.90	24	106	0	100	0.10	0.0	0.625	0.018	0	0	0	0	
L			B		2.47Y	115.9	0.01	6.08	16.71	9	39	13	95					0	0	0	0	L
L			C		2.44Y	114.7	0.06	7.32	39.72	22	97	0	100					0	0	0	0	L
	OH64	OH63	A	#2 ACSR 6/	2.48Y	116.5	0.02	5.53	42.90	24	106	0	100	0.06	0.0	0.635	0.010	0	0	0	0	
L			B		2.46Y	115.9	0.01	6.09	16.71	9	39	13	95					0	0	0	0	L
L			C		2.44Y	114.6	0.04	7.35	39.72	22	97	0	100					0	0	0	0	L
	OH65	OH64	A	#2 ACSR 6/	2.48Y	116.4	0.04	5.57	42.90	24	106	0	100	0.09	0.0	0.652	0.016	0	0	0	0	
L			B		2.46Y	115.9	0.01	6.10	16.71	9	39	13	95					0	0	0	0	L
L			C		2.44Y	114.6	0.06	7.41	39.72	22	97	0	100					0	0	0	0	L
	OH66	OH65	A	#2 ACSR 6/	2.48Y	116.4	0.03	5.60	42.90	24	106	0	100	0.07	0.0	0.665	0.013	0	0	0	0	
L			B		2.46Y	115.9	0.01	6.11	16.71	9	39	13	95					7	2	0	0	L
L			C		2.44Y	114.5	0.05	7.46	39.72	22	97	0	-100					0	0	0	0	L
	OH67	OH66	A	#2 ACSR 6/	2.47Y	116.4	0.04	5.64	42.90	24	106	0	100	0.09	0.0	0.682	0.017	10	0	0	0	
L			B		2.46Y	115.9	0.01	6.12	13.92	8	33	11	95					4	1	0	0	L
L			C		2.43Y	114.5	0.06	7.52	39.72	22	97	0	-100					5	0	0	0	L
	OH68	OH67	A	#2 ACSR 6/	2.47Y	116.3	0.04	5.68	39.01	22	97	0	100	0.10	0.0	0.703	0.021	0	0	0	0	
L			B		2.46Y	115.9	0.01	6.13	12.25	7	29	9	95					0	0	0	0	L
L			C		2.43Y	114.4	0.07	7.59	37.47	21	91	0	-100					0	0	0	0	L

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
OH69	OH68	A	#2 ACSR 6/	2.47Y	116.3	0.03	5.71	39.01	22	97	0	100	0.05	0.0	0.715	0.012	0	0	0	0	
L		B		2.46Y	115.9	0.00	6.14	12.25	7	29	9	95					0	0	0	0	L
L		C		2.43Y	114.4	0.03	7.63	37.47	21	91	0	-100					27	0	0	0	L
OH70	OH69	A	#2 ACSR 6/	2.47Y	116.3	0.03	5.74	39.01	22	96	0	100	0.04	0.0	0.727	0.012	0	0	0	0	
L		B		2.46Y	115.9	0.00	6.14	12.25	7	29	9	95					0	0	0	0	L
L		C		2.43Y	114.3	0.03	7.66	26.24	15	64	0	-100					0	0	0	0	L
OH71	OH70	A	#2 ACSR 6/	2.47Y	116.2	0.09	5.82	39.01	22	96	0	100	0.13	0.1	0.764	0.037	0	0	0	0	
L		B		2.46Y	115.9	0.01	6.15	12.25	7	29	9	95					0	0	0	0	L
L		C		2.43Y	114.3	0.09	7.75	26.24	15	64	0	-100					0	0	0	0	L
OH72	OH71	A	#2 ACSR 6/	2.47Y	116.1	0.04	5.86	26.01	14	64	0	100	0.03	0.0	0.784	0.021	0	0	0	0	
L		B		2.46Y	115.9	-0.00	6.15	5.57	3	13	4	95					0	0	0	0	L
L		C		2.43Y	114.2	0.03	7.78	18.74	10	46	0	-100					27	0	0	0	L
OH73	OH72	A	#2 ACSR 6/	2.47Y	116.1	0.00	5.86	26.01	14	64	0	100	0.00	0.0	0.787	0.002	32	0	0	0	
L		B		2.46Y	115.9	-0.00	6.14	5.57	3	13	4	95					13	4	0	0	L
L		C		2.43Y	114.2	0.00	7.78	7.50	4	18	0	-100					18	0	0	0	L
OH74	OH73	A	#2 ACSR 6/	2.47Y	116.1	0.00	5.87	13.01	7	32	0	100	0.00	0.0	0.788	0.001	0	0	0	0	
L		B		2.46Y	115.9	-0.00	6.14	-0.00	0	0	0						0	0	0	0	L
L		C		2.43Y	114.2	0.00	7.78	-0.00	0	0	0						0	0	0	0	L
OH75	OH74	A	#2 ACSR 6/	2.47Y	116.1	0.02	5.89	13.01	7	32	0	100	0.01	0.0	0.811	0.023	0	0	0	0	
L		C		2.43Y	114.2	0.00	7.78	-0.00	0	0	0						0	0	0	0	L
OH76	OH75	A	#2 ACSR 6/	2.47Y	116.1	0.03	5.92	13.01	7	32	0	100	0.01	0.0	0.836	0.025	0	0	0	0	
OH77	OH76	A	#2 ACSR 6/	2.47Y	116.1	0.02	5.94	13.01	7	32	0	100	0.00	0.0	0.860	0.024	16	0	0	0	
OH715	OH77	A	#2 ACSR 6/	2.47Y	116.1	0.01	5.94	6.50	4	16	0	100	0.00	0.0	0.880	0.021	16	0	0	0	
OH78	OH71	A	#2 ACSR 6/	2.47Y	116.2	0.02	5.84	13.00	7	32	0	100	0.01	0.0	0.783	0.019	0	0	0	0	
L		B		2.46Y	115.8	0.01	6.16	6.68	4	16	5	95					0	0	0	0	L
L		C		2.43Y	114.2	0.01	7.76	7.50	4	18	0	-100					0	0	0	0	L
OH79	OH78	A	#2 ACSR 6/	2.47Y	116.1	0.01	5.86	13.00	7	32	0	100	0.01	0.0	0.799	0.016	0	0	0	0	
L		B		2.46Y	115.8	0.01	6.16	6.68	4	16	5	95					0	0	0	0	L
L		C		2.43Y	114.2	0.01	7.77	7.50	4	18	0	-100					0	0	0	0	L
L OH180	OH79	B	#2 ACSR 6/	2.46Y	115.8	0.00	6.16	2.79	2	7	2	96	0.00	0.0	0.823	0.024	7	2	0	0	L
OH181	OH79	A	#2 ACSR 6/	2.47Y	116.1	0.01	5.86	6.50	4	16	0	100	0.00	0.0	0.835	0.036	16	0	0	0	
L		B		2.46Y	115.8	0.00	6.16	2.78	2	7	2	95					7	2	0	0	L
L		C		2.43Y	114.2	0.01	7.78	3.75	2	9	0	-100					9	0	0	0	L
OH80	OH79	A	#2 ACSR 6/	2.47Y	116.1	0.01	5.87	6.50	4	16	0	100	0.00	0.0	0.826	0.027	0	0	0	0	
L		B		2.46Y	115.8	-0.00	6.16	1.11	1	3	1	95					3	1	0	0	L
L		C		2.43Y	114.2	0.01	7.78	3.75	2	9	0	-100					0	0	0	0	L
OH81	OH80	A	#2 ACSR 6/	2.47Y	116.1	0.00	5.87	6.50	4	16	0	100	0.00	0.0	0.850	0.023	16	0	0	0	
L		B		2.46Y	115.8	-0.00	6.16	-0.00	0	0	0						0	0	0	0	L
L		C		2.43Y	114.2	0.01	7.79	3.75	2	9	0	-100					9	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total
KW	3899	0	0	0	0	0	143	0.00	4043
KVAR	1467	0	0	-4	0	0	272		1734

Lowest Voltage	Highest Accumulated Voltage Drop	Highest Element Voltage Drop
A-Phase -> 112.12 volts on OH278	9.88 volts on OH278	2.59 volts on XFMR38
B-Phase -> 110.09 volts on OH669	11.91 volts on OH669	2.87 volts on XFMR38
C-Phase -> 109.97 volts on OH430	12.03 volts on OH430	3.35 volts on XFMR38

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	VCB214		A	Delta EPA	7.65Y	120.5	1.53	1.53	175.46	0	1271	482	94	26.36	0.7	0.000	0.000	0	0	0	0	
			B		7.64Y	120.3	1.68	1.68	181.52	0	1282	578	91					0	0	0	0	
			C		7.62Y	120.1	1.94	1.94	211.05	0	1490	674	91					0	0	0	0	
	UG7	VCB214	A	1/0URD	7.65Y	120.4	0.04	1.57	175.46	77	1263	454	94	1.67	0.0	0.014	0.014	0	0	0	0	
			B		7.64Y	120.3	0.04	1.72	181.52	80	1274	548	92					0	0	0	0	
C			C		7.62Y	120.0	0.06	2.00	211.05	93	1479	634	92					0	0	0	0	C
	OH10	SW9-B	A	#1/0 ACSR	7.65Y	120.4	0.03	1.60	175.46	76	1263	454	94	1.32	0.0	0.027	0.014	0	0	0	0	
			B		7.64Y	120.2	0.04	1.76	181.53	79	1274	548	92					0	0	0	0	
C			C		7.62Y	119.9	0.05	2.05	211.05	92	1478	634	92					0	0	0	0	C
	OH12	REG11	A	#1/0 ACSR	7.64Y	120.3	0.06	1.66	175.47	76	1262	454	94	2.33	0.1	0.051	0.024	0	0	0	0	
			B		7.63Y	120.2	0.07	1.83	181.53	79	1273	548	92					0	0	0	0	
C			C		7.61Y	119.9	0.09	2.14	211.05	92	1478	633	92					0	0	0	0	C
	OH735	OH729	A	#2 ACSR 6/	7.64Y	120.2	0.00	1.75	1.06	1	8	3	94	0.00	0.0	0.367	0.028	8	3	0	0	
			B		7.62Y	120.0	-0.00	1.98	-0.00	0	0	0						0	0	0	0	
			C		7.60Y	119.7	0.00	2.28	-0.00	0	0	0						0	0	0	0	
	OH46	OH27	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.01	0	0	0		0.00	0.0	0.553	0.039	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.01	0	0	0						0	0	0	0	
			C		7.52Y	118.4	-0.00	3.63	-0.01	0	0	0						0	0	0	0	
	OH49	OH46	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.01	0	0	0		0.00	0.0	0.583	0.030	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.01	0	0	0						0	0	0	0	
			C		7.52Y	118.4	0.00	3.63	-0.01	0	0	0						0	0	0	0	
	OH50	OH49	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.00	0	0	0		0.00	0.0	0.591	0.009	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0	
			C		7.52Y	118.4	0.00	3.63	-0.00	0	0	0						0	0	0	0	
	OH51	OH50	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.00	0	0	0		0.00	0.0	0.611	0.020	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0	
			C		7.52Y	118.4	0.00	3.63	-0.00	0	0	0						0	0	0	0	
	OH52	OH51	A	#1/0 ACSR	7.58Y	119.3	0.00	2.69	-0.00	0	0	0		0.00	0.0	0.630	0.019	0	0	0	0	
			B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0	
			C		7.52Y	118.4	0.00	3.63	-0.00	0	0	0						0	0	0	0	
	OH54	OH33	A	#4 ACSR 6/	7.57Y	119.2	-0.00	2.75	-0.00	0	0	0		0.00	0.0	0.605	0.016	0	0	0	0	
			B		7.55Y	118.9	0.00	3.10	-0.00	0	0	0						0	0	0	0	
			C		7.51Y	118.3	0.00	3.75	12.72	9	91	30	95					91	30	0	0	
	XFMR38	OH31	A	Transforme	2.48Y	116.6	2.59	5.42	117.79	72	839	301	94	24.29	1.0	0.592	0.000	0	0	0	0	
L			B		2.47Y	116.0	2.87	6.03	111.70	68	761	363	90					0	0	0	0	L
L			C		2.44Y	114.8	3.35	7.19	132.90	81	905	420	91					0	0	0	0	L
	OH40	XFMR38	A	500 MCM Hd	2.48Y	116.5	0.03	5.45	351.76	42	831	263	95	0.38	0.0	0.600	0.008	0	0	0	0	
L			B		2.47Y	115.9	0.03	6.06	333.59	40	754	329	92					0	0	0	0	L
L			C		2.44Y	114.8	0.04	7.23	396.90	47	895	372	92					0	0	0	0	L
	OH42	OH40	A	500 MCM Hd	2.48Y	116.5	0.01	5.46	237.96	28	551	212	93	0.03	0.0	0.602	0.002	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	201.83	24	461	187	93					0	0	0	0	L
L			C		2.44Y	114.8	0.01	7.23	234.64	28	508	265	89					0	0	0	0	L

----------- Feeder No. 154 (CB 154) Beginning with Device CB 154 -----------

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	CB 154	OH42	A	560 VWE	2.48Y	116.5	0.00	5.46	133.89	0	312	113	94	0.00	0.0	0.602	0.000	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	132.82	0	308	112	94					0	0	0	0	L
L			C		2.44Y	114.8	0.00	7.23	80.93	0	174	94	88					0	0	0	0	L
	OH82	CB 154	A	#2 ACSR 6/	2.48Y	116.5	0.08	5.54	133.89	74	312	113	94	0.43	0.1	0.609	0.007	0	0	0	0	
L			B		2.46Y	115.9	0.06	6.12	132.82	74	308	112	94					0	0	0	0	L
L			C		2.44Y	114.7	0.03	7.26	80.93	45	174	94	88					0	0	0	0	L
	OH84	OH82	A	#2 ACSR 6/	2.47Y	116.3	0.19	5.73	133.89	74	312	113	94	1.02	0.1	0.626	0.017	0	0	0	0	
L			B		2.46Y	115.7	0.15	6.27	132.82	74	307	112	94					0	0	0	0	L
L			C		2.44Y	114.7	0.08	7.34	80.93	45	174	94	88					0	0	0	0	L
	OH85	OH84	A	#2 ACSR 6/	2.47Y	116.1	0.20	5.94	133.89	74	311	113	94	1.08	0.1	0.643	0.018	0	0	0	0	
L			B		2.46Y	115.6	0.15	6.42	132.82	74	307	112	94					0	0	0	0	L
L			C		2.44Y	114.6	0.08	7.42	80.93	45	174	94	88					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

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Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
L OH86	OH85	A	#2 ACSR 6/	2.47Y	116.0	0.09	6.02	133.89	74	311	113	94	0.45	0.1	0.651	0.007	0	0	0	0	L
L		B		2.46Y	115.5	0.06	6.49	132.82	74	307	112	94					0	0	0	0	L
L		C		2.44Y	114.5	0.03	7.46	80.93	45	174	94	88					0	0	0	0	L
L OH87	OH86	A	#2 ACSR 6/	2.46Y	115.6	0.33	6.35	133.89	74	310	113	94	1.75	0.2	0.680	0.029	0	0	0	0	L
L		B		2.45Y	115.3	0.25	6.74	132.82	74	307	112	94					0	0	0	0	L
L		C		2.43Y	114.4	0.13	7.59	80.93	45	173	94	88					0	0	0	0	L
L OH88	OH87	A	#2 ACSR 6/	2.46Y	115.5	0.19	6.54	133.89	74	310	112	94	1.00	0.1	0.696	0.017	0	0	0	0	L
L		B		2.45Y	115.1	0.14	6.88	132.82	74	306	111	94					0	0	0	0	L
L		C		2.43Y	114.3	0.07	7.66	80.93	45	173	94	88					7	4	0	0	L
L OH89	OH88	A	#2 ACSR 6/	2.45Y	115.2	0.23	6.77	133.89	74	309	112	94	1.17	0.1	0.716	0.020	0	0	0	0	L
L		B		2.44Y	115.0	0.17	7.05	132.82	74	306	111	94					0	0	0	0	L
L		C		2.43Y	114.3	0.08	7.74	77.85	43	167	90	88					13	7	0	0	L
L OH90	OH89	A	#2 ACSR 6/	2.44Y	115.0	0.26	7.03	133.89	74	308	112	94	1.30	0.2	0.738	0.022	0	0	0	0	L
L		B		2.44Y	114.8	0.19	7.24	132.82	74	305	111	94					0	0	0	0	L
L		C		2.43Y	114.2	0.08	7.82	71.68	40	153	83	88					0	0	0	0	L
L OH91	OH90	A	#2 ACSR 6/	2.44Y	114.9	0.11	7.15	133.89	74	308	112	94	0.57	0.1	0.748	0.010	0	0	0	0	L
L		B		2.44Y	114.7	0.08	7.32	132.82	74	305	111	94					0	0	0	0	L
L		C		2.43Y	114.1	0.04	7.86	71.68	40	153	83	88					0	0	0	0	L
L OCD182	OH91	A	50A QR	2.44Y	114.9	0.00	7.15	92.40	185	212	77	94	0.00	0.0	0.748	0.000	0	0	0	0	L
L		B		2.44Y	114.7	0.00	7.32	126.41	253	290	105	94					0	0	0	0	L
L		C		2.43Y	114.1	0.00	7.86	65.50	131	140	76	88					0	0	0	0	L
L OH183	OCD182	A	#2 ACSR 6/	2.44Y	114.8	0.10	7.24	92.40	51	212	77	94	0.51	0.1	0.760	0.012	0	0	0	0	L
L		B		2.44Y	114.6	0.12	7.44	126.41	70	290	105	94					0	0	0	0	L
L		C		2.43Y	114.1	0.04	7.89	65.50	36	140	76	88					0	0	0	0	L
L OH185	OH183	A	#2 ACSR 6/	2.44Y	114.5	0.24	7.48	92.40	51	212	77	94	1.25	0.2	0.791	0.030	0	0	0	0	L
L		B		2.43Y	114.3	0.28	7.72	126.41	70	290	105	94					4	2	0	0	L
L		C		2.42Y	114.0	0.09	7.98	65.50	36	140	76	88					0	0	0	0	L
L OH186	OH185	A	#2 ACSR 6/	2.44Y	114.5	0.00	7.48	-0.00	0	0	0		0.00	0.0	0.824	0.033	0	0	0	0	L
L		B		2.43Y	114.3	0.00	7.72	-0.00	0	0	0						0	0	0	0	L
L		C		2.42Y	114.0	0.00	7.98	-0.00	0	0	0						0	0	0	0	L
L OH188	OH185	A	#2 ACSR 6/	2.43Y	114.4	0.12	7.60	92.40	51	212	77	94	0.63	0.1	0.806	0.016	0	0	0	0	L
L		B		2.43Y	114.1	0.14	7.86	124.57	69	285	103	94					0	0	0	0	L
L		C		2.42Y	114.0	0.05	8.03	65.50	36	140	76	88					0	0	0	0	L
L OH189	OH188	A	#2 ACSR 6/	2.43Y	114.2	0.22	7.82	92.41	51	211	77	94	1.13	0.2	0.834	0.028	0	0	0	0	L
L		B		2.42Y	113.9	0.25	8.12	124.57	69	284	103	94					0	0	0	0	L
L		C		2.42Y	113.9	0.08	8.11	65.50	36	140	76	88					0	0	0	0	L
L OH190	OH189	A	#2 ACSR 6/	2.43Y	114.2	0.00	7.82	-0.00	0	0	0		0.00	0.0	0.858	0.025	0	0	0	0	L
L		B		2.42Y	113.9	0.00	8.12	-0.00	0	0	0						0	0	0	0	L
L OH192	OH189	B	#2 ACSR 6/	2.42Y	113.9	0.00	8.12	1.85	1	4	2	89	0.00	0.0	0.856	0.022	4	2	0	0	L
L OH193	OH189	A	#2 ACSR 6/	2.42Y	114.0	0.23	8.05	92.41	51	211	76	94	1.18	0.2	0.863	0.030	9	3	0	0	L
L		B		2.42Y	113.6	0.27	8.38	122.73	68	280	101	94					0	0	0	0	L
L		C		2.42Y	113.8	0.09	8.21	65.50	36	139	76	88					0	0	0	0	L
L OH194	OH193	C	#2 ACSR 6/	2.42Y	113.8	0.01	8.21	9.29	5	20	11	88	0.00	0.0	0.882	0.019	20	11	0	0	L
L OH195	OH193	A	#2 ACSR 6/	2.42Y	113.8	0.19	8.24	88.53	49	202	73	94	0.95	0.2	0.889	0.025	0	0	0	0	L
L		B		2.41Y	113.4	0.23	8.61	122.73	68	279	101	94					0	0	0	0	L
L		C		2.42Y	113.7	0.05	8.26	56.21	31	120	65	88					0	0	0	0	L
L OH196	OH195	A	#2 ACSR 6/	2.42Y	113.8	0.01	8.25	7.77	4	18	6	95	0.00	0.0	0.908	0.019	18	6	0	0	L
L		C		2.42Y	113.7	0.01	8.26	6.20	3	13	7	88					13	7	0	0	L
L OCD197	OH195	B	50A QR	2.41Y	113.4	0.00	8.61	18.56	37	42	15	94	0.00	0.0	0.889	0.000	0	0	0	0	L
L OH198	OCD197	B	#2 ACSR 6/	2.41Y	113.3	0.04	8.65	18.56	10	42	15	94	0.01	0.0	0.913	0.025	11	4	0	0	L
L OH199	OH198	B	#2 ACSR 6/	2.41Y	113.3	0.03	8.68	13.92	8	32	11	95	0.01	0.0	0.935	0.022	0	0	0	0	L
L OH200	OH199	B	#2 ACSR 6/	2.41Y	113.3	0.02	8.70	13.92	8	32	11	95	0.00	0.0	0.954	0.019	11	4	0	0	L
L OH201	OH200	B	#2 ACSR 6/	2.41Y	113.3	0.01	8.71	9.28	5	21	8	93	0.00	0.0	0.967	0.013	0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
L OH202	OH201	B	#2 ACSR 6/	2.41Y	113.3	0.01	8.72	4.64	3	11	4	94	0.00	0.0	0.995	0.028	11	4	0	0 L
L OH204	OH201	B	#2 ACSR 6/	2.41Y	113.3	0.01	8.72	4.64	3	11	4	94	0.00	0.0	0.996	0.030	11	4	0	0 L
L OH205	OH195	A	#2 ACSR 6/	2.42Y	113.6	0.18	8.42	80.76	45	184	67	94	0.70	0.1	0.913	0.025	0	0	0	0 L
L		B		2.41Y	113.2	0.18	8.79	104.17	58	236	85	94					11	4	0	0 L
L		C		2.42Y	113.7	0.05	8.31	50.01	28	106	58	88					7	4	0	0 L
L OH206	OH205	A	#2 ACSR 6/	2.41Y	113.5	0.06	8.48	80.76	45	183	67	94	0.24	0.0	0.922	0.009	4	1	0	0 L
L		B		2.41Y	113.1	0.06	8.86	99.53	55	225	81	94					0	0	0	0 L
L		C		2.42Y	113.7	0.02	8.33	46.91	26	100	54	88					0	0	0	0 L
L OH207	OH206	A	#2 ACSR 6/	2.41Y	113.3	0.23	8.71	79.21	44	180	65	94	0.90	0.2	0.956	0.034	0	0	0	0 L
L		B		2.40Y	112.9	0.24	9.10	99.53	55	225	81	94					0	0	0	0 L
L		C		2.42Y	113.6	0.06	8.39	46.91	26	100	54	88					0	0	0	0 L
L OH208	OH207	A	#2 ACSR 6/	2.41Y	113.2	0.12	8.84	79.21	44	179	65	94	0.49	0.1	0.975	0.019	18	6	0	0 L
L		B		2.40Y	112.8	0.14	9.24	99.53	55	225	81	94					0	0	0	0 L
L		C		2.42Y	113.6	0.04	8.42	46.91	26	100	54	88					0	0	0	0 L
L OH219	OH208	A	#2 ACSR 6/	2.40Y	113.0	0.14	8.98	40.13	22	91	33	94	0.26	0.1	1.011	0.036	0	0	0	0 L
L		B		2.39Y	112.6	0.14	9.38	53.73	30	121	44	94					0	0	0	0 L
L		C		2.42Y	113.6	0.00	8.43	15.52	9	33	18	88					0	0	0	0 L
L OH220	OH219	A	#2 ACSR 6/	2.40Y	112.9	0.11	9.09	40.13	22	91	33	94	0.21	0.1	1.042	0.031	9	3	0	0 L
L		B		2.39Y	112.5	0.12	9.50	53.73	30	121	44	94					0	0	0	0 L
L		C		2.42Y	113.6	0.00	8.43	15.52	9	33	18	88					0	0	0	0 L
L OCD221	OH220	C	50A QR	2.42Y	113.6	0.00	8.43	9.32	19	20	11	88	0.00	0.0	1.042	0.000	0	0	0	0 L
L OH222	OCD221	C	#2 ACSR 6/	2.41Y	113.5	0.04	8.46	9.32	5	20	11	88	0.01	0.0	1.079	0.038	0	0	0	0 L
L OH225	OH222	C	#2 ACSR 6/	2.41Y	113.5	0.02	8.48	9.32	5	20	11	88	0.00	0.0	1.098	0.018	0	0	0	0 L
L OH226	OH225	C	#2 ACSR 6/	2.41Y	113.5	0.02	8.50	9.32	5	20	11	88	0.00	0.0	1.120	0.022	7	4	0	0 L
L OH227	OH226	C	#2 ACSR 6/	2.41Y	113.5	0.00	8.50	3.11	2	7	4	87	0.00	0.0	1.147	0.027	7	4	0	0 L
L OH229	OH226	C	#2 ACSR 6/	2.41Y	113.5	0.00	8.50	3.11	2	7	4	87	0.00	0.0	1.140	0.021	7	4	0	0 L
L OH230	OH220	A	#2 ACSR 6/	2.40Y	112.8	0.08	9.17	36.22	20	82	30	94	0.14	0.1	1.063	0.021	0	0	0	0 L
L		B		2.39Y	112.4	0.09	9.59	53.73	30	121	44	94					0	0	0	0 L
L		C		2.42Y	113.6	-0.02	8.41	6.20	3	13	7	88					0	0	0	0 L
L OH231	OH230	A	#2 ACSR 6/	2.40Y	112.7	0.10	9.27	36.22	20	82	30	94	0.18	0.1	1.090	0.027	0	0	0	0 L
L		B		2.39Y	112.3	0.11	9.70	53.73	30	121	44	94					0	0	0	0 L
L		C		2.42Y	113.6	-0.02	8.38	6.20	3	13	7	88					0	0	0	0 L
L OH232	OH231	A	#2 ACSR 6/	2.40Y	112.6	0.10	9.36	36.22	20	82	30	94	0.17	0.1	1.116	0.026	0	0	0	0 L
L		B		2.39Y	112.2	0.10	9.80	53.73	30	121	43	94					0	0	0	0 L
L		C		2.42Y	113.7	-0.03	8.35	6.20	3	13	7	88					13	7	0	0 L
L SW550-A	OH232	A	Open	2.40Y	112.6	0.00	9.36	0.00	0	0	0	100	0.00	0.0	1.116	0.000	0	0	0	0 L
L		B		2.39Y	112.2	0.00	9.80	0.00	0	0	0	100					0	0	0	0 L
L		C		2.42Y	113.7	0.00	8.35	0.00	0	0	0	100					0	0	0	0 L
L OH233	OH232	A	#2 ACSR 6/	2.39Y	112.5	0.10	9.46	36.22	20	82	30	94	0.17	0.1	1.141	0.025	0	0	0	0 L
L		B		2.38Y	112.1	0.10	9.90	53.73	30	121	43	94					0	0	0	0 L
L		C		2.42Y	113.7	-0.04	8.31	-0.00	0	0	0						0	0	0	0 L
L OH234	OH233	A	#2 ACSR 6/	2.39Y	112.4	0.13	9.59	36.22	20	81	30	94	0.23	0.1	1.176	0.035	9	3	0	0 L
L		B		2.38Y	112.0	0.14	10.05	53.73	30	121	43	94					0	0	0	0 L
L		C		2.42Y	113.7	-0.05	8.25	-0.00	0	0	0						0	0	0	0 L
L OH235	OH234	A	#2 ACSR 6/	2.39Y	112.3	0.10	9.69	32.29	18	73	26	94	0.17	0.1	1.204	0.027	0	0	0	0 L
L		B		2.38Y	111.8	0.11	10.16	53.73	30	120	43	94					0	0	0	0 L
L		C		2.42Y	113.8	-0.04	8.21	-0.00	0	0	0						0	0	0	0 L
L OCD236	OH235	A	50A QR	2.39Y	112.3	0.00	9.69	12.60	25	28	10	94	0.00	0.0	1.204	0.000	0	0	0	0 L
L		B		2.38Y	111.8	0.00	10.16	39.59	79	89	32	94					0	0	0	0 L
L OH238	OCD236	A	#2 ACSR 6/	2.39Y	112.3	0.03	9.72	12.60	7	28	10	94	0.07	0.1	1.227	0.023	0	0	0	0 L
L		B		2.38Y	111.8	0.08	10.24	39.59	22	89	32	94					0	0	0	0 L
L OH239	OH238	A	#2 ACSR 6/	2.39Y	112.2	0.03	9.76	12.60	7	28	10	94	0.06	0.1	1.249	0.022	0	0	0	0 L
L		B		2.38Y	111.7	0.08	10.32	39.59	22	89	32	94					0	0	0	0 L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH240	OH239	A	#2 ACSR 6/	2.39Y	112.2	0.03	9.79	10.24	6	23	8	94	0.01	0.0	1.279	0.031	0	0	0	0	L
L			B		2.37Y	111.7	0.01	10.33	7.53	4	17	6	94					0	0	0	0	L
L	OH241	OH240	A	#2 ACSR 6/	2.39Y	112.2	0.03	9.81	6.30	4	14	5	94	0.00	0.0	1.320	0.040	0	0	0	0	L
L			B		2.37Y	111.7	0.01	10.34	4.71	3	11	4	94					0	0	0	0	L
L	OH242	OH241	A	#2 ACSR 6/	2.39Y	112.2	0.01	9.83	6.30	4	14	5	94	0.00	0.0	1.350	0.031	9	3	0	0	L
L			B		2.37Y	111.6	0.01	10.35	4.71	3	11	4	94					0	0	0	0	L
L	OH247	OH242	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.83	2.36	1	5	2	93	0.00	0.0	1.378	0.028	5	2	0	0	L
L	OH248	OH242	B	#2 ACSR 6/	2.37Y	111.6	0.01	10.36	4.71	3	11	4	94	0.00	0.0	1.366	0.016	0	0	0	0	L
L	OH250	OH248	B	#2 ACSR 6/	2.37Y	111.6	0.01	10.37	4.71	3	11	4	94	0.00	0.0	1.400	0.034	11	4	0	0	L
L	OH251	OH250	B	#2 ACSR 6/	2.37Y	111.6	0.00	10.37	-0.00	0	0	0		0.00	0.0	1.419	0.019	0	0	0	0	L
L	OH252	OH240	A	#2 ACSR 6/	2.39Y	112.2	0.01	9.79	3.94	2	9	3	95	0.00	0.0	1.306	0.027	9	3	0	0	L
L	OH253	OH252	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	-0.00	0	0	0	100	0.00	0.0	1.332	0.026	0	0	0	0	L
L	OH254	OH240	B	#2 ACSR 6/	2.37Y	111.7	0.00	10.33	2.82	2	6	2	95	0.00	0.0	1.299	0.019	6	2	0	0	L
L	OH255	OH239	A	#2 ACSR 6/	2.39Y	112.2	0.01	9.76	2.36	1	5	2	93	0.01	0.0	1.276	0.028	5	2	0	0	L
L			B		2.37Y	111.6	0.04	10.35	13.66	8	31	11	94					0	0	0	0	L
L	OH256	OH255	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.76	-0.00	0	0	0		0.01	0.0	1.306	0.029	0	0	0	0	L
L			B		2.37Y	111.6	0.04	10.39	13.67	8	31	11	94					0	0	0	0	L
L	OH257	OH256	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.76	-0.00	0	0	0		0.01	0.0	1.335	0.029	0	0	0	0	L
L			B		2.37Y	111.6	0.04	10.43	13.67	8	31	11	94					4	2	0	0	L
L	OH258	OH257	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.77	-0.00	0	0	0		0.00	0.0	1.354	0.019	0	0	0	0	L
L			B		2.37Y	111.6	0.02	10.45	11.78	7	26	9	94					11	4	0	0	L
L	OH259	OH258	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.77	-0.00	0	0	0		0.00	0.0	1.365	0.010	0	0	0	0	L
L			B		2.37Y	111.5	0.01	10.45	7.07	4	16	6	94					0	0	0	0	L
L	OH260	OH259	A	#2 ACSR 6/	2.39Y	112.2	0.00	9.77	-0.00	0	0	0		0.00	0.0	1.393	0.029	0	0	0	0	L
L			B		2.37Y	111.5	0.01	10.46	7.07	4	16	6	94					16	6	0	0	L
L	OH261	OH239	A	#2 ACSR 6/	2.39Y	112.2	0.01	9.76	-0.00	0	0	0		0.03	0.1	1.301	0.052	0	0	0	0	L
L			B		2.37Y	111.6	0.09	10.41	18.40	10	41	15	94					3	1	0	0	L
L	OH262	OH261	B	#2 ACSR 6/	2.37Y	111.6	0.00	10.41	16.98	9	38	14	94	0.00	0.0	1.302	0.000	0	0	0	0	L
L	OH263	OH262	B	#2 ACSR 6/	2.37Y	111.5	0.06	10.46	16.98	9	38	14	94	0.02	0.0	1.341	0.039	11	4	0	0	L
L	OH264	OH263	B	#2 ACSR 6/	2.37Y	111.5	0.04	10.51	12.27	7	27	10	94	0.01	0.0	1.378	0.037	0	0	0	0	L
L	OH265	OH264	B	#2 ACSR 6/	2.37Y	111.4	0.06	10.57	12.27	7	27	10	94	0.01	0.0	1.425	0.047	0	0	0	0	L
L	OH266	OH265	B	#2 ACSR 6/	2.37Y	111.4	0.04	10.61	12.27	7	27	10	94	0.01	0.0	1.464	0.039	6	2	0	0	L
L	OH267	OH266	B	#2 ACSR 6/	2.37Y	111.4	0.03	10.63	9.44	5	21	8	93	0.00	0.0	1.503	0.039	11	4	0	0	L
L	OH268	OH267	B	#2 ACSR 6/	2.37Y	111.3	0.02	10.65	4.72	3	11	4	94	0.00	0.0	1.537	0.033	0	0	0	0	L
L	OH269	OH268	B	#2 ACSR 6/	2.37Y	111.3	0.01	10.66	4.72	3	11	4	94	0.00	0.0	1.579	0.042	11	4	0	0	L
L	OCD270	OH235	A	50A QR	2.39Y	112.3	0.00	9.69	19.69	39	44	16	94	0.00	0.0	1.204	0.000	0	0	0	0	L
L			B		2.38Y	111.8	0.00	10.16	14.14	28	32	11	94					0	0	0	0	L
L	OH271	OCD270	A	#2 ACSR 6/	2.39Y	112.3	0.01	9.70	19.69	11	44	16	94	0.01	0.0	1.210	0.007	0	0	0	0	L
L			B		2.38Y	111.8	0.01	10.17	14.14	8	32	11	94					0	0	0	0	L
L	OH272	OH271	A	#2 ACSR 6/	2.39Y	112.2	0.05	9.76	19.69	11	44	16	94	0.02	0.0	1.240	0.029	9	3	0	0	L
L			B		2.38Y	111.8	0.02	10.19	14.14	8	32	11	94					0	0	0	0	L
L	OH274	OH272	A	#2 ACSR 6/	2.39Y	112.2	0.03	9.79	15.76	9	35	13	94	0.01	0.0	1.258	0.018	0	0	0	0	L
L			B		2.38Y	111.8	0.02	10.21	14.14	8	32	11	94					0	0	0	0	L
L	OH275	OH274	A	#2 ACSR 6/	2.39Y	112.2	0.05	9.84	15.76	9	35	13	94	0.02	0.0	1.299	0.041	18	6	0	0	L
L			B		2.38Y	111.8	0.04	10.25	14.14	8	32	11	94					0	0	0	0	L
L	OH276	OH275	A	#2 ACSR 6/	2.38Y	112.1	0.02	9.85	7.88	4	18	6	95	0.00	0.0	1.319	0.021	0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
L OH277	OH276	A	#2 ACSR 6/	2.38Y	112.1	0.02	9.87	7.88	4	18	6	95	0.00	0.0	1.344	0.025	0	0	0	0	L
L OH278	OH277	A	#2 ACSR 6/	2.38Y	112.1	0.01	9.88	7.88	4	18	6	95	0.00	0.0	1.371	0.026	18	6	0	0	L
L OCD279	OH275	B	25A QA	2.38Y	111.8	0.00	10.25	14.14	57	32	11	95	0.00	0.0	1.299	0.000	0	0	0	0	L
L OH280	OCD279	B	#2 ACSR 6/	2.38Y	111.7	0.04	10.29	14.14	8	32	11	95	0.01	0.0	1.329	0.031	0	0	0	0	L
L OH281	OH280	B	#2 ACSR 6/	2.38Y	111.7	0.02	10.31	14.14	8	32	11	95	0.01	0.0	1.344	0.015	0	0	0	0	L
L OH282	OH281	B	#2 ACSR 6/	2.37Y	111.7	0.04	10.35	14.14	8	32	11	95	0.01	0.0	1.376	0.031	11	4	0	0	L
L OH283	OH282	B	#2 ACSR 6/	2.37Y	111.6	0.03	10.38	9.43	5	21	8	93	0.00	0.0	1.407	0.031	0	0	0	0	L
L OH284	OH283	B	#2 ACSR 6/	2.37Y	111.6	0.02	10.39	9.43	5	21	8	93	0.00	0.0	1.428	0.021	0	0	0	0	L
L OH285	OH284	B	#2 ACSR 6/	2.37Y	111.6	0.02	10.41	9.43	5	21	8	93	0.00	0.0	1.445	0.017	0	0	0	0	L
L OH286	OH285	B	#2 ACSR 6/	2.37Y	111.6	0.02	10.43	9.43	5	21	8	93	0.00	0.0	1.466	0.021	0	0	0	0	L
L OH287	OH286	B	#2 ACSR 6/	2.37Y	111.5	0.02	10.45	9.43	5	21	8	93	0.00	0.0	1.489	0.023	0	0	0	0	L
L OH288	OH287	B	#2 ACSR 6/	2.37Y	111.5	0.03	10.49	9.43	5	21	8	93	0.01	0.0	1.526	0.038	0	0	0	0	L
L OH289	OH288	B	#2 ACSR 6/	2.37Y	111.5	0.03	10.51	9.43	5	21	8	93	0.00	0.0	1.554	0.028	0	0	0	0	L
L OH290	OH289	B	#2 ACSR 6/	2.37Y	111.5	0.02	10.53	9.43	5	21	8	93	0.00	0.0	1.586	0.033	21	8	0	0	L
L OH291	OH208	A	#2 ACSR 6/	2.40Y	113.1	0.07	8.91	23.46	13	53	19	94	0.20	0.1	1.017	0.042	0	0	0	0	L
L		B		2.39Y	112.6	0.14	9.38	43.01	24	97	35	94					0	0	0	0	L
L		C		2.41Y	113.5	0.07	8.50	31.40	17	67	36	88					7	4	0	0	L
L OH292	OH291	A	#2 ACSR 6/	2.40Y	113.1	0.03	8.94	7.82	4	18	6	95	0.01	0.0	1.064	0.048	0	0	0	0	L
L		B		2.39Y	112.6	0.03	9.41	9.34	5	21	8	94					0	0	0	0	L
L		C		2.41Y	113.5	0.01	8.51	4.66	3	10	5	88					0	0	0	0	L
L OH293	OH292	A	#2 ACSR 6/	2.40Y	113.1	0.00	8.94	7.82	4	18	6	95	0.00	0.0	1.078	0.014	18	6	0	0	L
L		B		2.39Y	112.6	0.00	9.42	9.34	5	21	8	94					21	8	0	0	L
L		C		2.41Y	113.5	0.00	8.51	4.66	3	10	5	88					10	5	0	0	L
L OH294	OH293	A	#2 ACSR 6/	2.40Y	113.1	0.00	8.94	-0.00	0	0	0		0.00	0.0	1.100	0.022	0	0	0	0	L
L		B		2.39Y	112.6	0.00	9.42	-0.00	0	0	0						0	0	0	0	L
L		C		2.41Y	113.5	0.00	8.51	-0.00	0	0	0						0	0	0	0	L
L OH295	OH291	A	#2 ACSR 6/	2.40Y	113.1	0.03	8.94	15.64	9	35	13	94	0.09	0.1	1.048	0.032	0	0	0	0	L
L		B		2.39Y	112.5	0.09	9.47	33.67	19	76	27	94					0	0	0	0	L
L		C		2.41Y	113.5	0.04	8.54	23.63	13	50	27	88					0	0	0	0	L
L OH296	OH295	A	#2 ACSR 6/	2.40Y	113.0	0.02	8.96	15.64	9	35	13	94	0.03	0.0	1.066	0.018	0	0	0	0	L
L		B		2.39Y	112.5	0.03	9.49	19.66	11	44	16	94					0	0	0	0	L
L		C		2.41Y	113.4	0.03	8.57	23.63	13	50	27	88					0	0	0	0	L
L OH302	OH296	A	#2 ACSR 6/	2.40Y	113.0	0.02	8.97	15.64	9	35	13	94	0.01	0.0	1.085	0.019	18	6	0	0	L
L		C		2.41Y	113.4	0.02	8.59	9.32	5	20	11	88					0	0	0	0	L
L OH303	OH302	A	#2 ACSR 6/	2.40Y	113.0	0.02	9.00	7.82	4	18	6	95	0.01	0.0	1.124	0.040	0	0	0	0	L
L		C		2.41Y	113.4	0.03	8.62	9.32	5	20	11	88					13	7	0	0	L
L OH304	OH303	A	#2 ACSR 6/	2.40Y	113.0	0.02	9.01	7.82	4	18	6	95	0.00	0.0	1.151	0.026	0	0	0	0	L
L		C		2.41Y	113.4	0.01	8.63	3.11	2	7	4	88					0	0	0	0	L
L OH305	OH304	A	#2 ACSR 6/	2.40Y	113.0	0.02	9.03	7.82	4	18	6	95	0.00	0.0	1.180	0.029	0	0	0	0	L
L		C		2.41Y	113.4	0.01	8.64	3.11	2	7	4	88					0	0	0	0	L
L OH306	OH305	A	#2 ACSR 6/	2.40Y	112.9	0.02	9.05	7.82	4	18	6	95	0.00	0.0	1.216	0.036	9	3	0	0	L
L		C		2.41Y	113.4	0.01	8.65	3.11	2	7	4	88					0	0	0	0	L
L OH307	OH306	A	#2 ACSR 6/	2.40Y	112.9	0.01	9.06	3.91	2	9	3	95	0.00	0.0	1.245	0.029	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.66	3.11	2	7	4	88					0	0	0	0	L
L OH308	OH307	A	#2 ACSR 6/	2.40Y	112.9	0.01	9.07	3.91	2	9	3	95	0.00	0.0	1.271	0.026	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.67	3.11	2	7	4	88					0	0	0	0	L
L OH309	OH308	A	#2 ACSR 6/	2.40Y	112.9	0.01	9.07	3.91	2	9	3	95	0.00	0.0	1.288	0.017	0	0	0	0	L
L		C		2.41Y	113.3	0.00	8.67	3.11	2	7	4	88					7	4	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L OH310	OH309	A	#2 ACSR 6/	2.40Y	112.9	0.01	9.08	3.91	2	9	3	95	0.00	0.0	1.305	0.017	0	0	0	0	L
L		C		2.41Y	113.3	0.00	8.67	-0.00	0	0	0						0	0	0	0	L
L OH311	OH310	A	#2 ACSR 6/	2.40Y	112.9	0.00	9.08	3.91	2	9	3	95	0.00	0.0	1.318	0.013	9	3	0	0	L
L		C		2.41Y	113.3	0.00	8.67	-0.00	0	0	0						0	0	0	0	L
L OH312	OH311	A	#2 ACSR 6/	2.40Y	112.9	0.00	9.08	-0.00	0	0	0		0.00	0.0	1.331	0.012	0	0	0	0	L
L		C		2.41Y	113.3	0.00	8.67	-0.00	0	0	0						0	0	0	0	L
L OH313	OH296	B	#2 ACSR 6/	2.39Y	112.4	0.07	9.57	19.66	11	44	16	94	0.03	0.0	1.104	0.038	0	0	0	0	L
L		C		2.41Y	113.4	0.03	8.60	14.31	8	30	17	88					0	0	0	0	L
L OH314	OH313	B	#2 ACSR 6/	2.39Y	112.4	0.05	9.62	19.66	11	44	16	94	0.02	0.0	1.140	0.036	21	8	0	0	L
L		C		2.41Y	113.4	0.03	8.63	14.31	8	30	17	88					4	2	0	0	L
L OH315	OH314	B	#2 ACSR 6/	2.39Y	112.4	0.02	9.64	10.30	6	23	8	94	0.01	0.0	1.159	0.019	0	0	0	0	L
L		C		2.41Y	113.3	0.02	8.65	12.45	7	26	14	88					0	0	0	0	L
L OH316	OH315	B	#2 ACSR 6/	2.39Y	112.3	0.03	9.66	10.30	6	23	8	94	0.01	0.0	1.185	0.026	0	0	0	0	L
L		C		2.41Y	113.3	0.02	8.68	12.45	7	26	14	88					0	0	0	0	L
L OH317	OH316	B	#2 ACSR 6/	2.39Y	112.3	0.02	9.68	10.30	6	23	8	94	0.01	0.0	1.204	0.019	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.69	12.45	7	26	14	88					13	7	0	0	L
L OH318	OH317	B	#2 ACSR 6/	2.39Y	112.3	0.02	9.71	10.30	6	23	8	94	0.01	0.0	1.227	0.023	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.69	6.22	3	13	7	88					0	0	0	0	L
L OH319	OH318	B	#2 ACSR 6/	2.39Y	112.3	0.02	9.73	10.30	6	23	8	94	0.00	0.0	1.245	0.018	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.70	6.22	3	13	7	88					0	0	0	0	L
L OH320	OH319	B	#2 ACSR 6/	2.39Y	112.2	0.03	9.75	10.30	6	23	8	94	0.01	0.0	1.274	0.028	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.71	6.22	3	13	7	88					0	0	0	0	L
L OH321	OH320	B	#2 ACSR 6/	2.39Y	112.2	0.02	9.78	10.30	6	23	8	94	0.00	0.0	1.295	0.022	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.71	6.22	3	13	7	88					0	0	0	0	L
L OH322	OH321	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.78	2.81	2	6	2	95	0.00	0.0	1.310	0.015	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.72	6.22	3	13	7	88					0	0	0	0	L
L OH323	OH322	B	#2 ACSR 6/	2.39Y	112.2	0.01	9.79	2.81	2	6	2	95	0.00	0.0	1.335	0.025	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.74	6.22	3	13	7	88					0	0	0	0	L
L OH324	OH323	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	2.81	2	6	2	95	0.00	0.0	1.349	0.014	0	0	0	0	L
L		C		2.41Y	113.3	0.01	8.74	6.22	3	13	7	88					0	0	0	0	L
L OH325	OH324	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	2.81	2	6	2	95	0.00	0.0	1.373	0.024	6	2	0	0	L
L		C		2.41Y	113.3	-0.00	8.74	-0.00	0	0	0						0	0	0	0	L
L OH326	OH325	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	-0.00	0	0	0		0.00	0.0	1.399	0.025	0	0	0	0	L
L		C		2.41Y	113.3	0.00	8.74	-0.00	0	0	0						0	0	0	0	L
L OH327	OH324	C	#2 ACSR 6/	2.41Y	113.2	0.01	8.75	6.23	3	13	7	88	0.00	0.0	1.369	0.020	7	4	0	0	L
L OH328	OH327	C	#2 ACSR 6/	2.41Y	113.2	0.01	8.76	3.11	2	7	4	87	0.00	0.0	1.407	0.037	0	0	0	0	L
L OH329	OH328	C	#2 ACSR 6/	2.41Y	113.2	0.00	8.77	3.11	2	7	4	87	0.00	0.0	1.422	0.015	7	4	0	0	L
L OH330	OH321	B	#2 ACSR 6/	2.39Y	112.2	0.01	9.79	7.49	4	17	6	94	0.00	0.0	1.317	0.022	11	4	0	0	L
L OH331	OH330	B	#2 ACSR 6/	2.39Y	112.2	0.00	9.79	2.81	2	6	2	95	0.00	0.0	1.336	0.019	6	2	0	0	L
L OH298	OH295	B	#2 ACSR 6/	2.39Y	112.5	0.02	9.49	14.02	8	32	11	95	0.00	0.0	1.067	0.018	21	8	0	0	L
L OH300	OH298	B	#2 ACSR 6/	2.39Y	112.5	0.02	9.50	4.67	3	11	4	94	0.00	0.0	1.109	0.043	0	0	0	0	L
L OH301	OH300	B	#2 ACSR 6/	2.39Y	112.5	0.00	9.51	4.67	3	11	4	94	0.00	0.0	1.125	0.016	11	4	0	0	L
L OCD209	OH208	A	50A QR	2.41Y	113.2	0.00	8.84	7.81	16	18	6	95	0.00	0.0	0.975	0.000	0	0	0	0	L
L		B		2.40Y	112.8	0.00	9.24	2.80	6	6	2	94					0	0	0	0	L
L OH211	OCD209	A	#2 ACSR 6/	2.41Y	113.2	0.00	8.84	7.81	4	18	6	95	0.00	0.0	0.980	0.005	0	0	0	0	L
L		B		2.40Y	112.8	0.00	9.24	2.80	2	6	2	94					0	0	0	0	L
L OH212	OH211	A	#2 ACSR 6/	2.41Y	113.1	0.03	8.87	7.81	4	18	6	95	0.00	0.0	1.013	0.033	0	0	0	0	L
L		B		2.40Y	112.8	-0.00	9.23	2.80	2	6	2	94					6	2	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH213	OH212	A	#2 ACSR 6/	2.41Y	113.1	0.01	8.88	7.81	4	18	6	95	0.00	0.0	1.046	0.033	18	6	0	0	L
L			B		2.40Y	112.8	-0.00	9.23	-0.00	0	0	0						0	0	0	0	L
L	OH214	OH213	A	#2 ACSR 6/	2.41Y	113.1	0.00	8.88	-0.00	0	0	0		0.00	0.0	1.056	0.009	0	0	0	0	L
L			B		2.40Y	112.8	0.00	9.23	-0.00	0	0	0						0	0	0	0	L
L	OH215	OH214	A	#2 ACSR 6/	2.41Y	113.1	0.00	8.88	-0.00	0	0	0		0.00	0.0	1.081	0.025	0	0	0	0	L
L			B		2.40Y	112.8	0.00	9.23	-0.00	0	0	0						0	0	0	0	L
L	OH92	OH91	A	#2 ACSR 6/	2.44Y	114.8	0.03	7.18	41.49	23	95	35	94	0.02	0.0	0.756	0.008	3	1	0	0	L
L			B		2.44Y	114.7	-0.01	7.32	6.41	4	15	5	94					0	0	0	0	L
L			C		2.43Y	114.1	0.01	7.86	6.17	3	13	7	88					0	0	0	0	L
L	OH93	OH92	A	#2 ACSR 6/	2.44Y	114.7	0.12	7.30	40.33	22	92	34	94	0.09	0.1	0.788	0.032	0	0	0	0	L
L			B		2.44Y	114.7	-0.02	7.29	6.41	4	15	5	94					0	0	0	0	L
L			C		2.43Y	114.1	0.02	7.88	6.17	3	13	7	88					0	0	0	0	L
L	OH332	OH93	C	#2 ACSR 6/	2.43Y	114.1	0.00	7.89	1.85	1	4	2	89	0.00	0.0	0.817	0.028	4	2	0	0	L
L	OH94	OH93	A	#2 ACSR 6/	2.44Y	114.6	0.10	7.40	40.33	22	92	34	94	0.07	0.1	0.815	0.027	9	3	0	0	L
L			B		2.44Y	114.7	-0.02	7.28	6.41	4	15	5	94					0	0	0	0	L
L			C		2.43Y	114.1	0.01	7.90	4.32	2	9	5	88					0	0	0	0	L
L	OH95	OH94	A	#2 ACSR 6/	2.44Y	114.5	0.09	7.49	36.48	20	83	31	94	0.06	0.1	0.841	0.026	0	0	0	0	L
L			B		2.44Y	114.7	-0.02	7.26	6.41	4	15	5	94					0	0	0	0	L
L			C		2.43Y	114.1	0.01	7.91	4.32	2	9	5	88					0	0	0	0	L
L	OH334	OH95	A	#2 ACSR 6/	2.43Y	114.4	0.08	7.57	36.48	20	83	31	94	0.05	0.0	0.864	0.023	0	0	0	0	L
L			B		2.44Y	114.8	-0.02	7.24	6.41	4	15	5	94					11	4	0	0	L
L			C		2.43Y	114.1	0.01	7.92	4.32	2	9	5	88					0	0	0	0	L
L	OH335	OH334	A	#2 ACSR 6/	2.43Y	114.3	0.10	7.67	36.48	20	83	30	94	0.06	0.1	0.892	0.028	0	0	0	0	L
L			B		2.44Y	114.8	-0.03	7.21	1.83	1	4	1	94					0	0	0	0	L
L			C		2.43Y	114.1	0.02	7.94	4.32	2	9	5	88					0	0	0	0	L
L	OH336	OH335	A	#2 ACSR 6/	2.43Y	114.3	0.08	7.74	36.48	20	83	30	94	0.05	0.1	0.917	0.025	18	6	0	0	L
L			B		2.44Y	114.8	-0.02	7.19	1.83	1	4	1	94					0	0	0	0	L
L			C		2.43Y	114.0	0.01	7.95	4.32	2	9	5	88					0	0	0	0	L
L	OH337	OH336	A	#2 ACSR 6/	2.43Y	114.2	0.03	7.78	28.75	16	66	24	94	0.02	0.0	0.929	0.012	0	0	0	0	L
L			B		2.44Y	114.8	-0.01	7.18	1.83	1	4	1	94					0	0	0	0	L
L			C		2.43Y	114.0	0.01	7.96	4.32	2	9	5	88					0	0	0	0	L
L	OH338	OH337	A	#2 ACSR 6/	2.43Y	114.2	0.03	7.80	28.75	16	66	24	94	0.02	0.0	0.940	0.011	0	0	0	0	L
L			B		2.44Y	114.8	-0.01	7.17	1.83	1	4	1	94					0	0	0	0	L
L			C		2.43Y	114.0	0.01	7.97	4.32	2	9	5	88					0	0	0	0	L
L	OH339	OH338	A	#2 ACSR 6/	2.43Y	114.1	0.13	7.93	28.75	16	66	24	94	0.07	0.1	0.989	0.049	4	1	0	0	L
L			B		2.44Y	114.9	-0.04	7.13	1.83	1	4	1	94					4	2	0	0	L
L			C		2.42Y	114.0	0.03	7.99	4.32	2	9	5	88					3	1	0	0	L
L	OH340	OH339	A	#2 ACSR 6/	2.43Y	114.1	0.00	7.94	3.87	2	9	3	95	0.00	0.0	1.004	0.015	9	3	0	0	L
L			C		2.42Y	114.0	0.00	7.99	-0.00	0	0	0						0	0	0	0	L
L	OH341	OH339	A	#2 ACSR 6/	2.42Y	114.0	0.05	7.98	23.32	13	53	19	94	0.02	0.0	1.011	0.023	0	0	0	0	L
L			B		2.44Y	114.9	-0.02	7.12	-0.01	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.01	8.00	3.09	2	7	4	88					0	0	0	0	L
L	OH342	OH341	A	#2 ACSR 6/	2.42Y	114.0	0.06	8.04	23.32	13	53	19	94	0.03	0.0	1.038	0.026	0	0	0	0	L
L			B		2.44Y	114.9	-0.02	7.09	-0.01	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.01	8.01	3.09	2	7	4	88					0	0	0	0	L
L	OH343	OH342	A	#2 ACSR 6/	2.42Y	113.9	0.06	8.10	23.32	13	53	19	94	0.03	0.0	1.064	0.026	0	0	0	0	L
L			B		2.44Y	114.9	-0.02	7.07	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.01	8.03	3.09	2	7	4	88					0	0	0	0	L
L	OH344	OH343	A	#2 ACSR 6/	2.42Y	113.8	0.07	8.17	23.32	13	53	19	94	0.03	0.1	1.097	0.033	0	0	0	0	L
L			B		2.44Y	115.0	-0.03	7.05	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.01	8.04	3.09	2	7	4	88					7	4	0	0	L
L	OH345	OH344	A	#2 ACSR 6/	2.42Y	113.8	0.05	8.22	23.33	13	53	19	94	0.02	0.0	1.119	0.022	0	0	0	0	L
L			B		2.44Y	115.0	-0.02	7.03	-0.00	0	0	0						0	0	0	0	L
L			C		2.42Y	114.0	0.00	8.04	-0.01	0	0	0						0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L OH346	OH345	A	#2 ACSR 6/	2.42Y	113.7	0.07	8.29	19.44	11	44	16	94	0.03	0.1	1.157	0.038	0	0	0	0	L
L		B		2.45Y	115.0	-0.02	7.01	-0.00	0	0	0						0	0	0	0	L
L		C		2.42Y	114.0	0.00	8.04	-0.00	0	0	0						0	0	0	0	L
L OH347	OH346	A	#2 ACSR 6/	2.42Y	113.7	0.05	8.34	19.44	11	44	16	94	0.02	0.0	1.185	0.028	9	3	0	0	L
L		B		2.45Y	115.0	-0.02	6.99	-0.00	0	0	0						0	0	0	0	L
L		C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L OH348	OH347	A	#2 ACSR 6/	2.42Y	113.7	0.00	8.34	-0.00	0	0	0		0.00	0.0	1.218	0.033	0	0	0	0	L
L		B		2.45Y	115.0	0.00	6.99	-0.00	0	0	0						0	0	0	0	L
L		C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0	0					0	0	0	0	L
L OH349	OH347	A	#2 ACSR 6/	2.42Y	113.6	0.02	8.36	7.78	4	18	6	95	0.00	0.0	1.212	0.027	0	0	0	0	L
L OH350	OH349	A	#2 ACSR 6/	2.42Y	113.6	0.02	8.38	7.78	4	18	6	95	0.00	0.0	1.233	0.021	0	0	0	0	L
L OH352	OH350	A	#2 ACSR 6/	2.42Y	113.6	0.02	8.40	7.78	4	18	6	95	0.00	0.0	1.267	0.034	9	3	0	0	L
L OH353	OH352	A	#2 ACSR 6/	2.42Y	113.6	0.00	8.40	3.89	2	9	3	95	0.00	0.0	1.290	0.022	9	3	0	0	L
L OH354	OH347	A	#2 ACSR 6/	2.42Y	113.6	0.03	8.37	7.78	4	18	6	95	0.00	0.0	1.223	0.038	0	0	0	0	L
L		C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L OH355	OH354	A	#2 ACSR 6/	2.42Y	113.6	0.01	8.38	7.78	4	18	6	95	0.00	0.0	1.252	0.029	18	6	0	0	L
L		C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L OH358	OH355	A	#2 ACSR 6/	2.42Y	113.6	0.00	8.38	-0.00	0	0	0		0.00	0.0	1.265	0.013	0	0	0	0	L
L		C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L OH359	OH358	A	#2 ACSR 6/	2.42Y	113.6	0.00	8.38	-0.00	0	0	0		0.00	0.0	1.293	0.028	0	0	0	0	L
L		C		2.42Y	114.0	0.00	8.05	-0.00	0	0	0						0	0	0	0	L
L OH360	OH345	A	#2 ACSR 6/	2.42Y	113.8	0.00	8.23	3.88	2	9	3	95	0.00	0.0	1.142	0.022	9	3	0	0	L
L		C		2.42Y	114.0	0.00	8.04	-0.00	0	0	0						0	0	0	0	L
L OH361	OH360	A	#2 ACSR 6/	2.42Y	113.8	0.00	8.23	-0.00	0	0	0		0.00	0.0	1.205	0.063	0	0	0	0	L
L		C		2.42Y	114.0	0.00	8.04	-0.00	0	0	0						0	0	0	0	L

----------- Feeder No. 124 (CB 124) Beginning with Device CB 124 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
CB 124	OH42	A	560 VWE	2.48Y	116.5	0.00	5.46	22.98	0	55	16	96	0.00	0.0	0.602	0.000	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.06	44.44	0	95	54	87					0	0	0	0	L
L		C		2.44Y	114.8	0.00	7.23	44.21	0	100	40	93					0	0	0	0	L
OH126	CB 124	A	#2 ACSR 6/	2.48Y	116.5	0.01	5.47	22.98	13	55	16	96	0.11	0.0	0.618	0.016	0	0	0	0	
L		B		2.46Y	115.9	0.06	6.13	44.44	25	95	54	87					0	0	0	0	L
L		C		2.44Y	114.7	0.05	7.28	44.21	25	100	40	93					0	0	0	0	L
OH129	OH126	A	#2 ACSR 6/	2.48Y	116.5	0.02	5.49	22.98	13	55	16	96	0.20	0.1	0.649	0.031	0	0	0	0	
L		B		2.46Y	115.8	0.12	6.25	44.44	25	95	54	87					0	0	0	0	L
L		C		2.44Y	114.6	0.10	7.38	44.21	25	100	40	93					0	0	0	0	L
OH130	OH129	A	#2 ACSR 6/	2.48Y	116.5	0.03	5.52	22.98	13	55	16	96	0.25	0.1	0.687	0.038	0	0	0	0	
L		B		2.46Y	115.6	0.15	6.40	44.44	25	95	54	87					0	0	0	0	L
L		C		2.43Y	114.5	0.12	7.50	44.21	25	100	40	93					0	0	0	0	L
OH138	OH130	A	#2 ACSR 6/	2.48Y	116.5	0.03	5.55	22.27	12	53	15	96	0.22	0.1	0.722	0.034	0	0	0	0	
L		B		2.46Y	115.5	0.14	6.53	44.44	25	95	54	87					0	0	0	0	L
L		C		2.43Y	114.4	0.11	7.61	44.21	25	100	40	93					0	0	0	0	L
OH139	OH138	A	#2 ACSR 6/	2.48Y	116.4	0.06	5.61	22.27	12	53	15	96	0.51	0.2	0.800	0.078	0	0	0	0	
L		B		2.45Y	115.2	0.31	6.84	44.44	25	95	54	87					0	0	0	0	L
L		C		2.43Y	114.1	0.25	7.86	44.21	25	100	40	93					0	0	0	0	L
OCD141	OH139	A	50A QR	2.48Y	116.4	0.00	5.61	22.28	45	53	15	96	0.00	0.0	0.800	0.000	0	0	0	0	
L		B		2.45Y	115.2	0.00	6.84	44.44	89	95	54	87					0	0	0	0	L
L		C		2.43Y	114.1	0.00	7.86	44.21	88	100	39	93					0	0	0	0	L
OH142	OCD141	A	#2 ACSR 6/	2.47Y	116.4	0.02	5.62	22.28	12	53	15	96	0.17	0.1	0.825	0.026	0	0	0	0	
L		B		2.45Y	115.1	0.10	6.94	44.44	25	95	54	87					0	0	0	0	L
L		C		2.43Y	114.1	0.08	7.94	44.21	25	100	39	93					0	0	0	0	L
OH143	OH142	A	#2 ACSR 6/	2.47Y	116.4	0.02	5.64	22.28	12	53	15	96	0.18	0.1	0.853	0.027	0	0	0	0	
L		B		2.44Y	115.0	0.11	7.05	44.44	25	95	54	87					0	0	0	0	L
L		C		2.42Y	114.0	0.09	8.03	44.21	25	100	39	93					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH144	OH143	A	#2 ACSR 6/	2.47Y	116.3	0.02	5.67	22.28	12	53	15	96	0.21	0.1	0.885	0.033	0	0	0	0
L		B		2.44Y	114.8	0.13	7.18	44.44	25	94	54	87					0	0	0	0 L
L		C		2.42Y	113.9	0.10	8.13	44.21	25	100	39	93					0	0	0	0 L
OH456	OH144	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	1.77	1	4	1	97	0.00	0.0	0.906	0.021	0	0	0	0
L		B		2.44Y	114.8	0.00	7.18	1.75	1	4	2	87					4	2	0	0 L
OH457	OH456	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.68	1.77	1	4	1	97	0.00	0.0	0.933	0.027	0	0	0	0
L		B		2.44Y	114.8	-0.00	7.18	-0.00	0	0	0						0	0	0	0 L
OH459	OH144	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.67	5.31	3	13	4	96	0.00	0.0	0.895	0.010	0	0	0	0
L		B		2.44Y	114.8	-0.00	7.18	1.17	1	2	1	87					2	1	0	0 L
OH460	OH459	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.68	5.31	3	13	4	96	0.00	0.0	0.915	0.020	0	0	0	0
L		B		2.44Y	114.8	-0.00	7.17	-0.00	0	0	0						0	0	0	0 L
OH461	OH460	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.69	5.31	3	13	4	96	0.00	0.0	0.940	0.025	4	1	0	0
L		B		2.44Y	114.8	-0.00	7.17	-0.00	0	0	0						0	0	0	0 L
OH145	OH144	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	15.20	8	36	11	96	0.22	0.1	0.923	0.037	0	0	0	0
L		B		2.44Y	114.7	0.14	7.32	41.52	23	88	50	87					6	4	0	0 L
L		C		2.42Y	113.7	0.12	8.25	44.21	25	100	39	93					0	0	0	0 L
OH146	OH145	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	15.20	8	36	11	96	0.19	0.1	0.957	0.034	0	0	0	0
L		B		2.44Y	114.6	0.12	7.44	38.59	21	82	47	87					2	1	0	0 L
L		C		2.42Y	113.6	0.11	8.36	44.21	25	99	39	93					0	0	0	0 L
OH147	OH146	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	15.20	8	36	11	96	0.16	0.1	0.986	0.029	0	0	0	0
L		B		2.43Y	114.5	0.10	7.54	37.42	21	79	45	87					0	0	0	0 L
L		C		2.41Y	113.5	0.10	8.46	44.21	25	99	39	93					0	0	0	0 L
L OCD470	OH147	B	50A QR	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.00	0.0	0.986	0.000	0	0	0	0 L
L		C		2.41Y	113.5	0.00	8.46	13.93	28	31	12	93					0	0	0	0 L
L OH471	OCD470	B	#2 ACSR 6/	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.01	0.0	1.021	0.036	0	0	0	0 L
L		C		2.41Y	113.5	0.05	8.51	13.93	8	31	12	93					0	0	0	0 L
L OH472	OH471	C	#2 ACSR 6/	2.41Y	113.5	0.00	8.51	-0.00	0	0	0		0.00	0.0	1.039	0.017	0	0	0	0 L
L OH473	OH471	B	#2 ACSR 6/	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.01	0.0	1.051	0.029	0	0	0	0 L
L		C		2.41Y	113.5	0.04	8.55	13.93	8	31	12	93					0	0	0	0 L
L OH474	OH473	C	#2 ACSR 6/	2.41Y	113.4	0.00	8.55	2.32	1	5	2	93	0.00	0.0	1.076	0.026	5	2	0	0 L
L OH475	OH473	B	#2 ACSR 6/	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.00	0.0	1.062	0.011	0	0	0	0 L
L		C		2.41Y	113.4	0.01	8.56	11.61	6	26	10	93					0	0	0	0 L
L OH476	OH475	B	#2 ACSR 6/	2.43Y	114.5	0.00	7.54	-0.00	0	0	0		0.01	0.0	1.105	0.043	0	0	0	0 L
L		C		2.41Y	113.4	0.05	8.61	11.61	6	26	10	93					0	0	0	0 L
L OH477	OH476	C	#2 ACSR 6/	2.41Y	113.3	0.07	8.68	11.61	6	26	10	93	0.01	0.0	1.189	0.085	13	5	0	0 L
L OH478	OH477	C	#2 ACSR 6/	2.41Y	113.3	0.02	8.70	5.80	3	13	5	93	0.00	0.0	1.216	0.027	0	0	0	0 L
L OH479	OH478	C	#2 ACSR 6/	2.41Y	113.3	0.01	8.71	5.81	3	13	5	93	0.00	0.0	1.247	0.030	13	5	0	0 L
OH148	OH147	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.68	13.43	7	32	9	96	0.06	0.0	1.003	0.017	2	0	0	0
L		B		2.43Y	114.4	0.06	7.60	37.43	21	79	45	87					0	0	0	0 L
L		C		2.41Y	113.5	0.03	8.49	30.29	17	68	27	93					0	0	0	0 L
OH149	OH148	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.69	12.73	7	30	9	96	0.13	0.1	1.037	0.034	0	0	0	0
L		B		2.43Y	114.3	0.12	7.72	37.43	21	79	45	87					0	0	0	0 L
L		C		2.41Y	113.4	0.07	8.56	30.29	17	68	27	93					0	0	0	0 L
OH150	OH149	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.70	12.73	7	30	9	96	0.13	0.1	1.072	0.034	0	0	0	0
L		B		2.43Y	114.2	0.12	7.84	37.43	21	79	45	87					0	0	0	0 L
L		C		2.41Y	113.4	0.07	8.63	30.29	17	68	27	93					0	0	0	0 L
OH151	OH150	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.69	6.71	4	16	5	95	0.07	0.0	1.090	0.018	2	0	0	0
L		B		2.43Y	114.1	0.07	7.90	37.43	21	79	45	87					0	0	0	0 L
L		C		2.41Y	113.3	0.03	8.66	30.29	17	68	27	93					5	2	0	0 L
OH152	OH151	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.68	6.00	3	14	4	96	0.09	0.1	1.114	0.025	0	0	0	0
L		B		2.42Y	114.0	0.09	7.99	37.43	21	79	45	87					0	0	0	0 L
L		C		2.41Y	113.3	0.04	8.70	27.97	16	63	25	93					0	0	0	0 L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	OH153	OH152	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.68	6.00	3	14	4	96	0.09	0.1	1.140	0.026	0	0	0	0	
L			B		2.42Y	113.9	0.10	8.09	37.43	21	79	45	87					0	0	0	0	L
L			C		2.41Y	113.3	0.04	8.74	27.97	16	63	25	93					0	0	0	0	L
	OH485	OH153	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.68	0.71	0	2	0	100	0.00	0.0	1.150	0.009	2	0	0	0	
L			B		2.42Y	113.9	0.00	8.09	2.95	2	6	4	87					6	4	0	0	L
	OH154	OH153	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.67	5.30	3	13	4	96	0.08	0.1	1.166	0.026	0	0	0	0	
L			B		2.42Y	113.8	0.09	8.18	34.48	19	73	41	87					6	4	0	0	L
L			C		2.41Y	113.2	0.05	8.78	27.97	16	63	25	93					0	0	0	0	L
	OH156	OH154	A	#2 ACSR 6/	2.47Y	116.3	-0.01	5.65	5.30	3	13	4	96	0.08	0.1	1.194	0.028	3	1	0	0	
L			B		2.42Y	113.7	0.09	8.26	31.53	18	66	38	87					0	0	0	0	L
L			C		2.41Y	113.2	0.05	8.83	27.97	16	63	25	93					0	0	0	0	L
	OH157	OH156	A	#2 ACSR 6/	2.47Y	116.4	-0.01	5.64	4.24	2	10	3	96	0.08	0.1	1.221	0.027	0	0	0	0	
L			B		2.42Y	113.7	0.09	8.35	31.53	18	66	38	87					0	0	0	0	L
L			C		2.41Y	113.1	0.05	8.88	27.97	16	63	25	93					0	0	0	0	L
	OH158	OH157	A	#2 ACSR 6/	2.47Y	116.4	-0.01	5.63	4.24	2	10	3	96	0.06	0.0	1.246	0.025	0	0	0	0	
L			B		2.42Y	113.6	0.08	8.43	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	113.1	0.04	8.92	27.97	16	63	25	93					13	5	0	0	L
	OH159	OH158	A	#2 ACSR 6/	2.47Y	116.4	-0.01	5.63	4.24	2	10	3	96	0.05	0.0	1.268	0.022	0	0	0	0	
L			B		2.41Y	113.5	0.07	8.50	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	113.1	0.03	8.95	22.15	12	50	19	93					0	0	0	0	L
	OH160	OH159	A	#2 ACSR 6/	2.47Y	116.4	-0.01	5.62	4.24	2	10	3	96	0.06	0.0	1.293	0.025	0	0	0	0	
L			B		2.41Y	113.4	0.08	8.57	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	113.0	0.03	8.98	22.15	12	50	19	93					0	0	0	0	L
	OH161	OH160	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.61	4.24	2	10	3	96	0.05	0.0	1.314	0.021	2	0	0	0	
L			B		2.41Y	113.4	0.07	8.64	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	113.0	0.03	9.00	22.15	12	50	19	93					0	0	0	0	L
	OH163	OH161	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.61	-0.00	0	0	0		0.00	0.0	1.322	0.008	0	0	0	0	
L			B		2.41Y	113.4	0.00	8.64	-0.00	0	0	0						0	0	0	0	L
L			C		2.40Y	113.0	0.00	9.00	-0.00	0	0	0						0	0	0	0	L
	OH164	OH163	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.61	-0.00	0	0	0		0.00	0.0	1.329	0.007	0	0	0	0	
L			B		2.41Y	113.4	0.00	8.64	-0.00	0	0	0						0	0	0	0	L
L			C		2.40Y	113.0	0.00	9.00	-0.00	0	0	0						0	0	0	0	L
	OH165	OH161	A	#2 ACSR 6/	2.48Y	116.4	-0.02	5.60	3.53	2	8	2	97	0.10	0.1	1.357	0.043	0	0	0	0	
L			B		2.41Y	113.2	0.14	8.78	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	112.9	0.05	9.06	22.15	12	50	19	93					0	0	0	0	L
	OH166	OH165	A	#2 ACSR 6/	2.48Y	116.4	-0.00	5.59	3.53	2	8	2	97	0.02	0.0	1.367	0.010	0	0	0	0	
L			B		2.41Y	113.2	0.03	8.81	31.53	18	66	38	87					0	0	0	0	L
L			C		2.40Y	112.9	0.01	9.07	22.15	12	50	19	93					4	2	0	0	L
	OH167	OH166	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.59	-0.00	0	0	0		0.00	0.0	1.392	0.026	0	0	0	0	
L			B		2.41Y	113.2	0.01	8.82	6.53	4	14	8	87					6	4	0	0	L
L			C		2.40Y	112.9	-0.00	9.06	-0.00	0	0	0						0	0	0	0	L
L	OH168	OH167	B	#2 ACSR 6/	2.41Y	113.2	0.01	8.82	3.56	2	7	4	87	0.00	0.0	1.412	0.020	4	2	0	0	L
L	OH712	OH168	B	#2 ACSR 6/	2.41Y	113.2	0.00	8.83	1.78	1	4	2	89	0.00	0.0	1.452	0.040	4	2	0	0	L
	OH169	OH166	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.59	3.53	2	8	2	97	0.03	0.0	1.387	0.021	0	0	0	0	
L			B		2.41Y	113.1	0.05	8.86	25.01	14	52	30	87					0	0	0	0	L
L			C		2.40Y	112.9	0.03	9.09	20.41	11	46	18	93					0	0	0	0	L
	OH170	OH169	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.58	3.53	2	8	2	97	0.04	0.0	1.414	0.027	0	0	0	0	
L			B		2.40Y	113.1	0.07	8.93	25.01	14	52	30	87					0	0	0	0	L
L			C		2.40Y	112.9	0.03	9.13	20.41	11	46	18	93					0	0	0	0	L
L	OH486	OH170	B	#2 ACSR 6/	2.40Y	113.1	0.00	8.93	1.19	1	2	1	89	0.00	0.0	1.444	0.030	2	1	0	0	L
	OH171	OH170	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.57	3.53	2	8	2	97	0.04	0.0	1.439	0.025	0	0	0	0	
L			B		2.40Y	113.0	0.06	8.98	23.82	13	50	28	87					0	0	0	0	L
L			C		2.40Y	112.8	0.03	9.16	20.41	11	46	18	93					0	0	0	0	L
	OH172	OH171	A	#2 ACSR 6/	2.48Y	116.4	-0.01	5.57	3.53	2	8	2	97	0.03	0.0	1.458	0.019	0	0	0	0	
L			B		2.40Y	113.0	0.04	9.03	23.82	13	50	28	87					4	2	0	0	L
L			C		2.40Y	112.8	0.02	9.18	20.41	11	46	18	93					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
L OCD488	OH172	C	50A QR	2.40Y	112.8	0.00	9.18	14.58	29	33	13	93	0.00	0.0	1.458	0.000	0	0	0	0 L
L OH489	OCD488	C	#2 ACSR 6/	2.40Y	112.8	0.03	9.21	14.58	8	33	13	93	0.01	0.0	1.484	0.026	13	5	0	0 L
L OH490	OH489	C	#2 ACSR 6/	2.40Y	112.8	0.02	9.23	8.75	5	20	8	93	0.00	0.0	1.509	0.025	4	2	0	0 L
L OH491	OH490	C	#2 ACSR 6/	2.40Y	112.8	0.01	9.24	7.00	4	16	6	94	0.00	0.0	1.530	0.021	8	3	0	0 L
L OH492	OH491	C	#2 ACSR 6/	2.40Y	112.8	0.00	9.25	3.50	2	8	3	94	0.00	0.0	1.548	0.018	8	3	0	0 L
OH173	OH172	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.57	3.53	2	8	2	97	0.02	0.0	1.485	0.027	0	0	0	0
L		B		2.40Y	112.9	0.06	9.08	22.04	12	46	26	87					0	0	0	0 L
L		C		2.40Y	112.8	-0.00	9.18	5.83	3	13	5	93					0	0	0	0 L
OH174	OH173	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.57	3.53	2	8	2	97	0.01	0.0	1.497	0.012	0	0	0	0
L		B		2.40Y	112.9	0.03	9.11	22.04	12	46	26	87					0	0	0	0 L
L		C		2.40Y	112.8	-0.00	9.18	5.83	3	13	5	93					0	0	0	0 L
OH175	OH174	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.57	3.53	2	8	2	97	0.01	0.0	1.507	0.010	0	0	0	0
L		B		2.40Y	112.9	0.02	9.13	22.04	12	46	26	87					0	0	0	0 L
L		C		2.40Y	112.8	-0.00	9.18	5.83	3	13	5	93					0	0	0	0 L
OH176	OH175	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	3.53	2	8	2	97	0.02	0.0	1.526	0.019	0	0	0	0
L		B		2.40Y	112.8	0.04	9.17	22.04	12	46	26	87					0	0	0	0 L
L		C		2.40Y	112.8	-0.00	9.18	5.83	3	13	5	93					0	0	0	0 L
OH493	OH176	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	2.83	2	7	2	96	0.00	0.0	1.552	0.026	4	1	0	0
L		B		2.40Y	112.8	0.01	9.18	5.95	3	12	7	87					6	4	0	0 L
L		C		2.40Y	112.8	0.00	9.18	5.83	3	13	5	93					13	5	0	0 L
OH494	OH493	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	1.06	1	3	1	95	0.00	0.0	1.576	0.024	0	0	0	0
L		B		2.40Y	112.8	0.01	9.19	2.98	2	6	4	87					0	0	0	0 L
L		C		2.40Y	112.8	-0.00	9.18	-0.00	0	0	0						0	0	0	0 L
OH495	OH494	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	1.06	1	3	1	95	0.00	0.0	1.599	0.023	3	1	0	0
L		B		2.40Y	112.8	0.01	9.19	2.98	2	6	4	87					0	0	0	0 L
OH496	OH495	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.617	0.018	0	0	0	0
L		B		2.40Y	112.8	0.01	9.20	2.98	2	6	4	87					0	0	0	0 L
OH497	OH496	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.629	0.012	0	0	0	0
L		B		2.40Y	112.8	0.00	9.20	2.98	2	6	4	87					6	4	0	0 L
OH498	OH176	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	0.71	0	2	0	100	0.01	0.0	1.563	0.037	2	0	0	0
L		B		2.40Y	112.8	0.05	9.23	16.09	9	33	19	87					6	4	0	0 L
L		C		2.40Y	112.8	-0.02	9.16	-0.00	0	0	0						0	0	0	0 L
OH502	OH498	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.01	0.0	1.599	0.035	0	0	0	0
L		B		2.40Y	112.7	0.04	9.27	13.11	7	27	16	87					6	4	0	0 L
L		C		2.40Y	112.9	-0.01	9.15	-0.00	0	0	0						0	0	0	0 L
L OH507	OH502	B	#2 ACSR 6/	2.40Y	112.7	0.04	9.30	10.13	6	21	12	87	0.01	0.0	1.636	0.037	2	1	0	0 L
L OH508	OH507	B	#2 ACSR 6/	2.40Y	112.7	0.01	9.32	8.94	5	19	11	87	0.00	0.0	1.655	0.019	6	4	0	0 L
L OH509	OH508	B	#2 ACSR 6/	2.40Y	112.7	0.01	9.32	5.96	3	12	7	86	0.00	0.0	1.667	0.013	0	0	0	0 L
L OH510	OH509	B	#2 ACSR 6/	2.40Y	112.7	0.01	9.33	5.96	3	12	7	86	0.00	0.0	1.700	0.032	12	7	0	0 L
OH177	OH176	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.548	0.022	0	0	0	0
L		B		2.40Y	112.8	0.00	9.17	-0.00	0	0	0						0	0	0	0 L
L		C		2.40Y	112.8	0.00	9.18	-0.00	0	0	0						0	0	0	0 L
OH178	OH177	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.568	0.020	0	0	0	0
L		B		2.40Y	112.8	0.00	9.17	-0.00	0	0	0						0	0	0	0 L
L		C		2.40Y	112.8	0.00	9.18	-0.00	0	0	0						0	0	0	0 L
OH179	OH178	A	#2 ACSR 6/	2.48Y	116.4	0.00	5.58	-0.00	0	0	0		0.00	0.0	1.583	0.015	0	0	0	0
L		B		2.40Y	112.8	0.00	9.17	-0.00	0	0	0						0	0	0	0 L
L		C		2.40Y	112.8	0.00	9.18	-0.00	0	0	0						0	0	0	0 L
OH43	OH42	A	500 MCM Hd	2.48Y	116.5	0.00	5.46	81.32	10	184	82	91	0.01	0.0	0.604	0.002	0	0	0	0
L		B		2.47Y	115.9	-0.00	6.06	25.05	3	58	21	94					0	0	0	0 L
L		C		2.44Y	114.8	0.01	7.24	109.80	13	233	132	87					0	0	0	0 L

----------- Feeder No. 164 (CB 164) Beginning with Device CB 164 -----------

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

09/11/2018 18:52 Page 40

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
CB 164	OH43	A	560 VWE	2.48Y	116.5	0.00	5.46	52.12	0	119	51	92	0.00	0.0	0.604	0.000	0	0	0	0
L		B		2.47Y	115.9	0.00	6.06	14.89	0	34	14	92					0	0	0	0 L
L		C		2.44Y	114.8	0.00	7.24	74.35	0	156	92	86					0	0	0	0 L
OH99	CB 164	A	#2 ACSR 6/	2.48Y	116.5	0.02	5.48	52.12	29	119	51	92	0.09	0.0	0.611	0.007	0	0	0	0
L		B		2.47Y	115.9	-0.00	6.06	14.89	8	34	14	92					0	0	0	0 L
L		C		2.44Y	114.7	0.05	7.29	74.35	41	156	92	86					0	0	0	0 L
OH100	OH99	A	#2 ACSR 6/	2.48Y	116.5	0.05	5.53	52.12	29	119	51	92	0.21	0.1	0.627	0.016	0	0	0	0
L		B		2.47Y	115.9	-0.00	6.06	14.89	8	34	14	92					0	0	0	0 L
L		C		2.44Y	114.6	0.11	7.40	74.35	41	156	92	86					9	6	0	0 L
OH101	OH100	A	#2 ACSR 6/	2.48Y	116.4	0.06	5.58	52.12	29	119	51	92	0.22	0.1	0.646	0.018	0	0	0	0
L		B		2.47Y	115.9	-0.00	6.05	14.89	8	34	14	92					0	0	0	0 L
L		C		2.43Y	114.5	0.13	7.53	69.81	39	146	87	86					0	0	0	0 L
OH102	OH101	A	#2 ACSR 6/	2.48Y	116.4	0.02	5.61	52.12	29	119	51	92	0.09	0.0	0.653	0.007	0	0	0	0
L		B		2.47Y	115.9	-0.00	6.05	14.89	8	34	14	92					0	0	0	0 L
L		C		2.43Y	114.4	0.05	7.58	69.81	39	146	87	86					0	0	0	0 L
OH103	OH102	A	#2 ACSR 6/	2.47Y	116.3	0.09	5.70	52.12	29	119	51	92	0.35	0.1	0.682	0.029	0	0	0	0
L		B		2.47Y	116.0	-0.01	6.04	14.89	8	34	14	92					0	0	0	0 L
L		C		2.43Y	114.2	0.20	7.77	69.81	39	146	86	86					0	0	0	0 L
OH104	OH103	A	#2 ACSR 6/	2.47Y	116.3	0.05	5.75	52.12	29	119	51	92	0.20	0.1	0.698	0.016	0	0	0	0
L		B		2.47Y	116.0	-0.00	6.04	14.89	8	34	14	92					0	0	0	0 L
L		C		2.43Y	114.1	0.11	7.89	69.81	39	146	86	86					0	0	0	0 L
OH105	OH104	A	#2 ACSR 6/	2.47Y	116.2	0.06	5.81	52.12	29	119	51	92	0.24	0.1	0.718	0.020	0	0	0	0
L		B		2.47Y	116.0	-0.00	6.03	14.89	8	34	14	92					0	0	0	0 L
L		C		2.42Y	114.0	0.13	8.02	69.81	39	146	86	86					0	0	0	0 L
OH106	OH105	A	#2 ACSR 6/	2.47Y	116.1	0.07	5.88	52.12	29	118	50	92	0.27	0.1	0.740	0.022	0	0	0	0
L		B		2.47Y	116.0	-0.01	6.03	14.89	8	34	14	92					0	0	0	0 L
L		C		2.42Y	113.8	0.15	8.17	69.81	39	146	86	86					0	0	0	0 L
OH107	OH106	A	#2 ACSR 6/	2.47Y	116.1	0.03	5.91	52.12	29	118	50	92	0.13	0.0	0.751	0.010	0	0	0	0
L		B		2.47Y	116.0	-0.00	6.03	14.89	8	34	14	92					0	0	0	0 L
L		C		2.42Y	113.8	0.07	8.24	69.81	39	145	86	86					0	0	0	0 L
OH108	OH107	A	#2 ACSR 6/	2.47Y	116.0	0.07	5.98	52.12	29	118	50	92	0.29	0.1	0.775	0.024	3	1	0	0
L		B		2.47Y	116.0	-0.01	6.02	14.89	8	34	14	92					0	0	0	0 L
L		C		2.42Y	113.6	0.16	8.41	69.81	39	145	86	86					0	0	0	0 L
L OH109	OH108	A	#2 ACSR 6/	2.47Y	116.0	0.05	6.04	50.63	28	115	49	92	0.21	0.1	0.793	0.018	0	0	0	0 L
L		B		2.47Y	116.0	-0.00	6.02	14.89	8	34	14	92					0	0	0	0 L
L		C		2.41Y	113.5	0.12	8.52	69.81	39	145	86	86					9	6	0	0 L
L OH110	OH109	A	#2 ACSR 6/	2.47Y	115.9	0.03	6.07	50.63	28	115	49	92	0.11	0.0	0.803	0.011	0	0	0	0 L
L		B		2.47Y	116.0	-0.00	6.01	14.89	8	34	14	92					0	0	0	0 L
L		C		2.41Y	113.4	0.07	8.59	65.23	36	135	80	86					0	0	0	0 L
L OH111	OH110	A	#4 ACSR 6/	2.46Y	115.8	0.10	6.17	38.30	27	87	37	92	0.25	0.1	0.831	0.028	0	0	0	0 L
L		B		2.47Y	116.0	0.02	6.03	14.89	11	34	14	92					0	0	0	0 L
L		C		2.41Y	113.2	0.17	8.76	46.84	33	97	57	86					0	0	0	0 L
L OH371	OH111	A	#4 ACSR 6/	2.46Y	115.8	0.05	6.22	38.30	27	87	37	92	0.13	0.1	0.846	0.015	0	0	0	0 L
L		B		2.47Y	116.0	0.00	6.03	14.89	11	34	15	92					17	7	0	0 L
L		C		2.41Y	113.1	0.09	8.85	46.85	33	97	57	86					0	0	0	0 L
L OH372	OH371	A	#4 ACSR 6/	2.46Y	115.7	0.10	6.33	38.30	27	87	37	92	0.26	0.1	0.875	0.029	0	0	0	0 L
L		B		2.47Y	116.0	-0.01	6.02	7.44	5	17	7	92					0	0	0	0 L
L		C		2.40Y	113.0	0.19	9.04	46.85	33	97	57	86					0	0	0	0 L
L OH373	OH372	A	#4 ACSR 6/	2.46Y	115.6	0.03	6.36	38.30	27	87	37	92	0.08	0.0	0.883	0.009	0	0	0	0 L
L		B		2.47Y	116.0	-0.00	6.02	7.44	5	17	7	92					0	0	0	0 L
L		C		2.40Y	112.9	0.06	9.10	46.85	33	97	57	86					0	0	0	0 L
L OH374	OH373	A	#4 ACSR 6/	2.46Y	115.5	0.10	6.45	38.30	27	87	37	92	0.23	0.1	0.910	0.027	0	0	0	0 L
L		B		2.47Y	116.0	-0.01	6.01	7.44	5	17	7	92					0	0	0	0 L
L		C		2.40Y	112.7	0.17	9.27	46.85	33	97	57	86					6	3	0	0 L
L OH375	OH374	A	#4 ACSR 6/	2.46Y	115.4	0.10	6.55	38.30	27	87	37	92	0.23	0.1	0.937	0.027	0	0	0	0 L
L		B		2.47Y	116.0	-0.01	6.00	7.44	5	17	7	92					0	0	0	0 L
L		C		2.39Y	112.6	0.17	9.43	44.08	31	91	54	86					0	0	0	0 L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH376	OH375	A	#4 ACSR 6/	2.45Y	115.3	0.12	6.67	38.30	27	87	37	92	0.26	0.1	0.969	0.032	0	0	0	0	L
			B		2.47Y	116.0	-0.03	5.97	7.44	5	17	7	92					17	7	0	0	
L			C		2.39Y	112.4	0.20	9.63	44.08	31	91	54	86					0	0	0	0	L
L	OH377	OH376	A	#4 ACSR 6/	2.45Y	115.2	0.09	6.76	38.30	27	86	37	92	0.20	0.1	0.994	0.025	0	0	0	0	L
			B		2.47Y	116.1	-0.03	5.94	-0.02	0	0	0						0	0	0	0	
L			C		2.39Y	112.2	0.15	9.79	44.08	31	91	54	86					6	3	0	0	L
L	OH378	OH377	A	#4 ACSR 6/	2.45Y	115.1	0.09	6.85	38.30	27	86	37	92	0.19	0.1	1.019	0.025	0	0	0	0	L
			B		2.47Y	116.1	-0.03	5.90	-0.02	0	0	0						0	0	0	0	
L			C		2.38Y	112.1	0.15	9.94	41.30	29	85	50	86					0	0	0	0	L
L	OH379	OH378	A	#4 ACSR 6/	2.45Y	115.1	0.09	6.94	38.30	27	86	37	92	0.19	0.1	1.044	0.025	5	2	0	0	L
			B		2.47Y	116.1	-0.03	5.87	-0.02	0	0	0						0	0	0	0	
L			C		2.38Y	111.9	0.15	10.09	41.30	29	85	50	86					0	0	0	0	L
L	OH380	OH379	A	#4 ACSR 6/	2.45Y	115.1	-0.00	6.94	-0.00	0	0	0		0.00	0.0	1.051	0.007	0	0	0	0	L
			B		2.47Y	116.1	0.00	5.87	-0.00	0	0	0						0	0	0	0	
L			C		2.38Y	111.9	0.00	10.09	2.79	2	6	3	86					6	3	0	0	L
L	OH381	OH379	A	#4 ACSR 6/	2.45Y	115.0	0.07	7.01	36.04	26	81	34	92	0.13	0.1	1.063	0.019	0	0	0	0	L
			B		2.47Y	116.2	-0.03	5.84	-0.02	0	0	0						0	0	0	0	
L			C		2.38Y	111.8	0.11	10.19	38.51	28	79	47	86					0	0	0	0	L
L	OH382	OH381	A	#4 ACSR 6/	2.44Y	114.9	0.05	7.06	36.04	26	81	34	92	0.09	0.1	1.076	0.013	0	0	0	0	L
			B		2.47Y	116.2	-0.02	5.83	-0.02	0	0	0						0	0	0	0	
L			C		2.38Y	111.7	0.08	10.27	38.51	28	79	47	86					0	0	0	0	L
L	OH383	OH382	A	#4 ACSR 6/	2.44Y	114.9	-0.00	7.05	-0.00	0	0	0		0.00	0.0	1.087	0.011	0	0	0	0	L
L			C		2.38Y	111.7	0.02	10.29	12.12	9	25	15	86					0	0	0	0	L
L	OH386	OH383	A	#4 ACSR 6/	2.44Y	115.0	-0.01	7.05	-0.00	0	0	0		0.01	0.0	1.104	0.016	0	0	0	0	L
L			C		2.38Y	111.7	0.02	10.31	12.12	9	25	15	86					4	2	0	0	L
L	OH387	OH386	A	#4 ACSR 6/	2.44Y	115.0	-0.01	7.04	-0.00	0	0	0		0.00	0.0	1.118	0.014	0	0	0	0	L
L			C		2.37Y	111.7	0.02	10.33	10.25	7	21	13	86					0	0	0	0	L
L	OH388	OH387	C	#4 ACSR 6/	2.37Y	111.7	0.00	10.34	2.80	2	6	3	89	0.00	0.0	1.136	0.018	6	3	0	0	L
L	OH389	OH387	A	#4 ACSR 6/	2.44Y	115.0	-0.01	7.03	-0.00	0	0	0		0.00	0.0	1.145	0.027	0	0	0	0	L
L			C		2.37Y	111.6	0.03	10.36	7.46	5	15	9	86					0	0	0	0	L
L	OH390	OH389	A	#4 ACSR 6/	2.44Y	115.0	-0.00	7.03	-0.00	0	0	0		0.00	0.0	1.163	0.018	0	0	0	0	L
L			C		2.37Y	111.6	0.02	10.38	7.46	5	15	9	86					3	2	0	0	L
L	OH391	OH390	A	#4 ACSR 6/	2.45Y	115.0	-0.00	7.02	-0.00	0	0	0		0.00	0.0	1.189	0.026	0	0	0	0	L
L			C		2.37Y	111.6	0.02	10.40	6.06	4	12	7	86					3	2	0	0	L
L	OH392	OH391	A	#4 ACSR 6/	2.45Y	115.0	-0.00	7.02	-0.00	0	0	0		0.00	0.0	1.219	0.030	0	0	0	0	L
L			C		2.37Y	111.6	0.01	10.41	4.66	3	9	6	86					9	6	0	0	L
L	OH385	OH382	A	#4 ACSR 6/	2.44Y	114.8	0.12	7.18	36.05	26	81	34	92	0.14	0.1	1.106	0.029	0	0	0	0	L
			B		2.47Y	116.2	-0.04	5.79	-0.02	0	0	0						0	0	0	0	
L			C		2.37Y	111.6	0.11	10.38	26.40	19	54	32	86					4	2	0	0	L
L	OH393	OH385	A	#4 ACSR 6/	2.44Y	114.8	0.07	7.25	36.05	26	81	34	92	0.09	0.1	1.125	0.019	3	1	0	0	L
			B		2.47Y	116.2	-0.03	5.76	-0.02	0	0	0						0	0	0	0	
L			C		2.37Y	111.5	0.07	10.45	24.53	18	50	30	86					0	0	0	0	L
L	OH394	OH393	A	#4 ACSR 6/	2.44Y	114.6	0.10	7.35	34.54	25	78	33	92	0.12	0.1	1.152	0.027	0	0	0	0	L
			B		2.47Y	116.3	-0.04	5.73	-0.02	0	0	0						0	0	0	0	
L			C		2.37Y	111.4	0.10	10.55	24.53	18	50	30	86					0	0	0	0	L
L	OH395	OH394	A	#4 ACSR 6/	2.44Y	114.6	0.09	7.44	34.54	25	78	33	92	0.11	0.1	1.178	0.027	13	5	0	0	L
			B		2.47Y	116.3	-0.03	5.69	-0.01	0	0	0						0	0	0	0	
L			C		2.37Y	111.4	0.10	10.65	24.53	18	50	30	86					0	0	0	0	L
L	OH396	OH395	A	#4 ACSR 6/	2.43Y	114.5	0.09	7.53	28.87	21	65	27	92	0.10	0.1	1.206	0.028	0	0	0	0	L
			B		2.47Y	116.3	-0.03	5.66	-0.01	0	0	0						0	0	0	0	
L			C		2.37Y	111.3	0.10	10.75	24.53	18	50	30	86					0	0	0	0	L
L	OH397	OH396	A	#4 ACSR 6/	2.43Y	114.4	0.02	7.55	28.87	21	65	27	92	0.03	0.0	1.213	0.007	0	0	0	0	L
			B		2.47Y	116.3	-0.01	5.66	-0.01	0	0	0						0	0	0	0	
L			C		2.37Y	111.2	0.03	10.78	24.53	18	50	30	86					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH398	OH397	A	#4 ACSR 6/	2.43Y	114.3	0.13	7.68	28.87	21	65	27	92	0.16	0.1	1.260	0.047	8	4	0	0	L
			B		2.48Y	116.4	-0.05	5.61	-0.01	0	0	0						0	0	0	0	
L			C		2.36Y	111.1	0.17	10.94	24.53	18	50	30	86					0	0	0	0	L
L	OH399	OH398	A	#4 ACSR 6/	2.43Y	114.3	0.01	7.69	3.79	3	8	4	89	0.00	0.0	1.298	0.038	8	4	0	0	L
			B		2.48Y	116.4	-0.00	5.61	-0.00	0	0	0						0	0	0	0	
L			C		2.36Y	111.0	0.01	10.95	2.81	2	6	3	86					6	3	0	0	L
L	OH400	OH398	A	#4 ACSR 6/	2.43Y	114.3	0.05	7.73	21.30	15	48	20	92	0.05	0.1	1.284	0.023	0	0	0	0	L
			B		2.48Y	116.4	-0.02	5.59	-0.01	0	0	0						0	0	0	0	
L			C		2.36Y	111.0	0.07	11.02	21.72	16	44	26	86					0	0	0	0	L
L	OH401	OH400	A	#4 ACSR 6/	2.43Y	114.3	0.00	7.73	-0.00	0	0	0	100	0.00	0.0	1.309	0.025	0	0	0	0	L
L	OH403	OH400	A	#4 ACSR 6/	2.43Y	114.2	0.09	7.82	21.30	15	48	20	92	0.09	0.1	1.324	0.041	0	0	0	0	L
			B		2.48Y	116.4	-0.03	5.56	-0.01	0	0	0						0	0	0	0	
L			C		2.36Y	110.9	0.13	11.15	21.72	16	44	26	86					0	0	0	0	L
L	OH404	OH403	A	#4 ACSR 6/	2.43Y	114.1	0.05	7.87	21.30	15	48	20	92	0.06	0.1	1.348	0.024	0	0	0	0	L
			B		2.48Y	116.5	-0.02	5.54	-0.01	0	0	0						0	0	0	0	
L			C		2.36Y	110.8	0.08	11.22	21.72	16	44	26	86					0	0	0	0	L
L	OH405	OH404	A	#4 ACSR 6/	2.43Y	114.1	0.08	7.95	21.30	15	48	20	92	0.08	0.1	1.385	0.037	0	0	0	0	L
			B		2.48Y	116.5	-0.03	5.51	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.7	0.12	11.34	21.72	16	44	26	86					0	0	0	0	L
L	OH406	OH405	A	#4 ACSR 6/	2.42Y	114.0	0.05	7.99	21.30	15	48	20	92	0.05	0.1	1.406	0.021	0	0	0	0	L
			B		2.48Y	116.5	-0.02	5.49	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.6	0.07	11.41	21.72	16	44	26	86					0	0	0	0	L
L	OH407	OH406	A	#4 ACSR 6/	2.42Y	114.0	0.04	8.03	19.02	14	42	18	92	0.04	0.1	1.429	0.023	3	1	0	0	L
			B		2.48Y	116.5	-0.02	5.48	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.5	0.07	11.48	21.72	16	44	26	86					4	2	0	0	L
L	OH410	OH407	A	#4 ACSR 6/	2.42Y	113.9	0.04	8.07	17.50	13	39	16	93	0.04	0.1	1.454	0.025	0	0	0	0	L
			B		2.48Y	116.5	-0.02	5.46	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.5	0.07	11.54	19.84	14	40	24	86					6	3	0	0	L
L	OH411	OH410	A	#4 ACSR 6/	2.42Y	113.9	0.04	8.11	17.50	13	39	16	93	0.03	0.0	1.475	0.021	0	0	0	0	L
			B		2.48Y	116.5	-0.01	5.45	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.4	0.05	11.60	17.02	12	34	21	86					0	0	0	0	L
L	OH412	OH411	A	#4 ACSR 6/	2.42Y	113.9	0.00	8.11	-0.00	0	0	0	100	0.00	0.0	1.485	0.010	0	0	0	0	L
L	OH413	OH411	A	#4 ACSR 6/	2.42Y	113.9	0.00	8.11	2.28	2	5	2	93	0.00	0.0	1.496	0.021	5	2	0	0	L
L	OH414	OH411	A	#4 ACSR 6/	2.42Y	113.9	0.04	8.15	15.22	11	34	14	92	0.03	0.0	1.501	0.026	0	0	0	0	L
			B		2.48Y	116.6	-0.01	5.44	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.3	0.06	11.66	17.02	12	34	21	86					0	0	0	0	L
L	OH415	OH414	A	#4 ACSR 6/	2.42Y	113.8	0.04	8.19	15.22	11	34	14	92	0.03	0.1	1.529	0.028	3	1	0	0	L
			B		2.48Y	116.6	-0.01	5.42	-0.01	0	0	0						0	0	0	0	
L			C		2.35Y	110.3	0.07	11.73	17.02	12	34	21	86					0	0	0	0	L
L	OH416	OH415	A	#4 ACSR 6/	2.42Y	113.8	0.01	8.19	2.28	2	5	2	93	0.00	0.0	1.557	0.028	0	0	0	0	L
L			C		2.34Y	110.3	0.00	11.73	-0.00	0	0	0						0	0	0	0	L
L	OH417	OH416	A	#4 ACSR 6/	2.42Y	113.8	0.00	8.20	2.28	2	5	2	93	0.00	0.0	1.581	0.025	5	2	0	0	L
L			C		2.34Y	110.3	0.00	11.73	-0.00	0	0	0						0	0	0	0	L
L	OH418	OH417	A	#4 ACSR 6/	2.42Y	113.8	0.00	8.20	-0.00	0	0	0		0.00	0.0	1.597	0.015	0	0	0	0	L
L			C		2.34Y	110.3	0.00	11.73	-0.00	0	0	0						0	0	0	0	L
L	OH419	OH415	A	#4 ACSR 6/	2.42Y	113.8	0.02	8.21	11.42	8	25	11	92	0.02	0.0	1.551	0.022	0	0	0	0	L
			B		2.48Y	116.6	-0.01	5.41	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.2	0.05	11.78	17.02	12	34	21	86					0	0	0	0	L
L	OH420	OH419	A	#4 ACSR 6/	2.42Y	113.8	0.03	8.23	11.42	8	25	11	92	0.03	0.1	1.581	0.030	0	0	0	0	L
			B		2.48Y	116.6	-0.01	5.40	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.1	0.07	11.86	17.02	12	34	21	86					0	0	0	0	L
L	OH421	OH420	A	#4 ACSR 6/	2.42Y	113.8	0.01	8.24	3.81	3	8	4	89	0.00	0.0	1.604	0.023	8	4	0	0	L
L	OH422	OH420	A	#4 ACSR 6/	2.42Y	113.8	0.01	8.24	7.61	5	17	7	92	0.02	0.0	1.612	0.031	8	4	0	0	L
			B		2.48Y	116.6	-0.01	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.1	0.06	11.92	17.02	12	34	21	86					9	6	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH423	OH422	A	#4 ACSR 6/	2.42Y	113.7	0.01	8.25	3.81	3	8	4	89	0.00	0.0	1.636	0.024	0	0	0	0	L
			B		2.48Y	116.6	-0.00	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.1	0.02	11.94	4.73	3	9	6	86					0	0	0	0	L
L	OH424	OH423	A	#4 ACSR 6/	2.42Y	113.7	0.00	8.25	3.81	3	8	4	89	0.00	0.0	1.654	0.018	8	4	0	0	L
			B		2.48Y	116.6	-0.00	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.1	0.01	11.95	4.73	3	9	6	86					0	0	0	0	L
L	OH425	OH424	A	#4 ACSR 6/	2.42Y	113.8	-0.00	8.25	-0.00	0	0	0		0.00	0.0	1.687	0.033	0	0	0	0	L
			B		2.48Y	116.6	0.00	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.0	0.01	11.96	4.73	3	9	6	86					9	6	0	0	L
L	OH426	OH425	A	#4 ACSR 6/	2.42Y	113.8	0.00	8.25	-0.00	0	0	0		0.00	0.0	1.719	0.033	0	0	0	0	L
			B		2.48Y	116.6	0.00	5.39	-0.00	0	0	0						0	0	0	0	
L			C		2.34Y	110.0	0.00	11.96	-0.00	0	0	0						0	0	0	0	L
L	OH427	OH422	C	#4 ACSR 6/	2.34Y	110.0	0.05	11.97	7.57	5	15	9	86	0.01	0.0	1.658	0.047	0	0	0	0	L
L	OH428	OH427	C	#4 ACSR 6/	2.34Y	110.0	0.02	11.98	7.57	5	15	9	86	0.00	0.0	1.674	0.015	0	0	0	0	L
L	OH429	OH428	C	#4 ACSR 6/	2.34Y	110.0	0.04	12.02	7.57	5	15	9	86	0.00	0.0	1.724	0.050	9	6	0	0	L
L	OH430	OH429	C	#4 ACSR 6/	2.34Y	110.0	0.01	12.03	2.84	2	6	3	89	0.00	0.0	1.774	0.050	6	3	0	0	L
L	OH408	OH406	A	#4 ACSR 6/	2.42Y	114.0	0.00	7.99	2.28	2	5	2	93	0.00	0.0	1.425	0.019	5	2	0	0	L
			B		2.48Y	116.5	-0.00	5.49	-0.00	0	0	0						0	0	0	0	
L	OH112	OH110	A	#4 ACSR 6/	2.46Y	115.9	0.03	6.09	12.33	9	28	12	92	0.03	0.0	0.830	0.026	0	0	0	0	L
L			B		2.47Y	116.0	-0.01	6.00	-0.00	0	0	0						0	0	0	0	L
L			C		2.41Y	113.3	0.07	8.66	18.39	13	38	23	86					0	0	0	0	L
L	OH362	OH112	A	#4 ACSR 6/	2.46Y	115.9	0.01	6.10	11.21	8	25	11	92	0.01	0.0	0.840	0.010	0	0	0	0	L
			B		2.47Y	116.0	-0.00	6.00	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.3	0.03	8.69	18.39	13	38	23	86					0	0	0	0	L
L	OH363	OH362	A	#4 ACSR 6/	2.46Y	115.9	0.01	6.12	11.21	8	25	11	92	0.02	0.0	0.857	0.017	0	0	0	0	L
			B		2.47Y	116.0	-0.01	5.99	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.3	0.05	8.73	18.39	13	38	23	86					0	0	0	0	L
L	OH364	OH363	A	#4 ACSR 6/	2.46Y	115.9	0.02	6.14	11.21	8	25	11	92	0.02	0.0	0.879	0.022	0	0	0	0	L
			B		2.47Y	116.0	-0.01	5.98	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.2	0.04	8.78	18.39	13	38	23	86					19	11	0	0	L
L	OH365	OH364	A	#4 ACSR 6/	2.46Y	115.8	0.03	6.17	11.21	8	25	11	92	0.02	0.0	0.927	0.048	17	7	0	0	L
			B		2.47Y	116.0	-0.01	5.97	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.2	0.06	8.84	9.20	7	19	11	86					0	0	0	0	L
L	OH366	OH365	A	#4 ACSR 6/	2.46Y	115.8	-0.00	6.17	3.74	3	8	4	89	0.01	0.0	0.965	0.038	8	4	0	0	L
			B		2.47Y	116.0	-0.00	5.97	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.1	0.05	8.89	9.20	7	19	11	86					0	0	0	0	L
L	OH367	OH366	C	#4 ACSR 6/	2.41Y	113.1	0.01	8.90	4.60	3	9	6	83	0.00	0.0	0.987	0.022	9	6	0	0	L
L	OH368	OH366	A	#4 ACSR 6/	2.46Y	115.8	-0.00	6.17	-0.00	0	0	0		0.00	0.0	1.002	0.036	0	0	0	0	L
			B		2.47Y	116.0	0.00	5.97	-0.00	0	0	0						0	0	0	0	
L			C		2.41Y	113.1	0.01	8.90	4.60	3	9	6	86					9	6	0	0	L
L	OH369	OH112	A	#4 ACSR 6/	2.46Y	115.9	0.00	6.10	1.12	1	3	1	95	0.00	0.0	0.864	0.034	3	1	0	0	L

----------- Feeder No. 134 (CB134) Beginning with Device CB134 -----------

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	CB134	OH43	A	560 VWE	2.48Y	116.5	0.00	5.46	29.22	0	65	32	90	0.00	0.0	0.604	0.000	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	10.24	0	24	6	97					0	0	0	0	L
L			C		2.44Y	114.8	0.00	7.24	35.50	0	77	39	89					0	0	0	0	L
	OH115	CB134	A	#2 ACSR 6/	2.48Y	116.5	0.03	5.49	29.22	16	65	32	90	0.05	0.0	0.620	0.016	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.06	10.24	6	24	6	97					0	0	0	0	L
L			C		2.44Y	114.7	0.05	7.29	35.50	20	77	39	89					0	0	0	0	L
	OH116	OH115	A	#2 ACSR 6/	2.48Y	116.5	0.05	5.54	29.22	16	65	32	90	0.09	0.1	0.646	0.026	0	0	0	0	
L			B		2.47Y	115.9	0.00	6.07	10.24	6	24	6	97					0	0	0	0	L
L			C		2.44Y	114.6	0.09	7.38	35.50	20	77	39	89					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
OH117	OH116	A	#2 ACSR 6/	2.48Y	116.4	0.06	5.60	29.22	16	65	32	90	0.11	0.1	0.679	0.033	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.07	10.24	6	24	6	97					0	0	0	0	L
L		C		2.44Y	114.5	0.11	7.49	35.50	20	77	39	89					0	0	0	0	L
OH118	OH117	A	#2 ACSR 6/	2.47Y	116.3	0.05	5.65	29.22	16	65	32	90	0.09	0.1	0.707	0.028	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.07	10.24	6	24	6	97					0	0	0	0	L
L		C		2.43Y	114.4	0.09	7.58	35.50	20	77	39	89					0	0	0	0	L
OH433	OH118	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.66	5.15	3	11	6	88	0.00	0.0	0.731	0.024	4	2	0	0	
L		B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L		C		2.43Y	114.4	0.02	7.59	7.21	4	16	8	89					3	2	0	0	L
OH434	OH433	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.66	3.44	2	8	4	89	0.00	0.0	0.745	0.014	0	0	0	0	
L		B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L		C		2.43Y	114.4	0.00	7.60	5.77	3	12	6	89					12	6	0	0	L
OH435	OH434	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	3.44	2	8	4	89	0.00	0.0	0.773	0.028	8	4	0	0	
L		B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0	L
L		C		2.43Y	114.4	0.00	7.60	-0.00	0	0	0						0	0	0	0	L
OH436	OH118	A	#2 ACSR 6/	2.47Y	116.3	0.03	5.68	13.75	8	31	15	90	0.01	0.0	0.733	0.025	0	0	0	0	
L		B		2.47Y	115.9	0.01	6.08	6.82	4	16	4	97					0	0	0	0	L
L		C		2.43Y	114.4	0.02	7.60	8.65	5	19	10	89					0	0	0	0	L
OH437	OH436	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.69	13.75	8	31	15	90	0.00	0.0	0.745	0.012	15	7	0	0	
L		B		2.47Y	115.9	0.00	6.08	6.83	4	16	4	97					8	2	0	0	L
L		C		2.43Y	114.4	0.01	7.60	8.65	5	19	10	89					0	0	0	0	L
OH438	OH437	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.69	6.88	4	15	7	91	0.00	0.0	0.747	0.002	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.08	3.41	2	8	2	97					0	0	0	0	L
L		C		2.43Y	114.4	0.00	7.61	8.65	5	19	10	89					0	0	0	0	L
OH439	OH438	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.70	6.88	4	15	7	91	0.00	0.0	0.764	0.017	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.08	3.41	2	8	2	97					0	0	0	0	L
L		C		2.43Y	114.4	0.01	7.62	8.65	5	19	10	89					0	0	0	0	L
OH440	OH439	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.70	-0.00	0	0	0		0.00	0.0	0.769	0.005	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.08	-0.00	0	0	0						0	0	0	0	L
OH441	OH440	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.70	-0.00	0	0	0		0.00	0.0	0.783	0.014	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.08	-0.00	0	0	0						0	0	0	0	L
OH442	OH439	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.71	6.88	4	15	7	91	0.00	0.0	0.780	0.016	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.09	3.41	2	8	2	97					0	0	0	0	L
L		C		2.43Y	114.4	0.01	7.63	8.65	5	19	10	89					0	0	0	0	L
OH443	OH442	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.71	6.88	4	15	7	91	0.00	0.0	0.795	0.015	15	7	0	0	
L		B		2.46Y	115.9	0.00	6.09	3.41	2	8	2	97					8	2	0	0	L
L		C		2.43Y	114.4	0.01	7.64	8.65	5	19	10	89					19	10	0	0	L
OH444	OH443	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.71	-0.00	0	0	0		0.00	0.0	0.797	0.002	0	0	0	0	
L		B		2.46Y	115.9	0.00	6.09	-0.00	0	0	0						0	0	0	0	L
L		C		2.43Y	114.4	0.00	7.64	-0.00	0	0	0						0	0	0	0	L
OH445	OH444	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.71	-0.00	0	0	0		0.00	0.0	0.841	0.044	0	0	0	0	
L		B		2.46Y	115.9	0.00	6.09	-0.00	0	0	0						0	0	0	0	L
L		C		2.43Y	114.4	0.00	7.64	-0.00	0	0	0						0	0	0	0	L
OH119	OH118	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.66	10.31	6	23	11	90	0.02	0.0	0.729	0.022	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.07	3.41	2	8	2	97					0	0	0	0	L
L		C		2.43Y	114.4	0.04	7.62	19.63	11	43	22	89					0	0	0	0	L
OH120	OH119	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.67	10.31	6	23	11	90	0.01	0.0	0.742	0.012	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.07	3.41	2	8	2	97					0	0	0	0	L
L		C		2.43Y	114.4	0.02	7.64	19.64	11	42	22	89					0	0	0	0	L
OH121	OH120	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.67	10.31	6	23	11	90	0.01	0.0	0.751	0.010	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.07	3.41	2	8	2	97					0	0	0	0	L
L		C		2.43Y	114.3	0.02	7.66	19.64	11	42	22	89					0	0	0	0	L
OH122	OH121	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.68	10.31	6	23	11	90	0.02	0.0	0.778	0.027	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.08	3.41	2	8	2	97					0	0	0	0	L
L		C		2.43Y	114.3	0.05	7.71	19.64	11	42	22	89					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH123	OH122	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.69	10.31	6	23	11	90	0.00	0.0	0.782	0.004	0	0	0	0
L		B		2.47Y	115.9	0.00	6.08	3.41	2	8	2	97					0	0	0	0 L
L		C		2.43Y	114.3	0.01	7.72	19.64	11	42	22	89					0	0	0	0 L
OH446	OH123	A	#2 ACSR 6/	2.47Y	116.3	0.01	5.70	10.31	6	23	11	90	0.01	0.0	0.806	0.023	15	7	0	0
L		B		2.47Y	115.9	-0.00	6.07	3.41	2	8	2	97					8	2	0	0 L
L		C		2.43Y	114.3	0.02	7.74	12.71	7	27	14	89					12	6	0	0 L
OH447	OH446	A	#2 ACSR 6/	2.47Y	116.3	0.00	5.70	3.44	2	8	4	89	0.00	0.0	0.829	0.023	0	0	0	0
L		B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0 L
L		C		2.43Y	114.2	0.02	7.76	6.93	4	15	8	89					0	0	0	0 L
OH448	OH447	A	#2 ACSR 6/	2.47Y	116.3	-0.00	5.70	3.44	2	8	4	89	0.00	0.0	0.844	0.015	8	4	0	0
L		B		2.47Y	115.9	-0.00	6.07	-0.00	0	0	0						0	0	0	0 L
L		C		2.43Y	114.2	0.01	7.77	6.93	4	15	8	89					2	1	0	0 L
OH449	OH448	A	#2 ACSR 6/	2.47Y	116.3	-0.00	5.70	-0.00	0	0	0		0.00	0.0	0.855	0.011	0	0	0	0
L		B		2.47Y	115.9	0.00	6.07	-0.00	0	0	0						0	0	0	0 L
L		C		2.43Y	114.2	0.00	7.77	5.78	3	12	6	89					12	6	0	0 L
L OH450	OH123	C	#2 ACSR 6/	2.43Y	114.3	0.01	7.73	4.04	2	9	4	91	0.00	0.0	0.810	0.027	2	1	0	0 L
L OH451	OH450	C	#2 ACSR 6/	2.43Y	114.3	0.01	7.74	2.89	2	6	3	89	0.00	0.0	0.832	0.022	0	0	0	0 L
L OH452	OH451	C	#2 ACSR 6/	2.43Y	114.3	0.00	7.74	2.89	2	6	3	89	0.00	0.0	0.854	0.022	6	3	0	0 L
L OH453	OH452	C	#2 ACSR 6/	2.43Y	114.3	0.00	7.74	-0.00	0	0	0	100	0.00	0.0	0.874	0.020	0	0	0	0 L
L OH454	OH453	C	#2 ACSR 6/	2.43Y	114.3	0.00	7.74	-0.00	0	0	0	100	0.00	0.0	0.928	0.053	0	0	0	0 L
OH124	OH123	A	#2 ACSR 6/	2.47Y	116.3	-0.00	5.69	-0.00	0	0	0		0.00	0.0	0.797	0.015	0	0	0	0
L		B		2.47Y	115.9	0.00	6.08	-0.00	0	0	0						0	0	0	0 L
L		C		2.43Y	114.3	0.00	7.72	2.89	2	6	3	89					6	3	0	0 L

----------- Feeder No. 114 (CB 114) Beginning with Device CB 114 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
CB 114	OH40	A	560 VWE	2.48Y	116.5	0.00	5.45	73.34	0	174	51	96	0.00	0.0	0.600	0.000	0	0	0	0
L		B		2.47Y	115.9	0.00	6.06	114.58	0	252	129	89					0	0	0	0 L
L		C		2.44Y	114.8	0.00	7.23	125.20	0	287	106	94					0	0	0	0 L
OH113	CB 114	A	336ACSR	2.48Y	116.6	-0.01	5.44	73.34	14	174	51	96	0.18	0.0	0.617	0.017	0	0	0	0
L		B		2.46Y	115.9	0.06	6.12	114.58	22	252	129	89					0	0	0	0 L
L		C		2.44Y	114.7	0.04	7.27	125.20	24	287	106	94					0	0	0	0 L
OH131	OH113	A	2/0ACSR	2.48Y	116.5	0.02	5.47	73.34	27	174	51	96	0.76	0.1	0.646	0.030	0	0	0	0
L		B		2.46Y	115.7	0.19	6.31	114.58	42	251	129	89					0	0	0	0 L
L		C		2.44Y	114.6	0.16	7.43	125.20	46	287	106	94					0	0	0	0 L
OH132	OH131	A	2/0ACSR	2.48Y	116.5	0.03	5.50	73.34	27	174	51	96	0.97	0.1	0.685	0.038	0	0	0	0
L		B		2.46Y	115.5	0.24	6.55	114.58	42	251	128	89					0	0	0	0 L
L		C		2.43Y	114.4	0.20	7.63	125.20	46	286	106	94					0	0	0	0 L
OH133	OH132	A	2/0ACSR	2.48Y	116.5	0.03	5.53	73.34	27	174	51	96	0.87	0.1	0.719	0.034	0	0	0	0
L		B		2.45Y	115.2	0.21	6.76	114.58	42	250	128	89					0	0	0	0 L
L		C		2.43Y	114.2	0.18	7.81	125.20	46	286	105	94					0	0	0	0 L
OH134	OH133	A	2/0ACSR	2.48Y	116.4	0.06	5.59	73.34	27	174	51	96	1.99	0.3	0.797	0.078	0	0	0	0
L		B		2.44Y	114.7	0.49	7.25	114.58	42	250	128	89					0	0	0	0 L
L		C		2.42Y	113.8	0.41	8.23	125.20	46	285	105	94					0	0	0	0 L
OH135	OH134	A	2/0ACSR	2.47Y	116.4	0.03	5.63	69.68	26	166	48	96	1.49	0.2	0.856	0.059	0	0	0	0
L		B		2.43Y	114.4	0.38	7.63	114.58	42	249	128	89					0	0	0	0 L
L		C		2.41Y	113.5	0.31	8.54	125.20	46	285	103	94					0	0	0	0 L
OCD513	OH135	A	50A QR	2.47Y	116.4	0.00	5.63	2.20	4	5	2	93	0.00	0.0	0.856	0.000	0	0	0	0
L		C		2.41Y	113.5	0.00	8.54	5.56	11	13	4	94					0	0	0	0 L
OH514	OCD513	A	2ACSR	2.47Y	116.4	0.00	5.63	2.20	1	5	2	93	0.00	0.0	0.878	0.022	0	0	0	0
L		C		2.41Y	113.4	0.01	8.55	5.56	3	13	4	94					0	0	0	0 L
OH516	OH514	A	2ACSR	2.47Y	116.4	-0.00	5.63	2.20	1	5	2	93	0.00	0.0	0.891	0.013	5	2	0	0
L		C		2.41Y	113.4	0.01	8.56	5.56	3	13	4	94					0	0	0	0 L
L OH517	OH516	C	2ACSR	2.41Y	113.4	0.00	8.56	2.78	2	6	2	95	0.00	0.0	0.917	0.026	6	2	0	0 L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts -Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
OH518	OH516	A	2ACSR	2.47Y	116.4	-0.00	5.62	-0.00	0	0	0		0.00	0.0	0.911	0.020	0	0	0	0	
L		C		2.41Y	113.4	0.01	8.56	2.78	2	6	2	94					0	0	0	0	L
OH519	OH518	A	2ACSR	2.47Y	116.4	-0.00	5.62	-0.00	0	0	0		0.00	0.0	0.939	0.029	0	0	0	0	
L		C		2.41Y	113.4	0.00	8.57	2.78	2	6	2	94					6	2	0	0	L
OH136	OH135	A	2/0ACSR	2.47Y	116.4	0.02	5.65	67.48	25	160	47	96	0.82	0.1	0.890	0.034	0	0	0	0	
L		B		2.43Y	114.2	0.22	7.85	114.58	42	248	127	89					0	0	0	0	L
L		C		2.41Y	113.3	0.17	8.70	119.64	44	271	98	94					0	0	0	0	L
L OH520	OH136	C	2/0ACSR	2.41Y	113.3	0.00	8.71	4.64	2	11	4	94	0.00	0.0	0.919	0.029	11	4	0	0	L
OH522	OH136	A	2/0ACSR	2.47Y	116.3	0.03	5.68	67.48	25	160	47	96	0.87	0.1	0.928	0.038	0	0	0	0	
L		B		2.42Y	113.9	0.24	8.09	114.58	42	247	127	89					0	0	0	0	L
L		C		2.41Y	113.1	0.17	8.88	115.01	43	261	94	94					0	0	0	0	L
OH523	OH522	A	2/0ACSR	2.47Y	116.3	0.01	5.68	65.29	24	155	45	96	0.25	0.0	0.938	0.011	3	1	0	0	
L		B		2.42Y	113.8	0.07	8.16	114.58	42	247	127	89					0	0	0	0	L
L		C		2.40Y	113.1	0.05	8.93	115.01	43	260	94	94					0	0	0	0	L
OH524	OH523	A	2/0ACSR	2.47Y	116.3	0.02	5.70	63.82	24	152	44	96	0.69	0.1	0.968	0.030	3	1	0	0	
L		B		2.42Y	113.6	0.20	8.36	114.58	42	247	127	89					0	0	0	0	L
L		C		2.40Y	112.9	0.14	9.06	115.01	43	260	94	94					0	0	0	0	L
OH525	OH524	A	2/0ACSR	2.47Y	116.3	0.01	5.71	62.72	23	149	43	96	0.70	0.1	0.999	0.031	0	0	0	0	
L		B		2.41Y	113.4	0.20	8.56	114.58	42	246	127	89					0	0	0	0	L
L		C		2.40Y	112.8	0.14	9.20	115.01	43	260	93	94					0	0	0	0	L
OH526	OH525	A	2/0ACSR	2.47Y	116.3	0.02	5.73	62.73	23	149	43	96	0.53	0.1	1.031	0.032	3	1	0	0	
L		B		2.41Y	113.3	0.13	8.69	80.37	30	173	88	89					0	0	0	0	L
L		C		2.40Y	112.6	0.16	9.36	107.55	40	243	87	94					0	0	0	0	L
OH527	OH526	A	2/0ACSR	2.47Y	116.2	0.02	5.75	61.63	23	146	43	96	0.52	0.1	1.063	0.031	0	0	0	0	
L		B		2.41Y	113.2	0.13	8.82	80.37	30	172	88	89					0	0	0	0	L
L		C		2.39Y	112.5	0.16	9.52	107.55	40	243	87	94					0	0	0	0	L
OH528	OH527	A	2/0ACSR	2.47Y	116.2	0.01	5.76	57.23	21	136	40	96	0.53	0.1	1.096	0.034	3	1	0	0	
L		B		2.40Y	113.0	0.15	8.97	80.37	30	172	88	89					0	0	0	0	L
L		C		2.39Y	112.3	0.17	9.69	107.55	40	242	86	94					11	4	0	0	L
OH529	OH528	A	2/0ACSR	2.47Y	116.2	0.01	5.77	55.77	21	132	39	96	0.47	0.1	1.127	0.031	0	0	0	0	
L		B		2.40Y	112.9	0.13	9.10	80.37	30	172	88	89					0	0	0	0	L
L		C		2.39Y	112.2	0.15	9.84	102.88	38	231	82	94					0	0	0	0	L
OH530	OH529	A	2/0ACSR	2.47Y	116.2	-0.01	5.76	42.56	16	101	29	96	0.37	0.1	1.158	0.030	0	0	0	0	
L		B		2.40Y	112.8	0.12	9.22	70.28	26	150	77	89					7	4	0	0	L
L		C		2.38Y	112.0	0.14	9.97	95.37	35	214	76	94					0	0	0	0	L
OH531	OH530	A	2/0ACSR	2.47Y	116.2	-0.01	5.76	42.56	16	101	29	96	0.36	0.1	1.188	0.030	0	0	0	0	
L		B		2.40Y	112.7	0.11	9.34	66.92	25	143	73	89					0	0	0	0	L
L		C		2.38Y	111.9	0.14	10.11	95.37	35	214	76	94					0	0	0	0	L
OH532	OH531	A	2/0ACSR	2.47Y	116.3	-0.01	5.75	42.56	16	101	29	96	0.35	0.1	1.217	0.029	0	0	0	0	
L		B		2.39Y	112.6	0.11	9.45	66.92	25	143	73	89					0	0	0	0	L
L		C		2.38Y	111.8	0.13	10.24	95.37	35	214	76	94					0	0	0	0	L
OH533	OH532	A	2/0ACSR	2.47Y	116.3	-0.02	5.73	33.40	12	79	23	96	0.35	0.1	1.251	0.034	0	0	0	0	
L		B		2.39Y	112.4	0.14	9.58	66.92	25	142	73	89					0	0	0	0	L
L		C		2.37Y	111.6	0.13	10.37	85.96	32	193	68	94					0	0	0	0	L
OH616	OH533	A	2/0ACSR	2.47Y	116.3	-0.02	5.71	29.73	11	71	20	96	0.30	0.1	1.281	0.030	0	0	0	0	
L		B		2.39Y	112.3	0.12	9.71	66.92	25	142	73	89					0	0	0	0	L
L		C		2.37Y	111.5	0.11	10.49	85.96	32	192	68	94					0	0	0	0	L
OH617	OH616	A	2/0ACSR	2.47Y	116.3	-0.03	5.68	29.73	11	71	20	96	0.35	0.1	1.316	0.035	0	0	0	0	
L		B		2.38Y	112.1	0.14	9.85	66.92	25	142	73	89					0	0	0	0	L
L		C		2.37Y	111.4	0.13	10.62	85.96	32	192	68	94					0	0	0	0	L
OH618	OH617	A	2/0ACSR	2.47Y	116.4	-0.04	5.64	29.73	11	71	20	96	0.47	0.1	1.362	0.046	0	0	0	0	
L		B		2.38Y	112.0	0.19	10.05	66.92	25	142	73	89					0	0	0	0	L
L		C		2.36Y	111.2	0.17	10.79	85.96	32	192	67	94					0	0	0	0	L
OH619	OH618	A	2/0ACSR	2.48Y	116.4	-0.03	5.61	29.73	11	71	21	96	0.38	0.1	1.399	0.038	0	0	0	0	
L		B		2.38Y	111.8	0.16	10.20	66.92	25	142	73	89					0	0	0	0	L
L		C		2.36Y	111.1	0.14	10.94	85.96	32	192	67	94					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
L	OCD620	OH619	B	50A QR	2.38Y	111.8	0.00	10.20	6.80	14	14	7	89	0.00	0.0	1.399	0.000	0	0	0	0	L
L			C		2.36Y	111.1	0.00	10.94	47.46	95	106	37	94					0	0	0	0	L
L	OH621	OCD620	B	2ACSR	2.38Y	111.8	0.03	10.23	6.80	4	14	7	89	0.14	0.1	1.434	0.035	0	0	0	0	L
L			C		2.36Y	110.9	0.15	11.09	47.46	26	106	37	94					0	0	0	0	L
L	OH674	OH621	B	2ACSR	2.38Y	111.8	0.01	10.24	6.80	4	14	7	89	0.00	0.0	1.447	0.013	0	0	0	0	L
L	OH675	OH674	B	2ACSR	2.38Y	111.7	0.02	10.26	6.80	4	14	7	89	0.00	0.0	1.476	0.028	0	0	0	0	L
L	OH676	OH675	B	2ACSR	2.38Y	111.7	0.01	10.27	6.80	4	14	7	89	0.00	0.0	1.505	0.029	14	7	0	0	L
L	OH677	OH676	B	2ACSR	2.38Y	111.7	0.00	10.27	-0.00	0	0	0		0.00	0.0	1.532	0.027	0	0	0	0	L
L	OH679	OH621	C	2ACSR	2.36Y	110.9	0.04	11.13	14.22	8	32	11	95	0.01	0.0	1.476	0.042	21	7	0	0	L
L	OH681	OH679	C	2ACSR	2.36Y	110.9	0.01	11.14	4.74	3	11	4	94	0.00	0.0	1.504	0.027	0	0	0	0	L
L	OH682	OH681	C	2ACSR	2.36Y	110.9	0.01	11.15	4.74	3	11	4	94	0.00	0.0	1.531	0.028	11	4	0	0	L
L	OH683	OH682	C	2ACSR	2.36Y	110.9	0.00	11.15	-0.00	0	0	0		0.00	0.0	1.559	0.028	0	0	0	0	L
L	OH684	OH621	B	2ACSR	2.38Y	111.8	0.01	10.24	-0.00	0	0	0		0.12	0.2	1.495	0.061	0	0	0	0	L
L			C		2.35Y	110.7	0.20	11.29	33.24	18	74	26	94					0	0	0	0	L
L	OH685	OH684	C	2ACSR	2.35Y	110.7	0.02	11.31	14.25	8	32	11	95	0.01	0.0	1.510	0.014	0	0	0	0	L
L	OH686	OH685	C	2ACSR	2.35Y	110.7	0.03	11.33	14.25	8	32	11	95	0.01	0.0	1.538	0.028	21	7	0	0	L
L	OH687	OH686	C	2ACSR	2.35Y	110.7	0.01	11.35	4.75	3	11	4	94	0.00	0.0	1.565	0.027	0	0	0	0	L
L	OH688	OH687	C	2ACSR	2.35Y	110.6	0.01	11.35	4.75	3	11	4	94	0.00	0.0	1.594	0.029	11	4	0	0	L
L	OH689	OH688	C	2ACSR	2.35Y	110.6	0.00	11.35	-0.00	0	0	0	100	0.00	0.0	1.621	0.028	0	0	0	0	L
L	OH690	OH684	C	2ACSR	2.35Y	110.7	0.01	11.30	9.50	5	21	7	95	0.00	0.0	1.509	0.014	0	0	0	0	L
L	OH691	OH690	C	2ACSR	2.35Y	110.7	0.03	11.33	9.50	5	21	7	95	0.00	0.0	1.537	0.028	0	0	0	0	L
L	OH692	OH691	C	2ACSR	2.35Y	110.7	0.01	11.34	9.50	5	21	7	95	0.00	0.0	1.567	0.029	21	7	0	0	L
L	OH693	OH692	C	2ACSR	2.35Y	110.7	0.00	11.34	-0.00	0	0	0	100	0.00	0.0	1.595	0.028	0	0	0	0	L
L	OH694	OH684	B	2ACSR	2.38Y	111.8	0.00	10.25	-0.00	0	0	0		0.01	0.0	1.554	0.059	0	0	0	0	L
L			C		2.35Y	110.7	0.05	11.34	9.50	5	21	7	94					0	0	0	0	L
L	OH696	OH694	C	2ACSR	2.35Y	110.7	0.01	11.35	4.75	3	11	4	94	0.00	0.0	1.568	0.014	0	0	0	0	L
L	OH697	OH696	C	2ACSR	2.35Y	110.6	0.01	11.36	4.75	3	11	4	94	0.00	0.0	1.596	0.028	0	0	0	0	L
L	OH698	OH697	C	2ACSR	2.35Y	110.6	0.01	11.37	4.75	3	11	4	94	0.00	0.0	1.625	0.028	11	4	0	0	L
L	OH699	OH698	C	2ACSR	2.35Y	110.6	0.00	11.37	-0.00	0	0	0	100	0.00	0.0	1.653	0.029	0	0	0	0	L
L	OH700	OH699	C	2ACSR	2.35Y	110.6	0.00	11.37	-0.00	0	0	0	100	0.00	0.0	1.669	0.015	0	0	0	0	L
L	OH705	OH694	C	2ACSR	2.35Y	110.7	0.01	11.35	4.75	3	11	4	94	0.00	0.0	1.569	0.015	0	0	0	0	L
L	OH706	OH705	C	2ACSR	2.35Y	110.6	0.01	11.36	4.75	3	11	4	94	0.00	0.0	1.597	0.028	0	0	0	0	L
L	OH707	OH706	C	2ACSR	2.35Y	110.6	0.01	11.38	4.75	3	11	4	94	0.00	0.0	1.626	0.029	0	0	0	0	L
L	OH708	OH707	C	2ACSR	2.35Y	110.6	0.01	11.38	4.75	3	11	4	94	0.00	0.0	1.656	0.030	11	4	0	0	L
L	OH709	OH708	C	2ACSR	2.35Y	110.6	0.00	11.38	-0.00	0	0	0	100	0.00	0.0	1.683	0.027	0	0	0	0	L
	OH622	OH619	A	2/0ACSR	2.47Y	116.4	0.02	5.64	29.73	11	71	21	96	0.13	0.0	1.428	0.029	0	0	0	0	
L			B		2.38Y	111.7	0.10	10.30	60.12	22	127	66	89					0	0	0	0	L
L			C		2.36Y	111.0	0.03	10.96	38.50	14	86	30	94					0	0	0	0	L
	OH623	OH622	A	2/0ACSR	2.47Y	116.3	0.03	5.66	29.73	11	71	21	96	0.16	0.1	1.463	0.035	0	0	0	0	
L			B		2.37Y	111.6	0.12	10.42	60.12	22	127	66	89					0	0	0	0	L
L			C		2.36Y	111.0	0.03	10.99	38.50	14	86	30	94					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
OH624	OH623	A	2/0ACSR	2.47Y	116.3	0.03	5.69	29.74	11	71	21	96	0.15	0.1	1.497	0.034	0	0	0	0	
L		B		2.37Y	111.5	0.12	10.54	60.13	22	127	65	89					0	0	0	0	L
L		C		2.36Y	111.0	0.03	11.02	38.50	14	86	30	94					0	0	0	0	L
OH625	OH624	A	2/0ACSR	2.47Y	116.3	0.03	5.72	29.74	11	71	21	96	0.14	0.1	1.529	0.032	0	0	0	0	
L		B		2.37Y	111.4	0.11	10.65	60.13	22	127	65	89					0	0	0	0	L
L		C		2.36Y	110.9	0.03	11.05	38.50	14	86	30	94					0	0	0	0	L
OH626	OH625	A	2/0ACSR	2.47Y	116.3	0.03	5.75	29.74	11	71	21	96	0.19	0.1	1.571	0.042	0	0	0	0	
L		B		2.36Y	111.2	0.14	10.79	60.13	22	127	65	89					0	0	0	0	L
L		C		2.36Y	110.9	0.04	11.09	38.50	14	86	30	94					0	0	0	0	L
OCD627	OH626	A	50A QR	2.47Y	116.3	0.00	5.75	11.00	22	26	8	96	0.00	0.0	1.571	0.000	0	0	0	0	
L		B		2.36Y	111.2	0.00	10.79	39.24	78	82	43	89					0	0	0	0	L
L		C		2.36Y	110.9	0.00	11.09	14.22	28	32	11	94					0	0	0	0	L
OH642	OCD627	A	2ACSR	2.47Y	116.2	0.01	5.76	11.00	6	26	8	96	0.06	0.0	1.593	0.022	0	0	0	0	
L		B		2.36Y	111.1	0.08	10.87	39.24	22	82	43	89					7	4	0	0	L
L		C		2.36Y	110.9	0.01	11.10	14.22	8	32	11	94					0	0	0	0	L
OH643	OH642	A	2/0ACSR	2.47Y	116.2	0.01	5.77	11.00	4	26	8	96	0.03	0.0	1.612	0.019	0	0	0	0	
L		B		2.36Y	111.1	0.04	10.91	35.82	13	75	39	89					0	0	0	0	L
L		C		2.36Y	110.9	-0.00	11.09	14.22	5	32	11	94					0	0	0	0	L
OH644	OH643	A	2ACSR	2.47Y	116.2	0.01	5.78	11.00	6	26	8	96	0.06	0.0	1.636	0.024	9	3	0	0	
L		B		2.36Y	111.0	0.08	10.99	35.82	20	75	39	89					0	0	0	0	L
L		C		2.36Y	110.9	0.01	11.10	14.22	8	32	11	94					0	0	0	0	L
OH645	OH644	A	2ACSR	2.47Y	116.2	0.01	5.79	7.34	4	17	5	96	0.07	0.1	1.663	0.027	0	0	0	0	
L		B		2.36Y	110.9	0.09	11.08	35.82	20	75	39	89					0	0	0	0	L
L		C		2.36Y	110.9	0.01	11.11	14.22	8	32	11	94					0	0	0	0	L
OH646	OH645	A	2ACSR	2.47Y	116.2	0.01	5.80	7.34	4	17	5	96	0.04	0.0	1.681	0.018	0	0	0	0	
L		B		2.36Y	110.9	0.06	11.15	35.82	20	75	39	89					0	0	0	0	L
L		C		2.36Y	110.9	0.01	11.11	14.22	8	32	11	94					0	0	0	0	L
OH647	OH646	A	2ACSR	2.47Y	116.2	0.03	5.82	7.34	4	17	5	96	0.09	0.1	1.730	0.048	0	0	0	0	
L		B		2.35Y	110.7	0.15	11.29	32.40	18	68	35	89					0	0	0	0	L
L		C		2.36Y	110.9	-0.01	11.10	9.48	5	21	7	94					11	4	0	0	L
L OH648	OH647	C	2ACSR	2.36Y	110.9	0.01	11.12	4.74	3	11	4	94	0.00	0.0	1.761	0.031	0	0	0	0	L
L OH649	OH648	C	2ACSR	2.36Y	110.9	0.01	11.13	4.74	3	11	4	94	0.00	0.0	1.789	0.028	0	0	0	0	L
L OH650	OH649	C	2ACSR	2.36Y	110.9	0.01	11.14	4.74	3	11	4	94	0.00	0.0	1.820	0.032	11	4	0	0	L
L OH651	OH650	C	2ACSR	2.36Y	110.9	0.00	11.14	-0.00	0	0	0	100	0.00	0.0	1.855	0.035	0	0	0	0	L
OH652	OH647	A	2ACSR	2.47Y	116.2	0.02	5.84	7.34	4	17	5	96	0.05	0.1	1.756	0.027	0	0	0	0	
L		B		2.35Y	110.6	0.08	11.37	32.40	18	68	35	89					0	0	0	0	L
OH653	OH652	A	4ACSR	2.47Y	116.1	0.06	5.90	7.34	5	17	5	96	0.14	0.2	1.808	0.052	0	0	0	0	
L		B		2.35Y	110.4	0.22	11.59	32.40	23	68	35	89					0	0	0	0	L
OH655	OH653	A	4ACSR	2.47Y	116.1	0.02	5.92	3.67	3	9	3	95	0.08	0.1	1.838	0.030	0	0	0	0	
L		B		2.35Y	110.3	0.13	11.72	32.40	23	68	35	89					0	0	0	0	L
OH656	OH655	A	4ACSR	2.47Y	116.1	0.01	5.94	3.67	3	9	3	95	0.02	0.0	1.881	0.043	9	3	0	0	
L		B		2.34Y	110.2	0.07	11.79	15.16	11	32	16	89					14	7	0	0	L
L OH657	OH656	B	4ACSR	2.34Y	110.2	0.04	11.83	8.27	6	17	9	88	0.01	0.0	1.929	0.048	7	4	0	0	L
L OH659	OH657	B	4ACSR	2.34Y	110.2	0.02	11.85	4.83	3	10	5	89	0.00	0.0	1.960	0.031	0	0	0	0	L
L OH660	OH659	B	4ACSR	2.34Y	110.1	0.02	11.87	4.83	3	10	5	89	0.00	0.0	1.992	0.033	3	1	0	0	L
L OH661	OH660	B	4ACSR	2.34Y	110.1	0.02	11.89	3.45	2	7	4	87	0.00	0.0	2.033	0.041	0	0	0	0	L
L OH662	OH661	B	4ACSR	2.34Y	110.1	0.00	11.89	3.45	2	7	4	87	0.00	0.0	2.048	0.015	7	4	0	0	L
L OH663	OH655	B	4ACSR	2.34Y	110.2	0.05	11.77	17.24	12	36	19	88	0.02	0.0	1.860	0.022	0	0	0	0	L
L OH664	OH663	B	4ACSR	2.34Y	110.2	0.01	11.78	3.45	2	7	4	87	0.00	0.0	1.888	0.028	7	4	0	0	L
L OH666	OH663	B	4ACSR	2.34Y	110.2	0.06	11.83	13.79	10	29	15	89	0.01	0.1	1.896	0.036	7	4	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
L	OH667	OH666	B	4ACSR	2.34Y	110.1	0.04	11.87	10.35	7	22	11	89	0.01	0.0	1.931	0.035	7	4	0	0	L
L	OH668	OH667	B	4ACSR	2.34Y	110.1	0.02	11.90	6.90	5	14	7	89	0.00	0.0	1.964	0.032	7	4	0	0	L
L	OH669	OH668	B	4ACSR	2.34Y	110.1	0.01	11.91	3.45	2	7	4	87	0.00	0.0	2.009	0.045	7	4	0	0	L
	OH670	OH646	A	2ACSR	2.47Y	116.2	-0.00	5.79	-0.00	0	0	0		0.00	0.0	1.711	0.029	0	0	0	0	
L			B		2.36Y	110.8	0.01	11.16	3.43	2	7	4	89					0	0	0	0	L
L			C		2.36Y	110.9	0.01	11.12	4.74	3	11	4	94					0	0	0	0	L
	OH671	OH670	A	2ACSR	2.47Y	116.2	-0.00	5.79	-0.00	0	0	0		0.00	0.0	1.740	0.030	0	0	0	0	
L			B		2.36Y	110.8	0.01	11.17	3.43	2	7	4	89					0	0	0	0	L
L			C		2.36Y	110.9	0.01	11.13	4.74	3	11	4	94					0	0	0	0	L
	OH672	OH671	A	2ACSR	2.47Y	116.2	-0.00	5.78	-0.00	0	0	0		0.00	0.0	1.769	0.029	0	0	0	0	
L			B		2.36Y	110.8	0.01	11.17	3.43	2	7	4	89					7	4	0	0	L
L			C		2.36Y	110.9	0.01	11.15	4.74	3	11	4	94					0	0	0	0	L
	OH673	OH672	A	2ACSR	2.47Y	116.2	-0.00	5.78	-0.00	0	0	0		0.00	0.0	1.784	0.015	0	0	0	0	
L			B		2.36Y	110.8	0.00	11.17	-0.00	0	0	0						0	0	0	0	L
L			C		2.36Y	110.8	0.00	11.15	4.74	3	11	4	94					11	4	0	0	L
	OCD628	OH626	A	50A QR	2.47Y	116.3	0.00	5.75	18.74	37	44	13	96	0.00	0.0	1.571	0.000	0	0	0	0	
L			B		2.36Y	111.2	0.00	10.79	20.89	42	44	23	89					0	0	0	0	L
L			C		2.36Y	110.9	0.00	11.09	24.28	49	54	19	94					0	0	0	0	L
	OH629	OCD628	A	4ACSR	2.47Y	116.2	0.06	5.81	18.74	13	44	13	96	0.12	0.1	1.609	0.038	0	0	0	0	
L			B		2.36Y	111.1	0.09	10.88	20.89	15	44	23	89					0	0	0	0	L
L			C		2.36Y	110.8	0.10	11.19	24.28	17	54	19	94					0	0	0	0	L
	OH630	OH629	A	4ACSR	2.47Y	116.1	0.10	5.91	18.74	13	44	13	96	0.16	0.1	1.666	0.057	0	0	0	0	
L			B		2.36Y	111.0	0.11	10.99	17.47	12	37	19	89					0	0	0	0	L
L			C		2.35Y	110.6	0.17	11.36	24.28	17	54	19	94					0	0	0	0	L
	OH631	OH630	A	4ACSR	2.47Y	116.0	0.06	5.96	18.74	13	44	13	96	0.09	0.1	1.699	0.034	0	0	0	0	
L			B		2.36Y	110.9	0.06	11.05	17.47	12	37	19	89					0	0	0	0	L
L			C		2.35Y	110.5	0.10	11.46	24.28	17	54	19	94					0	0	0	0	L
	OH632	OH631	A	4ACSR	2.47Y	116.0	0.02	5.98	5.51	4	13	4	96	0.01	0.0	1.742	0.043	0	0	0	0	
L			B		2.36Y	110.9	0.02	11.07	5.14	4	11	6	89					0	0	0	0	L
L			C		2.35Y	110.5	0.04	11.49	7.14	5	16	5	94					0	0	0	0	L
L	OH633	OH632	A	4ACSR	2.47Y	116.0	0.02	6.01	5.51	4	13	4	96	0.01	0.0	1.787	0.044	0	0	0	0	L
L			B		2.36Y	110.9	0.02	11.10	5.14	4	11	6	89					0	0	0	0	L
L			C		2.35Y	110.5	0.04	11.53	7.14	5	16	5	94					0	0	0	0	L
L	OH711	OH633	A	4ACSR	2.47Y	116.0	0.01	6.01	5.51	4	13	4	96	0.00	0.0	1.811	0.024	13	4	0	0	L
L			B		2.36Y	110.9	0.01	11.11	5.14	4	11	6	89					11	6	0	0	L
L			C		2.35Y	110.5	0.01	11.54	7.14	5	16	5	94					16	5	0	0	L
L	OH634	OH631	A	4ACSR	2.47Y	116.0	0.06	6.02	13.23	9	31	9	96	0.07	0.1	1.750	0.051	0	0	0	0	L
L			B		2.36Y	110.9	0.07	11.12	12.34	9	26	13	89					0	0	0	0	L
L			C		2.35Y	110.4	0.11	11.56	17.15	12	38	13	94					0	0	0	0	L
L	OH635	OH634	A	4ACSR	2.47Y	115.9	0.05	6.08	13.23	9	31	9	96	0.06	0.1	1.798	0.047	5	2	0	0	L
L			B		2.36Y	110.8	0.06	11.18	12.34	9	26	13	89					4	2	0	0	L
L			C		2.35Y	110.3	0.09	11.65	17.15	12	38	13	94					6	2	0	0	L
L	OH636	OH635	A	4ACSR	2.46Y	115.9	0.03	6.10	11.02	8	26	8	96	0.02	0.0	1.838	0.041	17	5	0	0	L
L			B		2.36Y	110.8	0.03	11.21	10.28	7	22	11	89					14	7	0	0	L
L			C		2.35Y	110.3	0.05	11.70	14.29	10	32	11	94					21	7	0	0	L
L	OH638	OH636	A	4ACSR	2.46Y	115.9	0.01	6.11	3.68	3	9	3	95	0.00	0.0	1.872	0.034	9	3	0	0	L
L			B		2.36Y	110.8	0.01	11.21	3.43	2	7	4	89					7	4	0	0	L
L			C		2.35Y	110.3	0.01	11.71	4.76	3	11	4	94					11	4	0	0	L
L	OH640	OH629	B	4ACSR	2.36Y	111.1	0.03	10.91	3.42	2	7	4	87	0.00	0.0	1.663	0.054	0	0	0	0	L
L	OH641	OH640	B	4ACSR	2.36Y	111.1	0.01	10.92	3.42	2	7	4	87	0.00	0.0	1.718	0.055	7	4	0	0	L
	OCD600	OH532	A	50A QR	2.47Y	116.3	0.00	5.75	9.16	18	22	6	96	0.00	0.0	1.217	0.000	0	0	0	0	
L			C		2.38Y	111.8	0.00	10.24	9.41	19	21	7	94					0	0	0	0	L
	OH601	OCD600	A	2ACSR	2.47Y	116.3	0.00	5.75	-0.00	0	0	0		0.00	0.0	1.222	0.005	0	0	0	0	
L			C		2.38Y	111.8	0.00	10.24	-0.00	0	0	0						0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
	OH602	OCD600	A	2/0ACSR	2.47Y	116.2	0.01	5.76	9.16	3	22	6	96	0.00	0.0	1.245	0.028	0	0	0	0	
L			C		2.38Y	111.7	0.02	10.26	9.41	3	21	7	94					0	0	0	0	L
	OH603	OH602	A	2/0ACSR	2.47Y	116.2	0.01	5.76	9.16	3	22	6	96	0.00	0.0	1.272	0.027	0	0	0	0	
L			C		2.38Y	111.7	0.02	10.28	9.41	3	21	7	94					0	0	0	0	L
	OH604	OH603	A	2/0ACSR	2.47Y	116.2	0.00	5.77	2.20	1	5	2	93	0.00	0.0	1.301	0.028	5	2	0	0	
L			C		2.38Y	111.7	0.00	10.28	-0.00	0	0	0						0	0	0	0	L
	OH605	OH603	A	2/0ACSR	2.47Y	116.2	0.00	5.77	1.10	0	3	1	95	0.00	0.0	1.302	0.029	3	1	0	0	
L			C		2.38Y	111.7	0.00	10.28	-0.00	0	0	0						0	0	0	0	L
	OH606	OH605	A	2/0ACSR	2.47Y	116.2	0.00	5.77	-0.00	0	0	0		0.00	0.0	1.329	0.027	0	0	0	0	
L			C		2.38Y	111.7	0.00	10.28	-0.00	0	0	0						0	0	0	0	L
	OH607	OH603	A	2/0ACSR	2.47Y	116.2	0.00	5.76	5.86	2	14	4	96	0.00	0.0	1.305	0.033	5	2	0	0	
L			C		2.38Y	111.7	0.02	10.30	9.41	3	21	7	94					0	0	0	0	L
	OH608	OH607	A	2/0ACSR	2.47Y	116.2	-0.00	5.76	3.66	1	9	3	95	0.00	0.0	1.338	0.033	0	0	0	0	
L			C		2.37Y	111.7	0.02	10.33	9.41	3	21	7	94					0	0	0	0	L
	OH609	OH608	A	2/0ACSR	2.47Y	116.2	0.00	5.77	3.66	1	9	3	95	0.00	0.0	1.362	0.024	9	3	0	0	
L			C		2.37Y	111.7	0.00	10.33	-0.00	0	0	0						0	0	0	0	L
L	OH610	OH608	C	2/0ACSR	2.37Y	111.7	0.00	10.33	4.71	2	11	4	94	0.00	0.0	1.362	0.024	11	4	0	0	L
	OH611	OH608	A	2/0ACSR	2.47Y	116.2	-0.00	5.76	-0.00	0	0	0		0.00	0.0	1.367	0.029	0	0	0	0	
L			C		2.37Y	111.7	0.01	10.33	4.71	2	11	4	94					0	0	0	0	L
	OH612	OH611	A	2/0ACSR	2.47Y	116.2	-0.00	5.76	-0.00	0	0	0		0.00	0.0	1.390	0.023	0	0	0	0	
L			C		2.37Y	111.7	0.00	10.34	4.71	2	11	4	94					11	4	0	0	L
	OH615	OH612	A	2/0ACSR	2.47Y	116.2	0.00	5.76	-0.00	0	0	0		0.00	0.0	1.403	0.013	0	0	0	0	
L			C		2.37Y	111.7	0.00	10.34	-0.00	0	0	0						0	0	0	0	L
	OCD576	OH529	A	50A QR	2.47Y	116.2	0.00	5.77	13.21	26	31	9	96	0.00	0.0	1.127	0.000	0	0	0	0	
L			B		2.40Y	112.9	0.00	9.10	10.09	20	22	11	89					0	0	0	0	L
L			C		2.39Y	112.2	0.00	9.84	7.51	15	17	6	95					0	0	0	0	L
	OH577	OCD576	A	2ACSR	2.47Y	116.2	0.04	5.81	13.21	7	31	9	96	0.01	0.0	1.162	0.034	0	0	0	0	
L			B		2.40Y	112.9	0.01	9.12	10.09	6	22	11	89					7	4	0	0	L
L			C		2.38Y	112.1	0.02	9.86	7.51	4	17	6	95					0	0	0	0	L
	OH578	OH577	A	2ACSR	2.47Y	116.2	0.02	5.83	13.21	7	31	9	96	0.01	0.0	1.181	0.020	0	0	0	0	
L			B		2.40Y	112.9	0.01	9.12	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.1	0.01	9.87	7.51	4	17	6	95					0	0	0	0	L
	OH579	OH578	A	2ACSR	2.47Y	116.2	0.00	5.83	-0.00	0	0	0		0.00	0.0	1.204	0.023	0	0	0	0	
L			B		2.40Y	112.9	0.00	9.12	-0.00	0	0	0						0	0	0	0	L
L			C		2.38Y	112.1	0.00	9.87	-0.00	0	0	0						0	0	0	0	L
	OH580	OH578	A	2ACSR	2.47Y	116.1	0.06	5.88	13.21	7	31	9	96	0.02	0.0	1.235	0.054	0	0	0	0	
L			B		2.40Y	112.9	0.01	9.14	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.1	0.03	9.90	7.51	4	17	6	95					0	0	0	0	L
	OH581	OH580	A	2ACSR	2.47Y	116.1	0.02	5.90	13.21	7	31	9	96	0.01	0.0	1.254	0.019	9	3	0	0	
L			B		2.40Y	112.9	0.01	9.14	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.1	0.01	9.92	7.51	4	17	6	94					0	0	0	0	L
	OH582	OH581	A	2ACSR	2.47Y	116.1	0.02	5.92	9.54	5	23	7	96	0.01	0.0	1.278	0.024	0	0	0	0	
L			B		2.40Y	112.8	0.01	9.15	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.1	0.01	9.93	7.51	4	17	6	94					0	0	0	0	L
	OH583	OH582	A	2ACSR	2.47Y	116.1	0.02	5.94	9.54	5	23	7	96	0.01	0.0	1.311	0.033	0	0	0	0	
L			B		2.40Y	112.8	0.01	9.17	6.73	4	14	7	89					0	0	0	0	L
L			C		2.38Y	112.0	0.02	9.95	7.51	4	17	6	94					0	0	0	0	L
	OH586	OH583	A	2ACSR	2.47Y	116.0	0.02	5.96	5.87	3	14	4	96	0.01	0.0	1.366	0.055	0	0	0	0	
L			B		2.40Y	112.8	0.02	9.19	6.73	4	14	7	89					7	4	0	0	L
L			C		2.38Y	112.0	0.03	9.99	7.51	4	17	6	94					0	0	0	0	L
	OH587	OH586	A	2ACSR	2.47Y	116.0	0.01	5.96	5.87	3	14	4	96	0.00	0.0	1.394	0.028	5	2	0	0	
L			B		2.40Y	112.8	0.01	9.19	3.36	2	7	4	89					0	0	0	0	L
L			C		2.38Y	112.0	0.02	10.00	7.51	4	17	6	94					0	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH588	OH587	A	2ACSR	2.47Y	116.0	0.00	5.97	3.67	2	9	3	95	0.00	0.0	1.431	0.037	0	0	0	0
L		B		2.40Y	112.8	0.01	9.20	3.36	2	7	4	89					0	0	0	0 L
L		C		2.38Y	112.0	0.02	10.03	7.51	4	17	6	94					0	0	0	0 L
OH589	OH588	A	2ACSR	2.47Y	116.0	0.00	5.97	3.67	2	9	3	95	0.00	0.0	1.459	0.028	0	0	0	0
L		B		2.40Y	112.8	0.00	9.20	3.37	2	7	4	89					7	4	0	0 L
L		C		2.38Y	112.0	0.02	10.05	7.51	4	17	6	94					0	0	0	0 L
OH590	OH589	A	2ACSR	2.47Y	116.0	-0.01	5.96	-0.00	0	0	0		0.00	0.0	1.482	0.023	0	0	0	0
L		B		2.40Y	112.8	0.00	9.20	-0.00	0	0	0						0	0	0	0 L
L		C		2.38Y	111.9	0.02	10.07	7.51	4	17	6	94					0	0	0	0 L
OH591	OH590	A	2ACSR	2.47Y	116.0	-0.00	5.96	-0.00	0	0	0		0.00	0.0	1.493	0.010	0	0	0	0
L		B		2.40Y	112.8	0.00	9.21	-0.00	0	0	0						0	0	0	0 L
L		C		2.38Y	111.9	0.01	10.07	7.51	4	17	6	94					0	0	0	0 L
OH593	OH591	A	2ACSR	2.47Y	116.0	-0.00	5.96	-0.00	0	0	0	100	0.00	0.0	1.513	0.020	0	0	0	0
L		B		2.40Y	112.8	0.00	9.21	-0.00	0	0	0						0	0	0	0 L
L		C		2.38Y	111.9	0.00	10.08	4.70	3	11	4	94					11	4	0	0 L
OH592	OH593	A	2ACSR	2.47Y	116.0	0.00	5.96	-0.00	0	0	0	100	0.00	0.0	1.530	0.017	0	0	0	0
L		B		2.40Y	112.8	0.00	9.21	-0.00	0	0	0						0	0	0	0 L
L		C		2.38Y	111.9	0.00	10.08	-0.00	0	0	0						0	0	0	0 L
OH594	OH591	A	2ACSR	2.47Y	116.0	-0.00	5.96	-0.00	0	0	0		0.00	0.0	1.531	0.038	0	0	0	0
L		C		2.38Y	111.9	0.01	10.08	2.82	2	6	2	94					0	0	0	0 L
OH595	OH594	A	2ACSR	2.47Y	116.0	-0.00	5.96	-0.00	0	0	0		0.00	0.0	1.558	0.027	0	0	0	0
L		C		2.38Y	111.9	0.00	10.09	2.82	2	6	2	94					6	2	0	0 L
L OH596	OH589	B	2ACSR	2.40Y	112.8	0.00	9.20	-0.00	0	0	0		0.00	0.0	1.469	0.010	0	0	0	0 L
L OH597	OH596	B	2ACSR	2.40Y	112.8	0.00	9.20	-0.00	0	0	0		0.00	0.0	1.502	0.034	0	0	0	0 L
OCD534	OH525	A	50A QR	2.47Y	116.3	0.00	5.71	-0.01	0	0	0		0.00	0.0	0.999	0.000	0	0	0	0
L		B		2.41Y	113.4	0.00	8.56	15.42	31	33	17	89					0	0	0	0 L
L		C		2.40Y	112.8	0.00	9.20	7.45	15	17	6	94					0	0	0	0 L
OH535	OCD534	A	2ACSR	2.47Y	116.3	-0.01	5.71	-0.01	0	0	0		0.02	0.0	1.032	0.033	0	0	0	0
L		B		2.41Y	113.4	0.05	8.61	15.42	9	33	17	89					0	0	0	0 L
L		C		2.40Y	112.8	0.01	9.21	7.45	4	17	6	94					0	0	0	0 L
OH536	OH535	A	2ACSR	2.47Y	116.3	-0.01	5.70	-0.01	0	0	0		0.01	0.0	1.068	0.035	0	0	0	0
L		B		2.41Y	113.3	0.04	8.66	15.42	9	33	17	89					14	7	0	0 L
L		C		2.40Y	112.8	0.01	9.22	7.45	4	17	6	94					0	0	0	0 L
OH537	OH536	A	2ACSR	2.47Y	116.3	-0.01	5.69	-0.00	0	0	0		0.01	0.0	1.110	0.042	0	0	0	0
L		B		2.41Y	113.3	0.04	8.69	8.72	5	19	10	89					0	0	0	0 L
L		C		2.40Y	112.8	0.01	9.23	7.46	4	17	6	94					6	2	0	0 L
OH538	OH537	A	2ACSR	2.47Y	116.3	-0.00	5.69	-0.00	0	0	0		0.00	0.0	1.140	0.030	0	0	0	0
L		B		2.41Y	113.3	0.03	8.72	8.72	5	19	10	89					0	0	0	0 L
L		C		2.40Y	112.8	0.01	9.24	4.66	3	11	4	94					0	0	0	0 L
OH539	OH538	A	2ACSR	2.47Y	116.3	-0.00	5.69	-0.00	0	0	0		0.00	0.0	1.166	0.026	0	0	0	0
L		B		2.41Y	113.3	0.02	8.74	8.72	5	19	10	89					0	0	0	0 L
L		C		2.40Y	112.8	-0.00	9.24	4.66	3	11	4	94					11	4	0	0 L
L OH540	OH539	B	2ACSR	2.41Y	113.2	0.02	8.77	8.72	5	19	10	88	0.00	0.0	1.193	0.027	0	0	0	0 L
L OH541	OH540	B	2ACSR	2.41Y	113.2	0.01	8.78	5.37	3	11	6	88	0.00	0.0	1.216	0.023	7	4	0	0 L
L OH542	OH541	B	2ACSR	2.41Y	113.2	0.00	8.78	2.01	1	4	2	89	0.00	0.0	1.239	0.023	4	2	0	0 L
L OH543	OH540	B	2ACSR	2.41Y	113.2	0.01	8.77	3.35	2	7	4	87	0.00	0.0	1.233	0.040	7	4	0	0 L
OH544	OH539	A	2ACSR	2.47Y	116.3	0.00	5.69	-0.00	0	0	0		0.00	0.0	1.193	0.027	0	0	0	0
L		B		2.41Y	113.3	0.00	8.74	-0.00	0	0	0						0	0	0	0 L
L		C		2.40Y	112.8	0.00	9.24	-0.00	0	0	0						0	0	0	0 L
OH545	OH544	A	2ACSR	2.47Y	116.3	0.00	5.69	-0.00	0	0	0		0.00	0.0	1.228	0.035	0	0	0	0
L		B		2.41Y	113.3	0.00	8.74	-0.00	0	0	0						0	0	0	0 L
L		C		2.40Y	112.8	0.00	9.24	-0.00	0	0	0						0	0	0	0 L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
OH546	OH545	A	2ACSR	2.47Y	116.3	0.00	5.69	-0.00	0	0	0		0.00	0.0	1.254	0.026	0	0	0	0	
L		B		2.41Y	113.3	0.00	8.74	-0.00	0	0	0						0	0	0	0	L
L		C		2.40Y	112.8	0.00	9.24	-0.00	0	0	0						0	0	0	0	L
SW550-B	OH546	A	Open	2.47Y	116.3	0.00	5.69	0.00	0	0	0	100	0.00	0.0	1.254	0.000	0	0	0	0	
L		B		2.41Y	113.3	0.00	8.74	0.00	0	0	0	100					0	0	0	0	L
L		C		2.40Y	112.8	0.00	9.24	0.00	0	0	0	100					0	0	0	0	L
L OCD555	OH525	B	50A QR	2.41Y	113.4	0.00	8.56	18.80	38	40	21	89	0.00	0.0	0.999	0.000	0	0	0	0	L
L OH559	OCD555	B	2ACSR	2.41Y	113.4	0.05	8.61	18.80	10	40	21	89	0.02	0.0	1.027	0.028	0	0	0	0	L
L OH560	OH559	B	2ACSR	2.41Y	113.3	0.09	8.70	18.80	10	40	21	89	0.03	0.1	1.076	0.049	0	0	0	0	L
L OH561	OH560	B	2ACSR	2.41Y	113.2	0.06	8.76	18.80	10	40	21	89	0.02	0.0	1.112	0.036	7	4	0	0	L
L OH562	OH561	B	2ACSR	2.41Y	113.2	0.05	8.82	15.44	9	33	17	89	0.01	0.0	1.147	0.035	4	2	0	0	L
L OH563	OH562	B	2ACSR	2.41Y	113.1	0.05	8.87	13.43	7	29	15	89	0.01	0.0	1.191	0.044	7	4	0	0	L
L OH564	OH563	B	2ACSR	2.41Y	113.1	0.00	8.87	-0.00	0	0	0		0.00	0.0	1.220	0.029	0	0	0	0	L
L OH565	OH563	B	2ACSR	2.40Y	113.1	0.04	8.91	10.08	6	22	11	89	0.01	0.0	1.235	0.044	0	0	0	0	L
L OH566	OH565	B	2ACSR	2.40Y	113.1	0.02	8.94	10.08	6	22	11	89	0.00	0.0	1.263	0.028	7	4	0	0	L
L OH567	OH566	B	2ACSR	2.40Y	113.0	0.02	8.95	6.72	4	14	7	89	0.00	0.0	1.300	0.037	7	4	0	0	L
L OH568	OH567	B	2ACSR	2.40Y	113.0	0.01	8.96	3.36	2	7	4	87	0.00	0.0	1.337	0.037	7	4	0	0	L

----------- Feeder No. 144 (CB 144) Beginning with Device CB 144 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru	
CB 144	OH40	A	560 VWE	2.48Y	116.5	0.00	5.45	42.90	0	106	0	100	0.00	0.0	0.600	0.000	0	0	0	0	
L		B		2.47Y	115.9	0.00	6.06	17.54	0	41	13	95					0	0	0	0	L
L		C		2.44Y	114.8	0.00	7.23	41.21	0	101	0	100					0	0	0	0	L
OH59	CB 144	A	#2 ACSR 6/	2.48Y	116.5	0.02	5.47	42.90	24	106	0	100	0.04	0.0	0.607	0.007	0	0	0	0	
L		B		2.47Y	115.9	0.01	6.07	17.54	10	41	13	95					0	0	0	0	L
L		C		2.44Y	114.7	0.03	7.25	41.21	23	101	0	100					0	0	0	0	L
L OH61	OH59	B	#2 ACSR 6/	2.47Y	115.9	0.00	6.07	0.83	0	2	1	89	0.00	0.0	0.620	0.012	2	1	0	0	L
L		C		2.44Y	114.7	0.00	7.25	1.49	1	4	0	-100					4	0	0	0	L
OH63	OH59	A	#2 ACSR 6/	2.48Y	116.5	0.04	5.51	42.90	24	106	0	100	0.10	0.0	0.625	0.018	0	0	0	0	
L		B		2.47Y	115.9	0.01	6.08	16.71	9	39	13	95					0	0	0	0	L
L		C		2.44Y	114.7	0.06	7.32	39.72	22	97	0	100					0	0	0	0	L
OH64	OH63	A	#2 ACSR 6/	2.48Y	116.5	0.02	5.53	42.90	24	106	0	100	0.06	0.0	0.635	0.010	0	0	0	0	
L		B		2.46Y	115.9	0.01	6.09	16.71	9	39	13	95					0	0	0	0	L
L		C		2.44Y	114.6	0.04	7.35	39.72	22	97	0	100					0	0	0	0	L
OH65	OH64	A	#2 ACSR 6/	2.48Y	116.4	0.04	5.57	42.90	24	106	0	100	0.09	0.0	0.652	0.016	0	0	0	0	
L		B		2.46Y	115.9	0.01	6.10	16.71	9	39	13	95					0	0	0	0	L
L		C		2.44Y	114.6	0.06	7.41	39.72	22	97	0	100					0	0	0	0	L
OH66	OH65	A	#2 ACSR 6/	2.48Y	116.4	0.03	5.60	42.90	24	106	0	100	0.07	0.0	0.665	0.013	0	0	0	0	
L		B		2.46Y	115.9	0.01	6.11	16.71	9	39	13	95					7	2	0	0	L
L		C		2.44Y	114.5	0.05	7.46	39.72	22	97	0	-100					0	0	0	0	L
OH67	OH66	A	#2 ACSR 6/	2.47Y	116.4	0.04	5.64	42.90	24	106	0	100	0.09	0.0	0.682	0.017	10	0	0	0	
L		B		2.46Y	115.9	0.01	6.12	13.92	8	33	11	95					4	1	0	0	L
L		C		2.43Y	114.5	0.06	7.52	39.72	22	97	0	-100					5	0	0	0	L
OH68	OH67	A	#2 ACSR 6/	2.47Y	116.3	0.04	5.68	39.01	22	97	0	100	0.10	0.0	0.703	0.021	0	0	0	0	
L		B		2.46Y	115.9	0.01	6.13	12.25	7	29	9	95					0	0	0	0	L
L		C		2.43Y	114.4	0.07	7.59	37.47	21	91	0	-100					0	0	0	0	L
OH69	OH68	A	#2 ACSR 6/	2.47Y	116.3	0.03	5.71	39.01	22	97	0	100	0.05	0.0	0.715	0.012	0	0	0	0	
L		B		2.46Y	115.9	0.00	6.14	12.25	7	29	9	95					0	0	0	0	L
L		C		2.43Y	114.4	0.03	7.63	37.47	21	91	0	-100					27	0	0	0	L
OH70	OH69	A	#2 ACSR 6/	2.47Y	116.3	0.03	5.74	39.01	22	96	0	100	0.04	0.0	0.727	0.012	0	0	0	0	
L		B		2.46Y	115.9	0.00	6.14	12.25	7	29	9	95					0	0	0	0	L
L		C		2.43Y	114.3	0.03	7.66	26.24	15	64	0	-100					0	0	0	0	L

Unbalanced Voltage Drop Report
Source: VCB214

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_BASE CASE.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	OH71	OH70	A	#2 ACSR 6/	2.47Y	116.2	0.09	5.82	39.01	22	96	0	100	0.13	0.1	0.764	0.037	0	0	0	0	
L			B		2.46Y	115.9	0.01	6.15	12.25	7	29	9	95					0	0	0	0	L
L			C		2.43Y	114.3	0.09	7.75	26.24	15	64	0	-100					0	0	0	0	L
	OH72	OH71	A	#2 ACSR 6/	2.47Y	116.1	0.04	5.86	26.01	14	64	0	100	0.03	0.0	0.784	0.021	0	0	0	0	
L			B		2.46Y	115.9	-0.00	6.15	5.57	3	13	4	95					0	0	0	0	L
L			C		2.43Y	114.2	0.03	7.78	18.74	10	46	0	-100					27	0	0	0	L
	OH73	OH72	A	#2 ACSR 6/	2.47Y	116.1	0.00	5.86	26.01	14	64	0	100	0.00	0.0	0.787	0.002	32	0	0	0	
L			B		2.46Y	115.9	-0.00	6.14	5.57	3	13	4	95					13	4	0	0	L
L			C		2.43Y	114.2	0.00	7.78	7.50	4	18	0	-100					18	0	0	0	L
	OH74	OH73	A	#2 ACSR 6/	2.47Y	116.1	0.00	5.87	13.01	7	32	0	100	0.00	0.0	0.788	0.001	0	0	0	0	
L			B		2.46Y	115.9	-0.00	6.14	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.2	0.00	7.78	-0.00	0	0	0						0	0	0	0	L
	OH75	OH74	A	#2 ACSR 6/	2.47Y	116.1	0.02	5.89	13.01	7	32	0	100	0.01	0.0	0.811	0.023	0	0	0	0	
L			C		2.43Y	114.2	0.00	7.78	-0.00	0	0	0						0	0	0	0	L
	OH78	OH71	A	#2 ACSR 6/	2.47Y	116.2	0.02	5.84	13.00	7	32	0	100	0.01	0.0	0.783	0.019	0	0	0	0	
L			B		2.46Y	115.8	0.01	6.16	6.68	4	16	5	95					0	0	0	0	L
L			C		2.43Y	114.2	0.01	7.76	7.50	4	18	0	-100					0	0	0	0	L
	OH79	OH78	A	#2 ACSR 6/	2.47Y	116.1	0.01	5.86	13.00	7	32	0	100	0.01	0.0	0.799	0.016	0	0	0	0	
L			B		2.46Y	115.8	0.01	6.16	6.68	4	16	5	95					0	0	0	0	L
L			C		2.43Y	114.2	0.01	7.77	7.50	4	18	0	-100					0	0	0	0	L
L	OH180	OH79	B	#2 ACSR 6/	2.46Y	115.8	0.00	6.16	2.79	2	7	2	96	0.00	0.0	0.823	0.024	7	2	0	0	L
	OH181	OH79	A	#2 ACSR 6/	2.47Y	116.1	0.01	5.86	6.50	4	16	0	100	0.00	0.0	0.835	0.036	16	0	0	0	
L			B		2.46Y	115.8	0.00	6.16	2.78	2	7	2	95					7	2	0	0	L
L			C		2.43Y	114.2	0.01	7.78	3.75	2	9	0	-100					9	0	0	0	L
	OH80	OH79	A	#2 ACSR 6/	2.47Y	116.1	0.01	5.87	6.50	4	16	0	100	0.00	0.0	0.826	0.027	0	0	0	0	
L			B		2.46Y	115.8	-0.00	6.16	1.11	1	3	1	95					3	1	0	0	L
L			C		2.43Y	114.2	0.01	7.78	3.75	2	9	0	-100					0	0	0	0	L
	OH81	OH80	A	#2 ACSR 6/	2.47Y	116.1	0.00	5.87	6.50	4	16	0	100	0.00	0.0	0.850	0.023	16	0	0	0	
L			B		2.46Y	115.8	-0.00	6.16	-0.00	0	0	0						0	0	0	0	L
L			C		2.43Y	114.2	0.01	7.79	3.75	2	9	0	-100					9	0	0	0	L

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total
KW	3899	0	0	0	0	0	143	0.00	4043
KVAR	1467	0	0	-4	0	0	272		1734

Lowest Voltage	Highest Accumulated Voltage Drop	Highest Element Voltage Drop
A-Phase -> 112.12 volts on OH278	9.88 volts on OH278	2.59 volts on XFMR38
B-Phase -> 110.09 volts on OH669	11.91 volts on OH669	2.87 volts on XFMR38
C-Phase -> 109.97 volts on OH430	12.03 volts on OH430	3.35 volts on XFMR38

Substation Summary:

Substation	KW	KVAR	KVA	KW Losses	KVAR Losses	% Capacity	No Load Loss	Rated No Load Loss
VCB214	4042.56	1734.08	4398.78	143.00	272.00	0.00	0.00	0.00
Total:	4042.56	1734.08	4398.78	143.00	272.00		0.00	0.00

Appendix D

Load Flow Report for Recommended 2019 System

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	
	VCB		A	Delta EPA	7.65Y	120.5	1.50	1.50	180.19	0	1319	458	94	26.89	0.7	0.000	0.000	0	0	0	0	
			B		7.64Y	120.4	1.65	1.65	182.50	0	1299	558	92					0	0	0	0	
			C		7.63Y	120.1	1.87	1.87	211.34	0	1510	632	92					0	0	0	0	
	UG7	VCB	A	1/0URD	7.65Y	120.5	0.04	1.55	180.19	79	1310	428	95	1.71	0.0	0.014	0.014	0	0	0	0	
C			B		7.64Y	120.3	0.04	1.69	182.50	80	1291	527	93					0	0	0	0	C
C			C		7.62Y	120.1	0.06	1.93	211.34	93	1500	592	93					0	0	0	0	C
	SW9-A	UG7	A	Closed	7.65Y	120.5	0.00	1.55	180.19	0	1310	428	95	0.00	0.0	0.014	0.000	0	0	0	0	
			B		7.64Y	120.3	0.00	1.69	182.51	0	1291	527	93					0	0	0	0	
			C		7.62Y	120.1	0.00	1.93	211.34	0	1499	591	93					0	0	0	0	
	SW9-B	SW9-A	A	Closed	7.65Y	120.5	0.00	1.55	180.19	0	1310	428	95	0.00	0.0	0.014	0.000	0	0	0	0	
			B		7.64Y	120.3	0.00	1.69	182.51	0	1291	527	93					0	0	0	0	
			C		7.62Y	120.1	0.00	1.93	211.34	0	1499	591	93					0	0	0	0	
	OH10	SW9-B	A	#2/0 ACSR	7.65Y	120.4	0.03	1.58	180.19	67	1310	428	95	1.07	0.0	0.027	0.014	0	0	0	0	
			B		7.64Y	120.3	0.03	1.72	182.51	68	1291	527	93					0	0	0	0	
			C		7.62Y	120.0	0.04	1.97	211.34	78	1499	591	93					0	0	0	0	
	REG11	OH10	A	167 kVA	7.65Y	120.4	0.00	1.58	180.19	0	1310	428	95	percent Boost= 0.00 Tap= 0.0							0	
			B		7.64Y	120.3	0.00	1.72	182.51	0	1290	527	93	percent Boost= 0.00 Tap= 0.0							0	
			C		7.62Y	120.0	0.00	1.97	211.34	0	1498	591	93	percent Boost= 0.00 Tap= 0.0							0	
	OH12	REG11	A	#2/0 ACSR	7.64Y	120.4	0.05	1.63	180.19	67	1310	428	95	1.89	0.0	0.051	0.024	0	0	0	0	
			B		7.63Y	120.2	0.06	1.78	182.51	68	1290	527	93					0	0	0	0	
			C		7.62Y	120.0	0.07	2.05	211.34	78	1498	591	93					0	0	0	0	
	OH13	OH12	A	#1/0 ACSR	7.64Y	120.4	0.00	1.63	23.82	10	169	67	93	0.02	0.0	0.062	0.011	0	0	0	0	
			B		7.63Y	120.2	0.01	1.79	27.98	12	196	84	92					0	0	0	0	
			C		7.62Y	119.9	0.01	2.05	30.95	13	217	93	92					0	0	0	0	
	OCD741	OH13	A	50A QR	7.64Y	120.4	0.00	1.63	23.82	48	169	67	93	0.00	0.0	0.062	0.000	0	0	0	0	
			B		7.63Y	120.2	0.00	1.79	27.98	56	196	84	92					0	0	0	0	
			C		7.62Y	119.9	0.00	2.05	30.95	62	217	93	92					0	0	0	0	
	OH716	OCD741	A	#2 ACSR 6/	7.64Y	120.4	0.01	1.65	23.82	13	169	67	93	0.09	0.0	0.090	0.028	0	0	0	0	
			B		7.63Y	120.2	0.02	1.81	27.98	16	196	84	92					0	0	0	0	
			C		7.62Y	119.9	0.02	2.07	30.95	17	217	93	92					0	0	0	0	
	OCD718	OH716	A	50A QR	7.64Y	120.4	0.00	1.65	0.00	0	0	0	100	0.00	0.0	0.090	0.000	0	0	0	0	
			B		7.63Y	120.2	0.00	1.81	0.00	0	0	0	100					0	0	0	0	
			C		7.62Y	119.9	0.00	2.07	0.00	0	0	0	100					0	0	0	0	
	OH719	OH716	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.66	23.82	13	169	67	93	0.09	0.0	0.117	0.027	0	0	0	0	
			B		7.63Y	120.2	0.02	1.83	27.98	16	196	84	92					0	0	0	0	
			C		7.61Y	119.9	0.02	2.09	30.95	17	217	93	92					0	0	0	0	
	OH721	OH719	A	#2 ACSR 6/	7.64Y	120.3	0.02	1.67	21.44	12	152	60	93	0.11	0.0	0.153	0.035	0	0	0	0	
			B		7.63Y	120.1	0.03	1.85	27.98	16	196	84	92					5	2	0	0	
			C		7.61Y	119.9	0.03	2.12	30.95	17	217	93	92					0	0	0	0	
	OH722	OH721	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.69	21.44	12	152	60	93	0.08	0.0	0.179	0.026	0	0	0	0	
			B		7.63Y	120.1	0.02	1.87	27.20	15	191	82	92					0	0	0	0	
			C		7.61Y	119.9	0.02	2.14	30.95	17	217	93	92					0	0	0	0	
	OH723	OH722	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.70	17.87	10	127	50	93	0.07	0.0	0.211	0.033	25	10	0	0	
			B		7.63Y	120.1	0.02	1.89	27.20	15	191	82	92					41	18	0	0	
			C		7.61Y	119.8	0.02	2.16	25.49	14	178	76	92					38	16	0	0	
	OH724	OH723	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.71	14.29	8	102	40	93	0.06	0.0	0.260	0.049	17	7	0	0	
			B		7.63Y	120.1	0.03	1.92	21.38	12	150	64	92					27	12	0	0	
			C		7.61Y	119.8	0.02	2.17	20.03	11	140	60	92					25	11	0	0	
	OH725	OH724	A	#2 ACSR 6/	7.64Y	120.3	0.01	1.72	11.91	7	85	34	93	0.05	0.0	0.312	0.053	0	0	0	0	
			B		7.62Y	120.1	0.02	1.94	17.49	10	123	52	92					0	0	0	0	
			C		7.61Y	119.8	0.02	2.19	16.39	9	115	49	92					0	0	0	0	
	OH726	OH725	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	5.96	3	42	17	93	0.01	0.0	0.346	0.034	25	10	0	0	
			B		7.62Y	120.1	0.01	1.95	9.72	5	68	29	92					41	18	0	0	
			C		7.61Y	119.8	0.00	2.20	9.11	5	64	27	92					38	16	0	0	
	OH727	OH726	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	2.38	1	17	7	92	0.00	0.0	0.353	0.007	0	0	0	0	
			B		7.62Y	120.1	0.00	1.95	3.89	2	27	12	92					0	0	0	0	
			C		7.61Y	119.8	0.00	2.20	3.64	2	25	11	92					0	0	0	0	

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru
OH728	OH727	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	2.38	1	17	7	92	0.00	0.0	0.368	0.015	17	7	0	0
		B		7.62Y	120.0	0.00	1.95	3.89	2	27	12	92					27	12	0	0
		C		7.61Y	119.8	0.00	2.20	3.64	2	25	11	92					25	11	0	0
OH729	OH725	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	5.96	3	42	17	93	0.01	0.0	0.339	0.027	0	0	0	0
		B		7.62Y	120.1	0.01	1.95	7.77	4	55	23	92					0	0	0	0
		C		7.61Y	119.8	0.00	2.20	7.28	4	51	22	92					0	0	0	0
OH732	OH729	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	4.77	3	34	13	93	0.00	0.0	0.367	0.028	17	7	0	0
		B		7.62Y	120.0	0.00	1.95	7.78	4	54	23	92					27	12	0	0
		C		7.61Y	119.8	0.00	2.20	7.28	4	51	22	92					25	11	0	0
OH733	OH732	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	2.38	1	17	7	92	0.00	0.0	0.369	0.002	0	0	0	0
		B		7.62Y	120.0	0.00	1.95	3.89	2	27	12	92					0	0	0	0
		C		7.61Y	119.8	0.00	2.20	3.64	2	25	11	92					0	0	0	0
OH734	OH733	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	2.38	1	17	7	92	0.00	0.0	0.382	0.013	17	7	0	0
		B		7.62Y	120.0	0.00	1.95	3.89	2	27	12	92					27	12	0	0
		C		7.61Y	119.8	0.00	2.20	3.64	2	25	11	92					25	11	0	0
OH735	OH729	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	1.19	1	8	3	94	0.00	0.0	0.367	0.028	8	3	0	0
		B		7.62Y	120.1	-0.00	1.95	-0.00	0	0	0						0	0	0	0
		C		7.61Y	119.8	0.00	2.20	-0.00	0	0	0						0	0	0	0
OCD731	OH725	A	50A QR	7.64Y	120.3	0.00	1.72	0.00	0	0	0	100	0.00	0.0	0.312	0.000	0	0	0	0
		B		7.62Y	120.1	0.00	1.94	0.00	0	0	0	100					0	0	0	0
		C		7.61Y	119.8	0.00	2.19	0.00	0	0	0	100					0	0	0	0
OH737	OH722	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.69	3.57	2	25	10	93	0.00	0.0	0.216	0.038	25	10	0	0
		C		7.61Y	119.9	0.00	2.14	5.46	3	38	16	92					38	16	0	0
OH736	OH719	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.66	2.38	1	17	7	92	0.00	0.0	0.133	0.016	17	7	0	0
OH14	OH12	A	#2/0 ACSR	7.64Y	120.3	0.06	1.69	156.42	58	1140	361	95	1.87	0.1	0.084	0.033	0	0	0	0
		B		7.63Y	120.2	0.07	1.85	154.54	57	1093	443	93					0	0	0	0
		C		7.61Y	119.9	0.08	2.13	180.41	67	1281	498	93					0	0	0	0
OH16	OH14	A	#2/0 ACSR	7.64Y	120.2	0.06	1.75	156.42	58	1139	360	95	1.91	0.1	0.117	0.033	0	0	0	0
		B		7.63Y	120.1	0.07	1.92	154.54	57	1093	443	93					0	0	0	0
		C		7.61Y	119.8	0.09	2.22	180.41	67	1280	497	93					0	0	0	0
OH17	OH16	A	#2/0 ACSR	7.63Y	120.2	0.06	1.81	156.42	58	1139	360	95	1.89	0.1	0.150	0.033	0	0	0	0
		B		7.62Y	120.0	0.07	1.98	154.54	57	1092	443	93					0	0	0	0
		C		7.60Y	119.7	0.09	2.30	180.41	67	1279	497	93					0	0	0	0
OH18	OH17	A	#2/0 ACSR	7.63Y	120.1	0.04	1.85	156.43	58	1138	359	95	1.20	0.0	0.171	0.021	0	0	0	0
		B		7.62Y	120.0	0.04	2.03	154.54	57	1092	442	93					0	0	0	0
		C		7.60Y	119.6	0.05	2.36	180.41	67	1278	496	93					0	0	0	0

----------- Feeder No. 124 (OCD744) Beginning with Device OCD744 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru
OCD744	OH18	A	75A QA	7.63Y	120.1	0.00	1.85	6.18	8	45	13	96	0.00	0.0	0.171	0.000	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	4.62	6	31	17	87					0	0	0	0
		C		7.60Y	119.6	0.00	2.36	5.79	8	41	16	93					0	0	0	0
OH154	OCD744	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.85	6.18	3	45	13	96	0.00	0.0	0.185	0.014	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	4.62	3	31	17	87					7	4	0	0
		C		7.60Y	119.6	0.00	2.36	5.79	3	41	16	93					0	0	0	0
OH485	OH154	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.85	0.26	0	2	1	89	0.00	0.0	0.195	0.009	2	1	0	0
		B		7.62Y	120.0	0.00	2.03	1.05	1	7	4	87					7	4	0	0
OH153	OH154	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.86	5.92	3	43	12	96	0.00	0.0	0.211	0.026	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	2.51	1	17	9	87					0	0	0	0
		C		7.60Y	119.6	0.00	2.36	5.79	3	41	16	93					0	0	0	0
OH152	OH153	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.86	5.92	3	43	12	96	0.00	0.0	0.236	0.025	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	2.51	1	17	9	87					0	0	0	0
		C		7.60Y	119.6	0.00	2.37	5.79	3	41	16	93					0	0	0	0
OH151	OH152	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.86	5.92	3	43	12	96	0.00	0.0	0.254	0.018	2	1	0	0
		B		7.62Y	120.0	0.00	2.03	2.51	1	17	9	87					0	0	0	0
		C		7.60Y	119.6	0.00	2.37	5.79	3	41	16	93					6	2	0	0
OH480	OH151	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.86	2.19	1	16	5	95	0.00	0.0	0.269	0.015	0	0	0	0

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru
OH481	OH480	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	2.19	1	16	5	95	0.00	0.0	0.319	0.050	9	3	0	0
OH482	OH481	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	0.90	1	7	2	96	0.00	0.0	0.343	0.025	2	1	0	0
OH483	OH482	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	0.64	0	5	1	98	0.00	0.0	0.365	0.022	0	0	0	0
OH484	OH483	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	0.64	0	5	1	98	0.00	0.0	0.391	0.025	5	1	0	0
OH150	OH151	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	3.47	2	25	7	96	0.00	0.0	0.288	0.034	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	2.52	1	17	9	87					0	0	0	0
		C		7.60Y	119.6	0.01	2.38	4.96	3	35	14	93					0	0	0	0
OH149	OH150	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	3.47	2	25	7	96	0.00	0.0	0.322	0.034	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	2.52	1	17	9	87					0	0	0	0
		C		7.60Y	119.6	0.01	2.38	4.96	3	35	14	93					0	0	0	0
OH148	OH149	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	3.47	2	25	7	96	0.00	0.0	0.340	0.017	2	1	0	0
		B		7.62Y	120.0	0.00	2.03	2.52	1	17	9	87					0	0	0	0
		C		7.60Y	119.6	0.00	2.38	4.97	3	35	14	93					0	0	0	0
OH468	OH148	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	0.64	0	5	1	98	0.00	0.0	0.361	0.022	0	0	0	0
OH469	OH468	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	0.64	0	5	1	98	0.00	0.0	0.390	0.028	5	1	0	0
OCD470	OH148	B	50A QR	7.62Y	120.0	0.00	2.03	-0.01	0	0	0		0.00	0.0	0.340	0.000	0	0	0	0
		C		7.60Y	119.6	0.00	2.38	4.97	10	35	14	93					0	0	0	0
OH471	OCD470	B	#2 ACSR 6/	7.62Y	120.0	0.00	2.03	-0.01	0	0	0		0.00	0.0	0.375	0.036	0	0	0	0
		C		7.60Y	119.6	0.01	2.39	4.97	3	35	14	93					0	0	0	0
OH472	OH471	C	#2 ACSR 6/	7.60Y	119.6	0.00	2.39	-0.00	0	0	0	100	0.00	0.0	0.393	0.017	0	0	0	0
OH473	OH471	B	#2 ACSR 6/	7.62Y	120.0	0.00	2.03	-0.01	0	0	0		0.00	0.0	0.404	0.029	0	0	0	0
		C		7.59Y	119.6	0.00	2.39	4.97	3	35	14	93					0	0	0	0
OH474	OH473	C	#2 ACSR 6/	7.59Y	119.6	0.00	2.39	0.83	0	6	2	95	0.00	0.0	0.430	0.026	6	2	0	0
OH475	OH473	B	#2 ACSR 6/	7.62Y	120.0	0.00	2.03	-0.00	0	0	0		0.00	0.0	0.415	0.011	0	0	0	0
		C		7.59Y	119.6	0.00	2.40	4.14	2	29	11	93					0	0	0	0
OH476	OH475	B	#2 ACSR 6/	7.62Y	120.0	0.00	2.03	-0.00	0	0	0		0.00	0.0	0.458	0.043	0	0	0	0
		C		7.59Y	119.6	0.01	2.40	4.14	2	29	11	93					0	0	0	0
OH477	OH476	C	#2 ACSR 6/	7.59Y	119.6	0.01	2.41	4.14	2	29	11	93	0.00	0.0	0.543	0.085	15	6	0	0
OH478	OH477	C	#2 ACSR 6/	7.59Y	119.6	0.00	2.41	2.07	1	15	6	93	0.00	0.0	0.570	0.027	0	0	0	0
OH479	OH478	C	#2 ACSR 6/	7.59Y	119.6	0.00	2.41	2.07	1	15	6	93	0.00	0.0	0.600	0.030	15	6	0	0
OH147	OH148	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	2.57	1	19	5	97	0.00	0.0	0.368	0.029	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	2.52	1	17	9	87					0	0	0	0
		C		7.60Y	119.6	-0.00	2.38	-0.01	0	0	0						0	0	0	0
OH146	OH147	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	2.57	1	19	5	97	0.00	0.0	0.403	0.034	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	2.52	1	17	9	87					3	2	0	0
		C		7.60Y	119.6	-0.00	2.38	-0.01	0	0	0						0	0	0	0
OH145	OH146	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	2.57	1	19	5	97	0.00	0.0	0.440	0.037	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	2.10	1	14	8	87					7	4	0	0
		C		7.60Y	119.6	-0.00	2.38	-0.01	0	0	0						0	0	0	0
OH456	OH145	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	0.64	0	5	1	98	0.00	0.0	0.461	0.021	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	0.63	0	4	2	87					4	2	0	0
OH457	OH456	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	0.64	0	5	1	98	0.00	0.0	0.488	0.027	0	0	0	0
		B		7.62Y	120.0	-0.00	2.04	-0.00	0	0	0						0	0	0	0
OH458	OH457	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	0.64	0	5	1	98	0.00	0.0	0.509	0.021	5	1	0	0
OH459	OH145	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	1.93	1	14	4	96	0.00	0.0	0.450	0.010	0	0	0	0
		B		7.62Y	120.0	-0.00	2.04	0.42	0	3	2	87					3	2	0	0
OH460	OH459	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	1.93	1	14	4	96	0.00	0.0	0.470	0.020	0	0	0	0
		B		7.62Y	120.0	-0.00	2.04	-0.00	0	0	0						0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH461	OH460	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	1.93	1	14	4	96	0.00	0.0	0.495	0.025	5	1	0	0
		B		7.62Y	120.0	-0.00	2.04	-0.00	0	0	0						0	0	0	0
OH462	OH461	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	1.29	1	9	3	95	0.00	0.0	0.520	0.025	0	0	0	0
OH463	OH462	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	1.29	1	9	3	95	0.00	0.0	0.545	0.026	0	0	0	0
OH465	OH463	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	0.64	0	5	1	98	0.00	0.0	0.567	0.022	5	1	0	0
OH466	OH463	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	0.64	0	5	1	98	0.00	0.0	0.556	0.011	0	0	0	0
OH467	OH466	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	0.64	0	5	1	98	0.00	0.0	0.594	0.038	5	1	0	0
OH144	OH145	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.01	0	0	0		0.00	0.0	0.473	0.033	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	-0.01	0	0	0						0	0	0	0
		C		7.60Y	119.6	0.00	2.38	-0.01	0	0	0						0	0	0	0
OH143	OH144	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.00	0	0	0		0.00	0.0	0.500	0.027	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	-0.00	0	0	0						0	0	0	0
		C		7.60Y	119.6	0.00	2.38	-0.00	0	0	0						0	0	0	0
OH142	OH143	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.00	0	0	0		0.00	0.0	0.526	0.026	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	-0.00	0	0	0						0	0	0	0
		C		7.60Y	119.6	0.00	2.38	-0.00	0	0	0						0	0	0	0
OH19	OH18	A	#2/0 ACSR	7.63Y	120.1	0.06	1.91	137.80	51	1005	307	96	1.53	0.1	0.207	0.036	0	0	0	0
		B		7.61Y	119.9	0.06	2.09	135.21	50	959	376	93					0	0	0	0
		C		7.59Y	119.6	0.08	2.43	151.96	56	1080	408	94					0	0	0	0
OH20	OH19	A	#2/0 ACSR	7.62Y	120.0	0.06	1.98	137.80	51	1005	307	96	1.56	0.1	0.243	0.037	0	0	0	0
		B		7.61Y	119.8	0.06	2.15	135.21	50	958	376	93					0	0	0	0
		C		7.59Y	119.5	0.08	2.51	151.96	56	1079	408	94					0	0	0	0
OH21	OH20	A	#2/0 ACSR	7.62Y	120.0	0.07	2.05	137.80	51	1005	306	96	1.79	0.1	0.285	0.042	0	0	0	0
		B		7.61Y	119.8	0.07	2.23	135.21	50	958	376	93					0	0	0	0
		C		7.58Y	119.4	0.09	2.60	151.96	56	1079	407	94					0	0	0	0
OH22	OH21	A	#2/0 ACSR	7.61Y	119.9	0.09	2.13	137.80	51	1004	306	96	2.13	0.1	0.335	0.050	0	0	0	0
		B		7.60Y	119.7	0.09	2.31	135.22	50	957	376	93					0	0	0	0
		C		7.58Y	119.3	0.11	2.71	151.96	56	1078	407	94					0	0	0	0
OH23	OH22	A	#2/0 ACSR	7.61Y	119.8	0.06	2.20	137.80	51	1003	305	96	1.61	0.1	0.373	0.038	0	0	0	0
		B		7.60Y	119.6	0.07	2.38	135.22	50	957	375	93					0	0	0	0
		C		7.57Y	119.2	0.08	2.79	151.96	56	1077	406	94					0	0	0	0
OH24	OH23	A	#2/0 ACSR	7.60Y	119.7	0.06	2.26	137.81	51	1003	305	96	1.57	0.1	0.409	0.037	0	0	0	0
		B		7.59Y	119.6	0.06	2.44	135.22	50	956	375	93					0	0	0	0
		C		7.56Y	119.1	0.08	2.87	151.96	56	1076	406	94					0	0	0	0
OH25	OH24	A	#2/0 ACSR	7.60Y	119.7	0.05	2.31	137.81	51	1003	305	96	1.37	0.0	0.441	0.032	0	0	0	0
		B		7.59Y	119.5	0.06	2.50	135.22	50	956	375	93					0	0	0	0
		C		7.56Y	119.1	0.07	2.94	151.96	56	1076	405	94					0	0	0	0
OH26	OH25	A	#2/0 ACSR	7.60Y	119.6	0.06	2.38	137.81	51	1002	304	96	1.60	0.1	0.479	0.037	0	0	0	0
		B		7.58Y	119.4	0.07	2.57	135.22	50	955	375	93					0	0	0	0
		C		7.56Y	119.0	0.08	3.02	151.96	56	1075	405	94					0	0	0	0
OH27	OH26	A	#2/0 ACSR	7.59Y	119.6	0.06	2.44	137.81	51	1002	304	96	1.49	0.0	0.514	0.035	0	0	0	0
		B		7.58Y	119.4	0.06	2.63	135.22	50	955	375	93					0	0	0	0
		C		7.55Y	118.9	0.07	3.09	151.96	56	1075	404	94					0	0	0	0

----------- Feeder No. 114 (OCD751) Beginning with Device OCD751 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OCD751	OH27	A	560 VWE	7.59Y	119.6	0.00	2.44	26.80	0	196	56	96	0.00	0.0	0.514	0.000	0	0	0	0
		B		7.58Y	119.4	0.00	2.63	40.50	0	274	139	89					0	0	0	0
		C		7.55Y	118.9	0.00	3.09	44.28	0	316	109	95					0	0	0	0
OH133	OCD751	A	2/0ACSR	7.59Y	119.6	0.00	2.44	26.80	10	196	56	96	0.11	0.0	0.548	0.034	0	0	0	0
		B		7.58Y	119.3	0.03	2.65	40.50	15	274	139	89					0	0	0	0
		C		7.55Y	118.9	0.02	3.11	44.28	16	316	109	95					0	0	0	0
OH134	OH133	A	2/0ACSR	7.59Y	119.5	0.01	2.45	26.81	10	196	56	96	0.25	0.0	0.626	0.078	0	0	0	0
		B		7.57Y	119.3	0.06	2.71	40.51	15	274	139	89					0	0	0	0
		C		7.55Y	118.8	0.05	3.16	44.28	16	316	109	95					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OCD511	OH134	A	50A QR	7.59Y	119.5	0.00	2.45	1.34	3	10	3	96	0.00	0.0	0.626	0.000	0	0	0	0
OH512	OCD511	A	2ACSR	7.59Y	119.5	0.00	2.45	1.34	1	10	3	96	0.00	0.0	0.660	0.034	10	3	0	0
OH135	OH134	A	2/0ACSR	7.59Y	119.5	0.00	2.45	25.46	9	186	53	96	0.19	0.0	0.685	0.059	0	0	0	0
		B		7.57Y	119.2	0.05	2.76	40.51	15	273	139	89					0	0	0	0
		C		7.54Y	118.8	0.04	3.20	44.28	16	316	109	95					0	0	0	0
OCD513	OH135	A	50A QR	7.59Y	119.5	0.00	2.45	0.81	2	6	2	95	0.00	0.0	0.685	0.000	0	0	0	0
		C		7.54Y	118.8	0.00	3.20	2.00	4	14	5	95					0	0	0	0
OH514	OCD513	A	2ACSR	7.59Y	119.5	0.00	2.45	0.81	0	6	2	95	0.00	0.0	0.707	0.022	0	0	0	0
		C		7.54Y	118.8	0.00	3.20	2.00	1	14	5	95					0	0	0	0
OH516	OH514	A	2ACSR	7.59Y	119.5	-0.00	2.45	0.81	0	6	2	95	0.00	0.0	0.720	0.013	6	2	0	0
		C		7.54Y	118.8	0.00	3.20	2.00	1	14	5	95					0	0	0	0
OH517	OH516	C	2ACSR	7.54Y	118.8	0.00	3.20	1.00	1	7	2	96	0.00	0.0	0.746	0.026	7	2	0	0
OH518	OH516	A	2ACSR	7.59Y	119.5	-0.00	2.45	-0.00	0	0	0		0.00	0.0	0.740	0.020	0	0	0	0
		C		7.54Y	118.8	0.00	3.20	1.00	1	7	2	95					0	0	0	0
OH519	OH518	A	2ACSR	7.59Y	119.5	-0.00	2.45	-0.00	0	0	0		0.00	0.0	0.768	0.029	0	0	0	0
		C		7.54Y	118.8	0.00	3.20	1.00	1	7	2	94					7	2	0	0
OH136	OH135	A	2/0ACSR	7.59Y	119.5	0.00	2.46	24.66	9	180	51	96	0.10	0.0	0.719	0.034	0	0	0	0
		B		7.57Y	119.2	0.03	2.78	40.51	15	273	139	89					0	0	0	0
		C		7.54Y	118.8	0.02	3.22	42.28	16	302	104	95					0	0	0	0
OH520	OH136	C	2/0ACSR	7.54Y	118.8	0.00	3.22	1.67	1	12	4	95	0.00	0.0	0.748	0.029	12	4	0	0
OH522	OH136	A	2/0ACSR	7.59Y	119.5	0.00	2.46	24.66	9	180	51	96	0.11	0.0	0.757	0.038	0	0	0	0
		B		7.57Y	119.2	0.03	2.81	40.51	15	273	139	89					0	0	0	0
		C		7.54Y	118.8	0.02	3.24	40.61	15	290	100	95					0	0	0	0
OH523	OH522	A	2/0ACSR	7.59Y	119.5	0.00	2.46	23.86	9	174	49	96	0.03	0.0	0.767	0.011	4	1	0	0
		B		7.57Y	119.2	0.01	2.82	40.51	15	273	139	89					0	0	0	0
		C		7.54Y	118.8	0.01	3.24	40.61	15	290	99	95					0	0	0	0
OH524	OH523	A	2/0ACSR	7.59Y	119.5	0.00	2.46	23.32	9	170	48	96	0.09	0.0	0.797	0.030	3	1	0	0
		B		7.57Y	119.2	0.02	2.84	40.51	15	273	139	89					0	0	0	0
		C		7.54Y	118.7	0.02	3.26	40.62	15	290	99	95					0	0	0	0
OH525	OH524	A	2/0ACSR	7.59Y	119.5	0.00	2.47	22.92	8	167	47	96	0.09	0.0	0.828	0.031	0	0	0	0
		B		7.56Y	119.1	0.02	2.87	40.52	15	273	139	89					0	0	0	0
		C		7.54Y	118.7	0.02	3.28	40.62	15	290	99	95					0	0	0	0
OH526	OH525	A	2/0ACSR	7.59Y	119.5	0.00	2.47	22.92	8	167	48	96	0.07	0.0	0.860	0.032	3	1	0	0
		B		7.56Y	119.1	0.02	2.88	28.26	10	191	97	89					0	0	0	0
		C		7.54Y	118.7	0.02	3.29	37.95	14	271	93	95					0	0	0	0
OH527	OH526	A	2/0ACSR	7.59Y	119.5	0.00	2.47	22.52	8	164	47	96	0.06	0.0	0.891	0.031	0	0	0	0
		B		7.56Y	119.1	0.02	2.90	28.26	10	190	97	89					0	0	0	0
		C		7.54Y	118.7	0.02	3.31	37.95	14	271	93	95					0	0	0	0
OH528	OH527	A	2/0ACSR	7.59Y	119.5	0.00	2.47	20.91	8	153	43	96	0.07	0.0	0.925	0.034	4	1	0	0
		B		7.56Y	119.1	0.02	2.92	28.26	10	190	97	89					0	0	0	0
		C		7.54Y	118.7	0.02	3.33	37.95	14	271	93	95					12	4	0	0
OH529	OH528	A	2/0ACSR	7.59Y	119.5	0.00	2.47	20.38	8	149	42	96	0.06	0.0	0.956	0.031	0	0	0	0
		B		7.56Y	119.1	0.02	2.93	28.27	10	190	97	89					0	0	0	0
		C		7.53Y	118.6	0.02	3.35	36.28	13	259	89	95					0	0	0	0
OH530	OH529	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	15.55	6	114	32	96	0.05	0.0	0.987	0.030	0	0	0	0
		B		7.56Y	119.1	0.01	2.95	24.67	9	166	85	89					8	4	0	0
		C		7.53Y	118.6	0.02	3.37	33.62	12	239	82	95					0	0	0	0
OH531	OH530	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	15.55	6	114	32	96	0.05	0.0	1.017	0.030	0	0	0	0
		B		7.56Y	119.0	0.01	2.96	23.47	9	158	81	89					0	0	0	0
		C		7.53Y	118.6	0.02	3.38	33.62	12	239	82	95					0	0	0	0
OH532	OH531	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	15.55	6	114	32	96	0.04	0.0	1.046	0.029	0	0	0	0
		B		7.56Y	119.0	0.01	2.97	23.47	9	158	81	89					0	0	0	0
		C		7.53Y	118.6	0.02	3.40	33.62	12	239	82	95					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH533	OH532	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	12.20	5	89	25	96	0.04	0.0	1.080	0.034	0	0	0	0
		B		7.56Y	119.0	0.02	2.99	23.47	9	158	81	89					0	0	0	0
		C		7.53Y	118.6	0.02	3.41	30.28	11	216	74	95					0	0	0	0
OH710	OH533	A	2/0ACSR	7.59Y	119.5	0.00	2.47	1.34	0	10	3	96	0.00	0.0	1.107	0.027	10	3	0	0
OH616	OH533	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	10.86	4	79	23	96	0.04	0.0	1.110	0.030	0	0	0	0
		B		7.56Y	119.0	0.01	3.01	23.47	9	158	81	89					0	0	0	0
		C		7.53Y	118.6	0.01	3.43	30.28	11	216	74	95					0	0	0	0
OH617	OH616	A	2/0ACSR	7.59Y	119.5	-0.00	2.46	10.86	4	79	23	96	0.04	0.0	1.145	0.035	0	0	0	0
		B		7.56Y	119.0	0.02	3.02	23.47	9	158	81	89					0	0	0	0
		C		7.53Y	118.6	0.02	3.44	30.28	11	216	74	95					0	0	0	0
OH618	OH617	A	2/0ACSR	7.59Y	119.5	-0.00	2.46	10.86	4	79	23	96	0.06	0.0	1.191	0.046	0	0	0	0
		B		7.55Y	119.0	0.02	3.05	23.47	9	158	81	89					0	0	0	0
		C		7.53Y	118.5	0.02	3.46	30.28	11	216	74	95					0	0	0	0
OH619	OH618	A	2/0ACSR	7.59Y	119.5	-0.00	2.46	10.86	4	79	23	96	0.05	0.0	1.228	0.038	0	0	0	0
		B		7.55Y	118.9	0.02	3.06	23.48	9	158	81	89					0	0	0	0
		C		7.53Y	118.5	0.02	3.48	30.29	11	216	74	95					0	0	0	0
OCD620	OH619	B	50A QR	7.55Y	118.9	0.00	3.06	2.40	5	16	8	89	0.00	0.0	1.228	0.000	0	0	0	0
		C		7.53Y	118.5	0.00	3.48	16.74	33	119	41	95					0	0	0	0
OH621	OCD620	B	2ACSR	7.55Y	118.9	0.00	3.07	2.40	1	16	8	89	0.02	0.0	1.263	0.035	0	0	0	0
		C		7.52Y	118.5	0.02	3.50	16.74	9	119	41	95					0	0	0	0
OH674	OH621	B	2ACSR	7.55Y	118.9	0.00	3.07	2.41	1	16	8	89	0.00	0.0	1.276	0.013	0	0	0	0
OH675	OH674	B	2ACSR	7.55Y	118.9	0.00	3.07	2.41	1	16	8	89	0.00	0.0	1.305	0.028	0	0	0	0
OH676	OH675	B	2ACSR	7.55Y	118.9	0.00	3.07	2.41	1	16	8	89	0.00	0.0	1.334	0.029	16	8	0	0
OH677	OH676	B	2ACSR	7.55Y	118.9	0.00	3.07	-0.00	0	0	0		0.00	0.0	1.361	0.027	0	0	0	0
OH679	OH621	C	2ACSR	7.52Y	118.5	0.00	3.50	5.02	3	36	12	95	0.00	0.0	1.305	0.042	24	8	0	0
OH681	OH679	C	2ACSR	7.52Y	118.5	0.00	3.50	1.67	1	12	4	95	0.00	0.0	1.332	0.027	0	0	0	0
OH682	OH681	C	2ACSR	7.52Y	118.5	0.00	3.51	1.67	1	12	4	95	0.00	0.0	1.360	0.028	12	4	0	0
OH683	OH682	C	2ACSR	7.52Y	118.5	0.00	3.51	-0.00	0	0	0		0.00	0.0	1.388	0.028	0	0	0	0
OH684	OH621	B	2ACSR	7.55Y	118.9	0.00	3.07	-0.01	0	0	0		0.01	0.0	1.324	0.061	0	0	0	0
		C		7.52Y	118.5	0.02	3.52	11.72	7	83	29	95					0	0	0	0
OH685	OH684	C	2ACSR	7.52Y	118.5	0.00	3.52	5.02	3	36	12	95	0.00	0.0	1.338	0.014	0	0	0	0
OH686	OH685	C	2ACSR	7.52Y	118.5	0.00	3.53	5.02	3	36	12	95	0.00	0.0	1.367	0.028	24	8	0	0
OH687	OH686	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.394	0.027	0	0	0	0
OH688	OH687	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.423	0.029	12	4	0	0
OH689	OH688	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0		0.00	0.0	1.450	0.028	0	0	0	0
OH690	OH684	C	2ACSR	7.52Y	118.5	0.00	3.52	3.35	2	24	8	95	0.00	0.0	1.338	0.014	0	0	0	0
OH691	OH690	C	2ACSR	7.52Y	118.5	0.00	3.53	3.35	2	24	8	95	0.00	0.0	1.366	0.028	0	0	0	0
OH692	OH691	C	2ACSR	7.52Y	118.5	0.00	3.53	3.35	2	24	8	95	0.00	0.0	1.396	0.029	24	8	0	0
OH693	OH692	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0		0.00	0.0	1.424	0.028	0	0	0	0
OH694	OH684	B	2ACSR	7.55Y	118.9	0.00	3.07	-0.00	0	0	0		0.00	0.0	1.383	0.059	0	0	0	0
		C		7.52Y	118.5	0.01	3.53	3.35	2	24	8	95					0	0	0	0
OH696	OH694	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.397	0.014	0	0	0	0
OH697	OH696	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.425	0.028	0	0	0	0
OH698	OH697	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.454	0.028	12	4	0	0
OH699	OH698	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0		0.00	0.0	1.482	0.029	0	0	0	0

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Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element----- KW	KVAR	Cons On	Cons Thru
OH700	OH699	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0		0.00	0.0	1.497	0.015	0	0	0	0
OH705	OH694	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.398	0.015	0	0	0	0
OH706	OH705	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.426	0.028	0	0	0	0
OH707	OH706	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.455	0.029	0	0	0	0
OH708	OH707	C	2ACSR	7.52Y	118.5	0.00	3.53	1.67	1	12	4	95	0.00	0.0	1.484	0.030	12	4	0	0
OH709	OH708	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0	100	0.00	0.0	1.512	0.027	0	0	0	0
OH622	OH619	A	2/0ACSR	7.59Y	119.5	0.00	2.46	10.86	4	79	23	96	0.02	0.0	1.257	0.029	0	0	0	0
		B		7.55Y	118.9	0.01	3.08	21.08	8	142	73	89					0	0	0	0
		C		7.53Y	118.5	0.00	3.48	13.55	5	96	33	95					0	0	0	0
OH623	OH622	A	2/0ACSR	7.59Y	119.5	0.00	2.46	10.86	4	79	23	96	0.02	0.0	1.292	0.035	0	0	0	0
		B		7.55Y	118.9	0.01	3.09	21.08	8	142	73	89					0	0	0	0
		C		7.53Y	118.5	0.00	3.49	13.55	5	96	33	95					0	0	0	0
OH624	OH623	A	2/0ACSR	7.59Y	119.5	0.00	2.47	10.86	4	79	23	96	0.02	0.0	1.326	0.034	0	0	0	0
		B		7.55Y	118.9	0.01	3.10	21.08	8	142	73	89					0	0	0	0
		C		7.53Y	118.5	0.00	3.49	13.55	5	96	33	95					0	0	0	0
OH625	OH624	A	2/0ACSR	7.59Y	119.5	0.00	2.47	10.86	4	79	23	96	0.02	0.0	1.358	0.032	0	0	0	0
		B		7.55Y	118.9	0.01	3.12	21.08	8	142	73	89					0	0	0	0
		C		7.53Y	118.5	0.00	3.49	13.55	5	96	33	95					0	0	0	0
OH626	OH625	A	2/0ACSR	7.59Y	119.5	0.00	2.47	10.86	4	79	23	96	0.02	0.0	1.400	0.042	0	0	0	0
		B		7.55Y	118.9	0.02	3.13	21.08	8	142	73	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	13.55	5	96	33	95					0	0	0	0
OCD627	OH626	A	50A QR	7.59Y	119.5	0.00	2.47	4.02	8	29	8	96	0.00	0.0	1.400	0.000	0	0	0	0
		B		7.55Y	118.9	0.00	3.13	13.74	27	92	47	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	5.02	10	36	12	95					0	0	0	0
OH642	OCD627	A	2ACSR	7.59Y	119.5	0.00	2.47	4.02	2	29	8	96	0.01	0.0	1.422	0.022	0	0	0	0
		B		7.55Y	118.9	0.01	3.14	13.74	8	92	47	89					8	4	0	0
		C		7.52Y	118.5	0.00	3.50	5.02	3	36	12	95					0	0	0	0
OH643	OH642	A	2/0ACSR	7.59Y	119.5	0.00	2.48	4.02	1	29	8	96	0.00	0.0	1.441	0.019	0	0	0	0
		B		7.55Y	118.9	0.00	3.15	12.53	5	84	43	89					0	0	0	0
		C		7.52Y	118.5	-0.00	3.50	5.02	2	36	12	95					0	0	0	0
OH644	OH643	A	2ACSR	7.59Y	119.5	0.00	2.48	4.02	2	29	8	96	0.01	0.0	1.465	0.024	10	3	0	0
		B		7.55Y	118.8	0.01	3.16	12.53	7	84	43	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	5.02	3	36	12	95					0	0	0	0
OH645	OH644	A	2ACSR	7.59Y	119.5	0.00	2.48	2.68	1	20	6	96	0.01	0.0	1.492	0.027	0	0	0	0
		B		7.55Y	118.8	0.01	3.17	12.54	7	84	43	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	5.02	3	36	12	95					0	0	0	0
OH646	OH645	A	2ACSR	7.59Y	119.5	0.00	2.48	2.68	1	20	6	96	0.01	0.0	1.510	0.018	0	0	0	0
		B		7.55Y	118.8	0.01	3.17	12.54	7	84	43	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	5.02	3	36	12	95					0	0	0	0
OH647	OH646	A	2ACSR	7.59Y	119.5	0.00	2.48	2.68	1	20	6	96	0.01	0.0	1.559	0.048	0	0	0	0
		B		7.54Y	118.8	0.02	3.19	11.33	6	76	39	89					0	0	0	0
		C		7.52Y	118.5	-0.00	3.50	3.35	2	24	8	95					12	4	0	0
OH648	OH647	C	2ACSR	7.52Y	118.5	0.00	3.50	1.67	1	12	4	95	0.00	0.0	1.590	0.031	0	0	0	0
OH649	OH648	C	2ACSR	7.52Y	118.5	0.00	3.50	1.67	1	12	4	95	0.00	0.0	1.618	0.028	0	0	0	0
OH650	OH649	C	2ACSR	7.52Y	118.5	0.00	3.50	1.67	1	12	4	95	0.00	0.0	1.649	0.032	12	4	0	0
OH651	OH650	C	2ACSR	7.52Y	118.5	0.00	3.50	-0.00	0	0	0	100	0.00	0.0	1.684	0.035	0	0	0	0
OH652	OH647	A	2ACSR	7.59Y	119.5	0.00	2.48	2.68	1	20	6	96	0.01	0.0	1.585	0.027	0	0	0	0
		B		7.54Y	118.8	0.01	3.20	11.34	6	76	39	89					0	0	0	0
OH653	OH652	A	4ACSR	7.59Y	119.5	0.01	2.49	2.68	2	20	6	96	0.02	0.0	1.637	0.052	0	0	0	0
		B		7.54Y	118.8	0.03	3.23	11.34	8	76	39	89					0	0	0	0
OH654	OH653	A	4ACSR	7.59Y	119.5	0.00	2.49	1.34	1	10	3	96	0.00	0.0	1.666	0.029	10	3	0	0

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Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH655	OH653	A	4ACSR	7.59Y	119.5	0.00	2.49	1.34	1	10	3	96	0.01	0.0	1.667	0.030	0	0	0	0
		B		7.54Y	118.8	0.02	3.24	11.34	8	76	39	89					0	0	0	0
OH656	OH655	A	4ACSR	7.59Y	119.5	0.00	2.50	1.34	1	10	3	96	0.00	0.0	1.710	0.043	10	3	0	0
		B		7.54Y	118.8	0.01	3.25	5.31	4	36	18	89					16	8	0	0
OH657	OH656	B	4ACSR	7.54Y	118.7	0.01	3.25	2.89	2	19	10	88	0.00	0.0	1.758	0.048	8	4	0	0
OH659	OH657	B	4ACSR	7.54Y	118.7	0.00	3.26	1.69	1	11	6	88	0.00	0.0	1.788	0.031	0	0	0	0
OH660	OH659	B	4ACSR	7.54Y	118.7	0.00	3.26	1.69	1	11	6	88	0.00	0.0	1.821	0.033	3	2	0	0
OH661	OH660	B	4ACSR	7.54Y	118.7	0.00	3.26	1.21	1	8	4	89	0.00	0.0	1.862	0.041	0	0	0	0
OH662	OH661	B	4ACSR	7.54Y	118.7	0.00	3.26	1.21	1	8	4	89	0.00	0.0	1.877	0.015	8	4	0	0
OH663	OH655	B	4ACSR	7.54Y	118.8	0.01	3.25	6.03	4	40	21	89	0.00	0.0	1.689	0.022	0	0	0	0
OH664	OH663	B	4ACSR	7.54Y	118.8	0.00	3.25	1.21	1	8	4	89	0.00	0.0	1.717	0.028	8	4	0	0
OH666	OH663	B	4ACSR	7.54Y	118.7	0.01	3.25	4.83	3	32	17	88	0.00	0.0	1.725	0.036	8	4	0	0
OH667	OH666	B	4ACSR	7.54Y	118.7	0.00	3.26	3.62	3	24	12	89	0.00	0.0	1.760	0.035	8	4	0	0
OH668	OH667	B	4ACSR	7.54Y	118.7	0.00	3.26	2.41	2	16	8	89	0.00	0.0	1.793	0.032	8	4	0	0
OH669	OH668	B	4ACSR	7.54Y	118.7	0.00	3.26	1.21	1	8	4	89	0.00	0.0	1.838	0.045	8	4	0	0
OH670	OH646	A	2ACSR	7.59Y	119.5	-0.00	2.48	-0.01	0	0	0		0.00	0.0	1.540	0.029	0	0	0	0
		B		7.55Y	118.8	0.00	3.18	1.20	1	8	4	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	1.67	1	12	4	95					0	0	0	0
OH671	OH670	A	2ACSR	7.59Y	119.5	-0.00	2.48	-0.01	0	0	0		0.00	0.0	1.569	0.030	0	0	0	0
		B		7.55Y	118.8	0.00	3.18	1.20	1	8	4	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	1.67	1	12	4	95					0	0	0	0
OH672	OH671	A	2ACSR	7.59Y	119.5	-0.00	2.48	-0.00	0	0	0		0.00	0.0	1.598	0.029	0	0	0	0
		B		7.55Y	118.8	0.00	3.18	1.20	1	8	4	89					8	4	0	0
		C		7.52Y	118.5	0.00	3.51	1.67	1	12	4	95					0	0	0	0
OH673	OH672	A	2ACSR	7.59Y	119.5	-0.00	2.48	-0.00	0	0	0		0.00	0.0	1.613	0.015	0	0	0	0
		B		7.55Y	118.8	0.00	3.18	-0.00	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.00	3.51	1.67	1	12	4	94					12	4	0	0
OCD628	OH626	A	50A QR	7.59Y	119.5	0.00	2.47	6.84	14	50	14	96	0.00	0.0	1.400	0.000	0	0	0	0
		B		7.55Y	118.9	0.00	3.13	7.34	15	49	25	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	8.54	17	61	21	95					0	0	0	0
OH629	OCD628	A	4ACSR	7.59Y	119.5	0.01	2.48	6.84	5	50	14	96	0.01	0.0	1.438	0.038	0	0	0	0
		B		7.55Y	118.9	0.01	3.14	7.34	5	49	25	89					0	0	0	0
		C		7.52Y	118.5	0.01	3.51	8.54	6	61	21	95					0	0	0	0
OH630	OH629	A	4ACSR	7.59Y	119.5	0.01	2.49	6.84	5	50	14	96	0.02	0.0	1.495	0.057	0	0	0	0
		B		7.55Y	118.8	0.01	3.16	6.14	4	41	21	89					0	0	0	0
		C		7.52Y	118.5	0.02	3.53	8.54	6	61	21	95					0	0	0	0
OH631	OH630	A	4ACSR	7.59Y	119.5	0.01	2.50	6.85	5	50	14	96	0.01	0.0	1.528	0.034	0	0	0	0
		B		7.55Y	118.8	0.01	3.16	6.14	4	41	21	89					0	0	0	0
		C		7.52Y	118.5	0.01	3.54	8.54	6	61	21	95					0	0	0	0
OH632	OH631	A	4ACSR	7.59Y	119.5	0.00	2.50	2.01	1	15	4	97	0.00	0.0	1.571	0.043	0	0	0	0
		B		7.55Y	118.8	0.00	3.17	1.81	1	12	6	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.55	2.51	2	18	6	95					0	0	0	0
OH633	OH632	A	4ACSR	7.59Y	119.5	0.00	2.50	2.01	1	15	4	97	0.00	0.0	1.616	0.044	0	0	0	0
		B		7.55Y	118.8	0.00	3.17	1.81	1	12	6	89					0	0	0	0
		C		7.52Y	118.4	0.00	3.55	2.51	2	18	6	95					0	0	0	0
OH711	OH633	A	4ACSR	7.59Y	119.5	0.00	2.51	2.01	1	15	4	97	0.00	0.0	1.640	0.024	15	4	0	0
		B		7.55Y	118.8	0.00	3.17	1.81	1	12	6	89					12	6	0	0
		C		7.52Y	118.4	0.00	3.55	2.51	2	18	6	94					18	6	0	0
OH634	OH631	A	4ACSR	7.59Y	119.5	0.01	2.51	4.83	3	35	10	96	0.01	0.0	1.579	0.051	0	0	0	0
		B		7.55Y	118.8	0.01	3.17	4.34	3	29	15	89					0	0	0	0
		C		7.52Y	118.4	0.01	3.55	6.03	4	43	15	95					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH635	OH634	A	4ACSR	7.59Y	119.5	0.01	2.51	4.83	3	35	10	96	0.01	0.0	1.627	0.047	6	2	0	0
		B		7.55Y	118.8	0.01	3.18	4.34	3	29	15	89					5	3	0	0
		C		7.52Y	118.4	0.01	3.57	6.03	4	43	15	94					7	2	0	0
OH636	OH635	A	4ACSR	7.59Y	119.5	0.00	2.52	4.03	3	29	9	96	0.00	0.0	1.667	0.041	20	6	0	0
		B		7.54Y	118.8	0.00	3.18	3.62	3	24	12	89					16	8	0	0
		C		7.52Y	118.4	0.01	3.57	5.03	4	36	12	94					24	8	0	0
OH638	OH636	A	4ACSR	7.59Y	119.5	0.00	2.52	1.34	1	10	3	96	0.00	0.0	1.701	0.034	10	3	0	0
		B		7.54Y	118.8	0.00	3.18	1.21	1	8	4	89					8	4	0	0
		C		7.52Y	118.4	0.00	3.57	1.68	1	12	4	94					12	4	0	0
OH640	OH629	B	4ACSR	7.55Y	118.9	0.00	3.15	1.20	1	8	4	89	0.00	0.0	1.492	0.054	0	0	0	0
OH641	OH640	B	4ACSR	7.55Y	118.9	0.00	3.15	1.20	1	8	4	89	0.00	0.0	1.546	0.055	8	4	0	0
OCD600	OH532	A	50A QR	7.59Y	119.5	0.00	2.47	3.36	7	24	7	96	0.00	0.0	1.046	0.000	0	0	0	0
		C		7.53Y	118.6	0.00	3.40	3.34	7	24	8	95					0	0	0	0
OH601	OCD600	A	2ACSR	7.59Y	119.5	0.00	2.47	-0.00	0	0	0		0.00	0.0	1.051	0.005	0	0	0	0
		C		7.53Y	118.6	0.00	3.40	-0.00	0	0	0						0	0	0	0
OH602	OCD600	A	2/0ACSR	7.59Y	119.5	0.00	2.47	3.36	1	24	7	96	0.00	0.0	1.074	0.028	0	0	0	0
		C		7.53Y	118.6	0.00	3.40	3.34	1	24	8	95					0	0	0	0
OH603	OH602	A	2/0ACSR	7.59Y	119.5	0.00	2.47	3.36	1	24	7	96	0.00	0.0	1.101	0.027	0	0	0	0
		C		7.53Y	118.6	0.00	3.40	3.34	1	24	8	95					0	0	0	0
OH604	OH603	A	2/0ACSR	7.59Y	119.5	0.00	2.47	0.81	0	6	2	95	0.00	0.0	1.129	0.028	6	2	0	0
		C		7.53Y	118.6	0.00	3.40	-0.00	0	0	0						0	0	0	0
OH605	OH603	A	2/0ACSR	7.59Y	119.5	0.00	2.47	0.40	0	3	1	95	0.00	0.0	1.131	0.029	3	1	0	0
		C		7.53Y	118.6	0.00	3.40	-0.00	0	0	0						0	0	0	0
OH606	OH605	A	2/0ACSR	7.59Y	119.5	0.00	2.47	-0.00	0	0	0		0.00	0.0	1.158	0.027	0	0	0	0
		C		7.53Y	118.6	0.00	3.40	-0.00	0	0	0						0	0	0	0
OH607	OH603	A	2/0ACSR	7.59Y	119.5	0.00	2.47	2.15	1	16	5	95	0.00	0.0	1.134	0.033	6	2	0	0
		C		7.53Y	118.6	0.00	3.41	3.34	1	24	8	95					0	0	0	0
OH608	OH607	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	1.34	0	10	3	96	0.00	0.0	1.167	0.033	0	0	0	0
		C		7.53Y	118.6	0.00	3.41	3.34	1	24	8	95					0	0	0	0
OH609	OH608	A	2/0ACSR	7.59Y	119.5	0.00	2.47	1.34	0	10	3	96	0.00	0.0	1.191	0.024	10	3	0	0
		C		7.53Y	118.6	0.00	3.41	-0.00	0	0	0						0	0	0	0
OH610	OH608	C	2/0ACSR	7.53Y	118.6	0.00	3.41	1.67	1	12	4	95	0.00	0.0	1.191	0.024	12	4	0	0
OH611	OH608	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	-0.00	0	0	0		0.00	0.0	1.196	0.029	0	0	0	0
		C		7.53Y	118.6	0.00	3.41	1.67	1	12	4	95					0	0	0	0
OH612	OH611	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	-0.00	0	0	0		0.00	0.0	1.219	0.023	0	0	0	0
		C		7.53Y	118.6	0.00	3.41	1.67	1	12	4	94					12	4	0	0
OH615	OH612	A	2/0ACSR	7.59Y	119.5	0.00	2.47	-0.00	0	0	0		0.00	0.0	1.232	0.013	0	0	0	0
		C		7.53Y	118.6	0.00	3.41	-0.00	0	0	0						0	0	0	0
OCD576	OH529	A	50A QR	7.59Y	119.5	0.00	2.47	4.83	10	35	10	96	0.00	0.0	0.956	0.000	0	0	0	0
		B		7.56Y	119.1	0.00	2.93	3.60	7	24	12	89					0	0	0	0
		C		7.53Y	118.6	0.00	3.35	2.66	5	19	6	95					0	0	0	0
OH577	OCD576	A	2ACSR	7.59Y	119.5	0.00	2.48	4.83	3	35	10	96	0.00	0.0	0.990	0.034	0	0	0	0
		B		7.56Y	119.1	0.00	2.93	3.60	2	24	12	89					8	4	0	0
		C		7.53Y	118.6	0.00	3.35	2.66	1	19	6	95					0	0	0	0
OH578	OH577	A	2ACSR	7.59Y	119.5	0.00	2.48	4.83	3	35	10	96	0.00	0.0	1.010	0.020	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	2.39	1	16	8	89					0	0	0	0
		C		7.53Y	118.6	0.00	3.35	2.67	1	19	6	95					0	0	0	0
OH579	OH578	A	2ACSR	7.59Y	119.5	0.00	2.48	-0.00	0	0	0		0.00	0.0	1.033	0.023	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.35	-0.00	0	0	0						0	0	0	0
OH580	OH578	A	2ACSR	7.59Y	119.5	0.01	2.49	4.83	3	35	10	96	0.00	0.0	1.064	0.054	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	2.39	1	16	8	89					0	0	0	0
		C		7.53Y	118.6	0.00	3.36	2.67	1	19	6	95					0	0	0	0

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Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH581	OH580	A	2ACSR	7.59Y	119.5	0.00	2.49	4.83	3	35	10	96	0.00	0.0	1.083	0.019	10	3	0	0
		B		7.56Y	119.1	0.00	2.94	2.40	1	16	8	89					0	0	0	0
		C		7.53Y	118.6	0.00	3.36	2.67	1	19	6	95					0	0	0	0
OH582	OH581	A	2ACSR	7.59Y	119.5	0.00	2.49	3.49	2	25	7	96	0.00	0.0	1.107	0.024	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	2.40	1	16	8	89					0	0	0	0
		C		7.53Y	118.6	0.00	3.36	2.67	1	19	6	95					0	0	0	0
OH583	OH582	A	2ACSR	7.59Y	119.5	0.00	2.49	3.49	2	25	7	96	0.00	0.0	1.140	0.033	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	2.40	1	16	8	89					0	0	0	0
		C		7.53Y	118.6	0.00	3.36	2.67	1	19	6	95					0	0	0	0
OH584	OH583	A	2ACSR	7.59Y	119.5	0.00	2.50	1.34	1	10	3	96	0.00	0.0	1.162	0.023	0	0	0	0
OH585	OH584	A	2ACSR	7.59Y	119.5	0.00	2.50	1.34	1	10	3	96	0.00	0.0	1.177	0.014	10	3	0	0
OH586	OH583	A	2ACSR	7.59Y	119.5	0.00	2.50	2.14	1	16	4	97	0.00	0.0	1.195	0.055	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	2.40	1	16	8	89					8	4	0	0
		C		7.53Y	118.6	0.00	3.37	2.67	1	19	6	95					0	0	0	0
OH587	OH586	A	2ACSR	7.59Y	119.5	0.00	2.50	2.14	1	16	4	97	0.00	0.0	1.223	0.028	6	2	0	0
		B		7.56Y	119.1	0.00	2.94	1.20	1	8	4	89					0	0	0	0
		C		7.53Y	118.6	0.00	3.37	2.67	1	19	7	95					0	0	0	0
OH588	OH587	A	2ACSR	7.59Y	119.5	0.00	2.50	1.34	1	10	3	96	0.00	0.0	1.260	0.037	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	1.20	1	8	4	89					0	0	0	0
		C		7.53Y	118.6	0.00	3.37	2.67	1	19	7	95					0	0	0	0
OH589	OH588	A	2ACSR	7.59Y	119.5	0.00	2.50	1.34	1	10	3	96	0.00	0.0	1.288	0.028	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	1.20	1	8	4	89					8	4	0	0
		C		7.53Y	118.6	0.00	3.38	2.67	1	19	7	95					0	0	0	0
OH590	OH589	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.01	0	0	0		0.00	0.0	1.311	0.023	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.38	2.67	1	19	7	95					0	0	0	0
OH591	OH590	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.01	0	0	0		0.00	0.0	1.321	0.010	0	0	0	0
		B		7.56Y	119.1	0.00	2.95	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.38	2.67	1	19	7	95					0	0	0	0
OH593	OH591	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.00	0	0	0	100	0.00	0.0	1.341	0.020	0	0	0	0
		B		7.56Y	119.1	0.00	2.95	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.38	1.67	1	12	4	95					12	4	0	0
OH592	OH593	A	2ACSR	7.59Y	119.5	0.00	2.50	-0.00	0	0	0	100	0.00	0.0	1.359	0.017	0	0	0	0
		B		7.56Y	119.1	0.00	2.95	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.38	-0.00	0	0	0						0	0	0	0
OH594	OH591	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.00	0	0	0		0.00	0.0	1.360	0.038	0	0	0	0
		C		7.53Y	118.6	0.00	3.38	1.00	1	7	2	95					0	0	0	0
OH595	OH594	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.00	0	0	0		0.00	0.0	1.387	0.027	0	0	0	0
		C		7.53Y	118.6	0.00	3.38	1.00	1	7	2	94					7	2	0	0
OH596	OH589	B	2ACSR	7.56Y	119.1	0.00	2.94	-0.00	0	0	0		0.00	0.0	1.298	0.010	0	0	0	0
OH597	OH596	B	2ACSR	7.56Y	119.1	0.00	2.94	-0.00	0	0	0		0.00	0.0	1.331	0.034	0	0	0	0
OH598	OH589	A	2ACSR	7.59Y	119.5	0.00	2.50	1.34	1	10	3	96	0.00	0.0	1.315	0.027	10	3	0	0
OH599	OH598	A	2ACSR	7.59Y	119.5	0.00	2.50	-0.00	0	0	0	100	0.00	0.0	1.343	0.028	0	0	0	0
OCD569	OH527	A	50A QR	7.59Y	119.5	0.00	2.47	1.61	3	12	3	97	0.00	0.0	0.891	0.000	0	0	0	0
OH570	OCD569	A	2ACSR	7.59Y	119.5	0.00	2.47	1.61	1	12	3	97	0.00	0.0	0.923	0.032	0	0	0	0
OH573	OH570	A	2ACSR	7.59Y	119.5	0.00	2.47	1.61	1	12	3	97	0.00	0.0	0.959	0.035	6	2	0	0
OH574	OH573	A	2ACSR	7.59Y	119.5	0.00	2.48	0.81	0	6	2	95	0.00	0.0	0.987	0.029	0	0	0	0
OH575	OH574	A	2ACSR	7.59Y	119.5	0.00	2.48	0.81	0	6	2	95	0.00	0.0	1.014	0.026	6	2	0	0
OCD534	OH525	A	50A QR	7.59Y	119.5	0.00	2.47	-0.02	0	0	0		0.00	0.0	0.828	0.000	0	0	0	0
		B		7.56Y	119.1	0.00	2.87	5.52	11	37	19	89					0	0	0	0
		C		7.54Y	118.7	0.00	3.28	2.67	5	19	6	95					0	0	0	0

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Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----------Element----------- KW	KVAR	Cons On	Cons Thru
OH535	OCD534	A	2ACSR	7.59Y	119.5	-0.00	2.47	-0.02	0	0	0		0.00	0.0	0.861	0.033	0	0	0	0
		B		7.56Y	119.1	0.01	2.87	5.52	3	37	19	89					0	0	0	0
		C		7.54Y	118.7	0.00	3.28	2.67	1	19	6	95					0	0	0	0
OH536	OH535	A	2ACSR	7.59Y	119.5	-0.00	2.46	-0.02	0	0	0		0.00	0.0	0.897	0.035	0	0	0	0
		B		7.56Y	119.1	0.01	2.88	5.53	3	37	19	89					16	8	0	0
		C		7.54Y	118.7	0.00	3.28	2.67	1	19	6	95					0	0	0	0
OH537	OH536	A	2ACSR	7.59Y	119.5	-0.00	2.46	-0.01	0	0	0		0.00	0.0	0.939	0.042	0	0	0	0
		B		7.56Y	119.1	0.00	2.88	3.12	2	21	11	89					0	0	0	0
		C		7.54Y	118.7	0.00	3.28	2.67	1	19	7	95					7	2	0	0
OH538	OH537	A	2ACSR	7.59Y	119.5	-0.00	2.46	-0.01	0	0	0		0.00	0.0	0.969	0.030	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	3.12	2	21	11	89					0	0	0	0
		C		7.54Y	118.7	0.00	3.28	1.67	1	12	4	95					0	0	0	0
OH539	OH538	A	2ACSR	7.59Y	119.5	-0.00	2.46	-0.01	0	0	0		0.00	0.0	0.995	0.026	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	3.12	2	21	11	89					0	0	0	0
		C		7.54Y	118.7	-0.00	3.28	1.67	1	12	4	95					12	4	0	0
OH540	OH539	B	2ACSR	7.56Y	119.1	0.00	2.89	3.13	2	21	11	89	0.00	0.0	1.022	0.027	0	0	0	0
OH541	OH540	B	2ACSR	7.56Y	119.1	0.00	2.89	1.92	1	13	7	88	0.00	0.0	1.045	0.023	8	4	0	0
OH542	OH541	B	2ACSR	7.56Y	119.1	0.00	2.89	0.72	0	5	2	93	0.00	0.0	1.068	0.023	5	3	0	0
OH543	OH540	B	2ACSR	7.56Y	119.1	0.00	2.89	1.20	1	8	4	89	0.00	0.0	1.062	0.040	8	4	0	0
OH544	OH539	A	2ACSR	7.59Y	119.5	0.00	2.46	-0.01	0	0	0		0.00	0.0	1.022	0.027	0	0	0	0
		B		7.56Y	119.1	-0.00	2.89	-0.01	0	0	0						0	0	0	0
		C		7.54Y	118.7	0.00	3.28	-0.01	0	0	0						0	0	0	0
OH545	OH544	A	2ACSR	7.59Y	119.5	0.00	2.46	-0.00	0	0	0		0.00	0.0	1.057	0.035	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	-0.00	0	0	0						0	0	0	0
		C		7.54Y	118.7	0.00	3.28	-0.00	0	0	0						0	0	0	0
OH546	OH545	A	2ACSR	7.59Y	119.5	0.00	2.46	-0.00	0	0	0		0.00	0.0	1.083	0.026	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	-0.00	0	0	0						0	0	0	0
		C		7.54Y	118.7	0.00	3.28	-0.00	0	0	0						0	0	0	0
SW550-B	OH546	A	Open	7.59Y	119.5	0.00	2.46	0.00	0	0	0	100	0.00	0.0	1.083	0.000	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	0.00	0	0	0	100					0	0	0	0
		C		7.54Y	118.7	0.00	3.28	0.00	0	0	0	100					0	0	0	0
OCD555	OH525	B	50A QR	7.56Y	119.1	0.00	2.87	6.73	13	45	23	89	0.00	0.0	0.828	0.000	0	0	0	0
OH559	OCD555	B	2ACSR	7.56Y	119.1	0.01	2.87	6.73	4	45	23	89	0.00	0.0	0.856	0.028	0	0	0	0
OH560	OH559	B	2ACSR	7.56Y	119.1	0.01	2.89	6.73	4	45	23	89	0.00	0.0	0.905	0.049	0	0	0	0
OH561	OH560	B	2ACSR	7.56Y	119.1	0.01	2.89	6.73	4	45	23	89	0.00	0.0	0.941	0.036	8	4	0	0
OH562	OH561	B	2ACSR	7.56Y	119.1	0.01	2.90	5.53	3	37	19	89	0.00	0.0	0.976	0.035	5	3	0	0
OH563	OH562	B	2ACSR	7.56Y	119.1	0.01	2.91	4.81	3	32	17	88	0.00	0.0	1.020	0.044	8	4	0	0
OH564	OH563	B	2ACSR	7.56Y	119.1	0.00	2.91	-0.00	0	0	0		0.00	0.0	1.049	0.029	0	0	0	0
OH565	OH563	B	2ACSR	7.56Y	119.1	0.01	2.91	3.61	2	24	12	89	0.00	0.0	1.064	0.044	0	0	0	0
OH566	OH565	B	2ACSR	7.56Y	119.1	0.00	2.91	3.61	2	24	12	89	0.00	0.0	1.092	0.028	8	4	0	0
OH567	OH566	B	2ACSR	7.56Y	119.1	0.00	2.92	2.41	1	16	8	89	0.00	0.0	1.129	0.037	8	4	0	0
OH568	OH567	B	2ACSR	7.56Y	119.1	0.00	2.92	1.20	1	8	4	89	0.00	0.0	1.166	0.037	8	4	0	0
OCD552	OH522	A	50A QR	7.59Y	119.5	0.00	2.46	0.81	2	6	2	95	0.00	0.0	0.757	0.000	0	0	0	0
OH553	OCD552	A	2ACSR	7.59Y	119.5	0.00	2.46	0.81	0	6	2	95	0.00	0.0	0.790	0.034	0	0	0	0
OH554	OH553	A	2ACSR	7.59Y	119.5	0.00	2.46	0.81	0	6	2	95	0.00	0.0	0.807	0.016	6	2	0	0
OCD761	OH27	A	40A QA	7.59Y	119.6	0.00	2.44	0.26	0	2	1	89	0.00	0.0	0.514	0.000	0	0	0	0
		B		7.58Y	119.4	0.00	2.63	0.00	0	0	0	100					0	0	0	0
		C		7.55Y	118.9	0.00	3.09	0.00	0	0	0	100					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH455	OCD761	A	#2 ACSR 6/	7.59Y	119.6	0.00	2.44	0.26	0	2	1	89	0.00	0.0	0.542	0.028	2	1	0	0
OH28	OH27	A	#2/0 ACSR	7.59Y	119.5	0.03	2.47	110.76	41	804	248	96	0.53	0.0	0.536	0.023	0	0	0	0
		B		7.58Y	119.3	0.02	2.65	94.99	35	681	235	95					0	0	0	0
		C		7.55Y	118.9	0.04	3.13	107.71	40	758	295	93					0	0	0	0
OH53	OH28	A	#2 ACSR 6/	7.59Y	119.5	0.00	2.48	10.37	6	75	25	95	0.01	0.0	0.573	0.037	75	25	0	0
		B		7.58Y	119.3	0.01	2.66	12.82	7	92	30	95					92	30	0	0
		C		7.55Y	118.9	0.00	3.13	10.08	6	72	24	95					72	24	0	0
OH29	OH28	A	#2/0 ACSR	7.59Y	119.5	0.00	2.48	97.29	36	706	215	96	0.05	0.0	0.539	0.003	0	0	0	0
		B		7.58Y	119.3	0.00	2.65	78.34	29	561	196	94					0	0	0	0
		C		7.55Y	118.9	0.00	3.13	92.62	34	649	259	93					0	0	0	0
OH32	OH29	A	#2 ACSR 6/	7.59Y	119.5	0.06	2.53	97.29	54	706	215	96	0.81	0.0	0.563	0.024	0	0	0	0
		B		7.58Y	119.3	0.04	2.69	78.34	44	560	196	94					0	0	0	0
		C		7.54Y	118.8	0.06	3.19	92.62	51	649	259	93					0	0	0	0
OH33	OH32	A	#2 ACSR 6/	7.58Y	119.4	0.06	2.60	97.29	54	706	215	96	0.92	0.0	0.589	0.027	0	0	0	0
		B		7.57Y	119.3	0.04	2.74	78.34	44	560	196	94					0	0	0	0
		C		7.54Y	118.8	0.06	3.25	92.62	51	649	259	93					0	0	0	0
OH54	OH33	A	#4 ACSR 6/	7.58Y	119.4	-0.00	2.59	-0.00	0	0	0		0.00	0.0	0.605	0.016	0	0	0	0
		B		7.57Y	119.3	0.00	2.74	-0.00	0	0	0						0	0	0	0
		C		7.54Y	118.7	0.00	3.25	10.09	7	72	24	95					72	24	0	0
OH34	OH33	A	#2 ACSR 6/	7.58Y	119.3	0.09	2.69	97.29	54	706	215	96	1.16	0.1	0.626	0.036	0	0	0	0
		B		7.57Y	119.2	0.06	2.79	78.34	44	560	196	94					0	0	0	0
		C		7.54Y	118.7	0.07	3.32	82.55	46	576	235	93					0	0	0	0
SW756-B	OH34	A	Closed	7.58Y	119.3	0.00	2.69	81.72	0	593	178	96	0.00	0.0	0.626	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.79	59.10	0	421	150	94					0	0	0	0
		C		7.54Y	118.7	0.00	3.32	67.46	0	468	200	92					0	0	0	0
SW756-A	SW756-B	A	Closed	7.58Y	119.3	0.00	2.69	81.72	0	593	178	96	0.00	0.0	0.626	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.79	59.10	0	421	150	94					0	0	0	0
		C		7.54Y	118.7	0.00	3.32	67.46	0	468	200	92					0	0	0	0
OH186	SW756-A	A	#2 ACSR 6/	7.57Y	119.2	0.07	2.75	81.72	45	593	178	96	0.70	0.0	0.659	0.033	0	0	0	0
		B		7.57Y	119.2	0.04	2.83	59.10	33	421	150	94					0	0	0	0
		C		7.53Y	118.6	0.06	3.39	67.46	37	468	200	92					0	0	0	0
OH185	OH186	A	#2 ACSR 6/	7.57Y	119.2	0.03	2.79	48.82	27	358	93	97	0.21	0.0	0.690	0.030	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	14.82	8	105	38	94					5	2	0	0
		C		7.53Y	118.6	0.04	3.43	44.00	24	311	115	94					0	0	0	0

----------- Feeder No. 164 (OCD758) Beginning with Device OCD758 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OCD758	OH185	A	560 VWE	7.57Y	119.2	0.00	2.79	48.82	0	358	93	97	0.00	0.0	0.690	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	14.15	0	101	36	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.43	44.00	0	311	115	94					0	0	0	0
OH183	OCD758	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.80	48.82	27	358	93	97	0.08	0.0	0.702	0.012	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	14.15	8	101	36	94					0	0	0	0
		C		7.53Y	118.6	0.02	3.45	44.00	24	311	115	94					0	0	0	0
OCD182	OH183	A	50A QR	7.57Y	119.2	0.00	2.80	30.24	60	226	38	99	0.00	0.0	0.702	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	8.73	17	63	21	95					0	0	0	0
		C		7.53Y	118.6	0.00	3.45	20.08	40	150	20	99					0	0	0	0
OH91	OCD182	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.80	15.76	9	119	0	100	0.01	0.0	0.712	0.010	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	6.42	4	46	15	95					0	0	0	0
		C		7.53Y	118.5	0.01	3.45	18.02	10	135	12	100					0	0	0	0
OH90	OH91	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.81	15.76	9	119	0	100	0.02	0.0	0.734	0.022	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	6.42	4	46	15	95					0	0	0	0
		C		7.53Y	118.5	0.01	3.46	18.02	10	135	12	100					0	0	0	0
OH89	OH90	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.81	15.76	9	119	0	100	0.02	0.0	0.753	0.020	0	0	0	0
		B		7.57Y	119.2	0.00	2.84	6.42	4	46	15	95					0	0	0	0
		C		7.53Y	118.5	0.01	3.47	18.02	10	135	12	100					15	8	0	0
OH88	OH89	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.82	15.76	9	119	0	100	0.01	0.0	0.770	0.017	0	0	0	0
		B		7.57Y	119.2	0.00	2.84	6.42	4	46	15	95					0	0	0	0
		C		7.53Y	118.5	0.01	3.48	15.99	9	120	4	100					7	4	0	0

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----------Element----------- KW	KVAR	Cons On	Cons Thru
OH87	OH88	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.83	15.76	9	119	0	100	0.02	0.0	0.799	0.029	0	0	0	0
		B		7.57Y	119.2	0.00	2.84	6.42	4	46	15	95					0	0	0	0
		C		7.53Y	118.5	0.01	3.50	14.99	8	113	0	-100					0	0	0	0
OH86	OH87	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.83	15.76	9	119	0	100	0.01	0.0	0.806	0.007	0	0	0	0
		B		7.57Y	119.2	0.00	2.84	6.42	4	46	15	95					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	14.99	8	113	0	-100					0	0	0	0
OH65	OH86	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.83	15.76	9	119	0	100	0.01	0.0	0.822	0.016	0	0	0	0
		B		7.57Y	119.2	0.00	2.84	6.12	3	44	14	95					0	0	0	0
		C		7.52Y	118.5	0.01	3.51	14.45	8	109	0	-100					0	0	0	0
OH66	OH65	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.84	15.76	9	119	0	100	0.01	0.0	0.836	0.013	0	0	0	0
		B		7.57Y	119.2	0.00	2.84	6.12	3	44	14	95					7	2	0	0
		C		7.52Y	118.5	0.01	3.51	14.45	8	109	0	-100					0	0	0	0
OH67	OH66	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.84	15.76	9	119	0	100	0.01	0.0	0.853	0.017	11	0	0	0
		B		7.57Y	119.2	0.00	2.85	5.10	3	37	12	95					4	1	0	0
		C		7.52Y	118.5	0.01	3.52	14.45	8	109	0	-100					6	0	0	0
OH68	OH67	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.85	14.32	8	108	0	100	0.01	0.0	0.874	0.021	0	0	0	0
		B		7.57Y	119.2	0.00	2.85	4.48	2	32	11	95					0	0	0	0
		C		7.52Y	118.5	0.01	3.53	13.63	8	103	0	-100					0	0	0	0
OH69	OH68	A	#2 ACSR 6/	7.57Y	119.1	0.00	2.85	14.32	8	108	0	100	0.01	0.0	0.886	0.012	0	0	0	0
		B		7.57Y	119.2	0.00	2.85	4.49	2	32	11	95					0	0	0	0
		C		7.52Y	118.5	0.00	3.53	13.63	8	103	0	-100					31	0	0	0
OH70	OH69	A	#2 ACSR 6/	7.57Y	119.1	0.00	2.85	14.32	8	108	0	100	0.01	0.0	0.898	0.012	0	0	0	0
		B		7.57Y	119.2	0.00	2.85	4.49	2	32	11	95					0	0	0	0
		C		7.52Y	118.5	0.00	3.54	9.54	5	72	0	-100					0	0	0	0
OH71	OH70	A	#2 ACSR 6/	7.57Y	119.1	0.01	2.86	14.32	8	108	0	100	0.02	0.0	0.935	0.037	0	0	0	0
		B		7.57Y	119.2	0.00	2.85	4.49	2	32	11	95					0	0	0	0
		C		7.52Y	118.5	0.01	3.55	9.54	5	72	0	-100					0	0	0	0
OH72	OH71	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	9.55	5	72	0	100	0.00	0.0	0.955	0.021	0	0	0	0
		B		7.57Y	119.2	-0.00	2.85	2.04	1	15	5	95					0	0	0	0
		C		7.52Y	118.4	0.00	3.55	6.82	4	51	0	-100					31	0	0	0
OH73	OH72	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	9.55	5	72	0	100	0.00	0.0	0.958	0.002	36	0	0	0
		B		7.57Y	119.2	-0.00	2.85	2.04	1	15	5	95					15	5	0	0
		C		7.52Y	118.4	0.00	3.55	2.73	2	21	0	-100					21	0	0	0
OH74	OH73	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	4.78	3	36	0	100	0.00	0.0	0.959	0.001	0	0	0	0
		B		7.57Y	119.2	-0.00	2.85	-0.00	0	0	0						0	0	0	0
		C		7.52Y	118.4	0.00	3.55	-0.00	0	0	0						0	0	0	0
OH75	OH74	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	4.78	3	36	0	100	0.00	0.0	0.982	0.023	0	0	0	0
		C		7.52Y	118.4	0.00	3.55	-0.00	0	0	0						0	0	0	0
OH76	OH75	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.88	4.77	3	36	0	100	0.00	0.0	1.007	0.025	0	0	0	0
OH77	OH76	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.88	4.77	3	36	0	100	0.00	0.0	1.031	0.024	18	0	0	0
OH715	OH77	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.88	2.39	1	18	0	100	0.00	0.0	1.051	0.021	18	0	0	0
OH78	OH71	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	4.77	3	36	0	100	0.00	0.0	0.954	0.019	0	0	0	0
		B		7.57Y	119.2	0.00	2.85	2.45	1	18	6	95					0	0	0	0
		C		7.52Y	118.5	0.00	3.55	2.73	2	21	0	-100					0	0	0	0
OH79	OH78	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	4.77	3	36	0	100	0.00	0.0	0.970	0.016	0	0	0	0
		B		7.57Y	119.1	0.00	2.85	2.45	1	18	6	95					0	0	0	0
		C		7.52Y	118.5	0.00	3.55	2.73	2	21	0	-100					0	0	0	0
OH180	OH79	B	#2 ACSR 6/	7.57Y	119.1	0.00	2.85	1.02	1	7	2	96	0.00	0.0	0.994	0.024	7	2	0	0
OH181	OH79	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	2.39	1	18	0	100	0.00	0.0	1.006	0.036	18	0	0	0
		B		7.57Y	119.1	0.00	2.85	1.02	1	7	2	95					7	2	0	0
		C		7.52Y	118.4	0.00	3.55	1.36	1	10	0	-100					10	0	0	0
OH80	OH79	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	2.39	1	18	0	100	0.00	0.0	0.997	0.027	0	0	0	0
		B		7.57Y	119.2	-0.00	2.85	0.41	0	3	1	95					3	1	0	0
		C		7.52Y	118.4	0.00	3.55	1.36	1	10	0	-100					0	0	0	0

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru
OH81	OH80	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	2.39	1	18	0	100	0.00	0.0	1.020	0.023	18	0	0	0
		B		7.57Y	119.2	-0.00	2.85	-0.00	0	0	0						0	0	0	0
		C		7.52Y	118.4	0.00	3.55	1.36	1	10	0	-100					10	0	0	0
OH85	OH86	A	#2 ACSR 6/	7.57Y	119.2	-0.00	2.83	-0.00	0	0	0	100	0.00	0.0	0.824	0.018	0	0	0	0
		B		7.57Y	119.2	0.00	2.84	0.30	0	2	1	95					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	0.55	0	4	0	-100					0	0	0	0
OH84	OH85	A	#2 ACSR 6/	7.57Y	119.2	-0.00	2.83	-0.00	0	0	0	100	0.00	0.0	0.841	0.017	0	0	0	0
		B		7.57Y	119.2	0.00	2.84	0.31	0	2	1	95					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	0.55	0	4	0	-100					0	0	0	0
OH61	OH84	B	#2 ACSR 6/	7.57Y	119.2	0.00	2.84	0.31	0	2	1	89	0.00	0.0	0.853	0.012	2	1	0	0
		C		7.52Y	118.5	0.00	3.50	0.55	0	4	0	-100					4	0	0	0
OH92	OCD182	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.81	14.95	8	106	38	94	0.00	0.0	0.710	0.008	3	1	0	0
		B		7.57Y	119.2	-0.00	2.83	2.32	1	17	6	95					0	0	0	0
		C		7.53Y	118.6	0.00	3.45	2.22	1	15	8	89					0	0	0	0
OH93	OH92	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.82	14.53	8	103	37	94	0.01	0.0	0.742	0.032	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	2.32	1	17	6	95					0	0	0	0
		C		7.53Y	118.5	0.00	3.45	2.22	1	15	8	89					0	0	0	0
OH332	OH93	C	#2 ACSR 6/	7.53Y	118.5	0.00	3.45	0.67	0	4	2	89	0.00	0.0	0.771	0.028	4	2	0	0
OH94	OH93	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.83	14.53	8	103	37	94	0.01	0.0	0.769	0.027	10	4	0	0
		B		7.57Y	119.2	-0.00	2.82	2.32	1	17	6	95					0	0	0	0
		C		7.53Y	118.5	0.00	3.45	1.55	1	10	5	89					0	0	0	0
OH95	OH94	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.84	13.13	7	93	34	94	0.01	0.0	0.795	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	2.32	1	17	6	95					0	0	0	0
		C		7.53Y	118.5	0.00	3.45	1.55	1	10	5	89					0	0	0	0
OH334	OH95	A	#2 ACSR 6/	7.57Y	119.1	0.01	2.85	13.13	7	93	34	94	0.01	0.0	0.818	0.023	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	2.32	1	17	6	95					12	4	0	0
		C		7.53Y	118.5	0.00	3.45	1.55	1	10	5	89					0	0	0	0
OH335	OH334	A	#2 ACSR 6/	7.57Y	119.1	0.01	2.86	13.13	7	93	34	94	0.01	0.0	0.846	0.028	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	0.66	0	5	1	95					0	0	0	0
		C		7.53Y	118.5	0.00	3.46	1.55	1	10	5	89					0	0	0	0
OH336	OH335	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.87	13.13	7	93	34	94	0.01	0.0	0.871	0.025	20	7	0	0
		B		7.57Y	119.2	-0.00	2.81	0.66	0	5	2	95					0	0	0	0
		C		7.53Y	118.5	0.00	3.46	1.55	1	10	5	89					0	0	0	0
OH337	OH336	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.88	10.34	6	74	27	94	0.00	0.0	0.883	0.012	0	0	0	0
		B		7.57Y	119.2	-0.00	2.81	0.66	0	5	2	95					0	0	0	0
		C		7.53Y	118.5	0.00	3.46	1.55	1	10	5	89					0	0	0	0
OH338	OH337	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.88	10.34	6	74	27	94	0.00	0.0	0.894	0.011	0	0	0	0
		B		7.57Y	119.2	-0.00	2.81	0.66	0	5	2	95					0	0	0	0
		C		7.53Y	118.5	0.00	3.46	1.55	1	10	5	89					0	0	0	0
OH339	OH338	A	#2 ACSR 6/	7.56Y	119.1	0.02	2.90	10.34	6	74	27	94	0.01	0.0	0.943	0.049	4	1	0	0
		B		7.57Y	119.2	-0.00	2.81	0.66	0	5	2	95					5	2	0	0
		C		7.53Y	118.5	0.00	3.46	1.55	1	10	5	89					3	2	0	0
OH340	OH339	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.90	1.40	1	10	4	93	0.00	0.0	0.958	0.015	10	4	0	0
		C		7.53Y	118.5	0.00	3.46	-0.00	0	0	0						0	0	0	0
OH341	OH339	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.90	8.38	5	60	21	94	0.00	0.0	0.965	0.023	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.02	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.46	1.11	1	7	4	89					0	0	0	0
OH342	OH341	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.91	8.38	5	60	21	94	0.00	0.0	0.992	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.02	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.11	1	7	4	89					0	0	0	0
OH343	OH342	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.92	8.38	5	60	22	94	0.00	0.0	1.018	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.11	1	7	4	89					0	0	0	0
OH344	OH343	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.92	8.39	5	60	22	94	0.00	0.0	1.051	0.033	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.11	1	7	4	89					7	4	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru
OH345	OH344	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.93	8.39	5	60	22	94	0.00	0.0	1.073	0.022	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.02	0	0	0						0	0	0	0
OH346	OH345	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.94	6.99	4	50	18	94	0.00	0.0	1.111	0.038	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.01	0	0	0						0	0	0	0
OH347	OH346	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.94	6.99	4	50	18	94	0.00	0.0	1.139	0.028	10	4	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.01	0	0	0						0	0	0	0
OH348	OH347	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	-0.00	0	0	0	100	0.00	0.0	1.172	0.033	0	0	0	0
		B		7.57Y	119.2	0.00	2.79	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH349	OH347	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	2.80	2	20	7	94	0.00	0.0	1.166	0.027	0	0	0	0
OH350	OH349	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	2.80	2	20	7	94	0.00	0.0	1.187	0.021	0	0	0	0
OH352	OH350	A	#2 ACSR 6/	7.56Y	119.0	0.00	2.95	2.80	2	20	7	94	0.00	0.0	1.221	0.034	10	4	0	0
OH353	OH352	A	#2 ACSR 6/	7.56Y	119.0	0.00	2.95	1.40	1	10	4	93	0.00	0.0	1.244	0.022	10	4	0	0
OH354	OH347	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	2.80	2	20	7	94	0.00	0.0	1.177	0.038	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.01	0	0	0						0	0	0	0
OH355	OH354	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	2.80	2	20	7	94	0.00	0.0	1.206	0.029	20	7	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH358	OH355	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	-0.00	0	0	0		0.00	0.0	1.219	0.013	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH359	OH358	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	-0.00	0	0	0		0.00	0.0	1.247	0.028	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH360	OH345	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	1.40	1	10	4	93	0.00	0.0	1.096	0.022	10	4	0	0
		C		7.53Y	118.5	0.00	3.47	-0.01	0	0	0						0	0	0	0
OH361	OH360	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	-0.00	0	0	0		0.00	0.0	1.159	0.063	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OCD759	OH183	A	40A QA	7.57Y	119.2	0.00	2.80	18.89	0	132	55	92	0.00	0.0	0.702	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	5.43	0	38	16	92					0	0	0	0
		C		7.53Y	118.6	0.00	3.45	24.84	0	161	96	86					0	0	0	0
OH108	OCD759	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.81	18.89	10	132	55	92	0.04	0.0	0.726	0.024	4	2	0	0
		B		7.57Y	119.2	-0.00	2.83	5.43	3	38	16	92					0	0	0	0
		C		7.53Y	118.5	0.02	3.47	24.84	14	161	96	86					0	0	0	0
OH109	OH108	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.82	18.34	10	128	53	92	0.03	0.0	0.744	0.018	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	5.43	3	38	16	92					0	0	0	0
		C		7.53Y	118.5	0.01	3.48	24.84	14	161	96	86					11	6	0	0
OH110	OH109	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.82	18.34	10	128	53	92	0.01	0.0	0.755	0.011	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	5.43	3	38	16	92					0	0	0	0
		C		7.53Y	118.5	0.01	3.49	23.18	13	150	89	86					0	0	0	0
OH111	OH110	A	#4 ACSR 6/	7.57Y	119.2	0.01	2.83	13.83	10	97	40	92	0.03	0.0	0.782	0.028	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	5.44	4	38	16	92					0	0	0	0
		C		7.52Y	118.5	0.02	3.51	16.56	12	107	64	86					0	0	0	0
OH371	OH111	A	#4 ACSR 6/	7.57Y	119.2	0.01	2.84	13.83	10	97	40	92	0.02	0.0	0.797	0.015	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	5.44	4	38	16	92					19	8	0	0
		C		7.52Y	118.5	0.01	3.52	16.56	12	107	64	86					0	0	0	0
OH372	OH371	A	#4 ACSR 6/	7.57Y	119.1	0.01	2.85	13.83	10	97	40	92	0.03	0.0	0.826	0.029	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	2.71	2	19	8	93					0	0	0	0
		C		7.52Y	118.5	0.02	3.54	16.56	12	107	64	86					0	0	0	0
OH373	OH372	A	#4 ACSR 6/	7.57Y	119.1	0.00	2.86	13.83	10	97	40	92	0.01	0.0	0.834	0.009	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	2.71	2	19	8	93					0	0	0	0
		C		7.52Y	118.5	0.01	3.55	16.56	12	107	64	86					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH374	OH373	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.87	13.83	10	97	40	92	0.03	0.0	0.861	0.027	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	2.71	2	19	8	93					0	0	0	0
		C		7.52Y	118.4	0.02	3.57	16.56	12	107	64	86					6	4	0	0
OH375	OH374	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.88	13.83	10	97	40	92	0.03	0.0	0.889	0.027	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	2.71	2	19	8	93					0	0	0	0
		C		7.52Y	118.4	0.02	3.59	15.57	11	101	60	86					0	0	0	0
OH376	OH375	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.89	13.83	10	97	40	92	0.03	0.0	0.920	0.032	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	2.71	2	19	8	93					19	8	0	0
		C		7.52Y	118.4	0.02	3.61	15.57	11	101	60	86					0	0	0	0
OH377	OH376	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.91	13.83	10	97	40	92	0.03	0.0	0.945	0.025	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.06	0	0	0						0	0	0	0
		C		7.52Y	118.4	0.02	3.63	15.57	11	101	60	86					6	4	0	0
OH378	OH377	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.92	13.83	10	97	40	92	0.02	0.0	0.970	0.025	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.06	0	0	0						0	0	0	0
		C		7.52Y	118.4	0.02	3.65	14.58	10	94	56	86					0	0	0	0
OH379	OH378	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.93	13.84	10	97	40	92	0.02	0.0	0.995	0.025	6	2	0	0
		B		7.57Y	119.2	-0.00	2.81	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.02	3.67	14.58	10	94	56	86					0	0	0	0
OH380	OH379	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.93	-0.00	0	0	0		0.00	0.0	1.002	0.007	0	0	0	0
		B		7.57Y	119.2	0.00	2.81	-0.00	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.00	3.67	1.00	1	6	4	86					6	4	0	0
OH381	OH379	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.94	13.01	9	91	38	92	0.02	0.0	1.014	0.019	0	0	0	0
		B		7.57Y	119.2	-0.00	2.81	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.68	13.58	10	88	52	86					0	0	0	0
OH382	OH381	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.94	13.01	9	91	38	92	0.01	0.0	1.027	0.013	0	0	0	0
		B		7.57Y	119.2	-0.00	2.81	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.69	13.58	10	88	52	86					0	0	0	0
OH383	OH382	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.01	0	0	0		0.00	0.0	1.039	0.011	0	0	0	0
		C		7.51Y	118.3	0.00	3.69	4.31	3	28	17	86					0	0	0	0
OH386	OH383	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.01	0	0	0		0.00	0.0	1.055	0.016	0	0	0	0
		C		7.51Y	118.3	0.00	3.69	4.31	3	28	17	86					4	3	0	0
OH387	OH386	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.01	0	0	0		0.00	0.0	1.069	0.014	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	3.65	3	24	14	86					0	0	0	0
OH388	OH387	C	#4 ACSR 6/	7.51Y	118.3	0.00	3.70	1.00	1	6	4	83	0.00	0.0	1.087	0.018	6	4	0	0
OH389	OH387	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.01	0	0	0		0.00	0.0	1.096	0.027	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	2.65	2	17	10	86					0	0	0	0
OH390	OH389	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.00	0	0	0		0.00	0.0	1.114	0.018	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	2.65	2	17	10	86					3	2	0	0
OH391	OH390	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.00	0	0	0		0.00	0.0	1.140	0.026	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	2.16	2	14	8	86					3	2	0	0
OH392	OH391	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.00	0	0	0		0.00	0.0	1.170	0.030	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	1.66	1	11	6	86					11	6	0	0
OH385	OH382	A	#4 ACSR 6/	7.56Y	119.0	0.01	2.96	13.02	9	91	38	92	0.02	0.0	1.057	0.029	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.70	9.28	7	60	35	86					4	3	0	0
OH393	OH385	A	#4 ACSR 6/	7.56Y	119.0	0.01	2.97	13.02	9	91	38	92	0.01	0.0	1.076	0.019	4	2	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.71	8.61	6	56	33	86					0	0	0	0
OH394	OH393	A	#4 ACSR 6/	7.56Y	119.0	0.01	2.98	12.47	9	87	36	92	0.02	0.0	1.103	0.027	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.72	8.61	6	56	33	86					0	0	0	0
OH395	OH394	A	#4 ACSR 6/	7.56Y	119.0	0.01	2.99	12.47	9	87	36	92	0.01	0.0	1.129	0.027	14	6	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.04	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.73	8.61	6	56	33	86					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH396	OH395	A	#4 ACSR 6/	7.56Y	119.0	0.01	3.00	10.41	7	73	30	92	0.01	0.0	1.157	0.028	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.04	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.74	8.62	6	56	33	86					0	0	0	0
OH397	OH396	A	#4 ACSR 6/	7.56Y	119.0	0.00	3.00	10.41	7	73	30	92	0.00	0.0	1.165	0.007	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.04	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.00	3.75	8.62	6	56	33	86					0	0	0	0
OH398	OH397	A	#4 ACSR 6/	7.56Y	119.0	0.02	3.02	10.41	7	73	30	92	0.02	0.0	1.211	0.047	10	4	0	0
		B		7.57Y	119.2	-0.01	2.78	-0.04	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.02	3.77	8.62	6	56	33	86					0	0	0	0
OH399	OH398	A	#4 ACSR 6/	7.56Y	119.0	0.00	3.02	1.37	1	10	4	93	0.00	0.0	1.249	0.038	10	4	0	0
		B		7.57Y	119.2	-0.00	2.78	-0.00	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.00	3.77	1.00	1	6	4	86					6	4	0	0
OH400	OH398	A	#4 ACSR 6/	7.55Y	119.0	0.01	3.02	7.67	5	54	22	93	0.01	0.0	1.235	0.023	0	0	0	0
		B		7.57Y	119.2	-0.00	2.78	-0.03	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.01	3.78	7.62	5	49	29	86					0	0	0	0
OH401	OH400	A	#4 ACSR 6/	7.55Y	119.0	0.00	3.02	-0.00	0	0	0	100	0.00	0.0	1.260	0.025	0	0	0	0
OH403	OH400	A	#4 ACSR 6/	7.55Y	119.0	0.01	3.03	7.67	5	54	22	93	0.01	0.0	1.275	0.041	0	0	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.03	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.02	3.79	7.62	5	49	29	86					0	0	0	0
OH404	OH403	A	#4 ACSR 6/	7.55Y	119.0	0.01	3.04	7.67	5	54	22	93	0.01	0.0	1.300	0.024	0	0	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.03	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.01	3.80	7.63	5	49	29	86					0	0	0	0
OH405	OH404	A	#4 ACSR 6/	7.55Y	118.9	0.01	3.05	7.68	5	53	22	92	0.01	0.0	1.336	0.037	0	0	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.03	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.81	7.63	5	49	29	86					0	0	0	0
OH406	OH405	A	#4 ACSR 6/	7.55Y	118.9	0.01	3.06	7.68	5	53	22	92	0.01	0.0	1.357	0.021	0	0	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.03	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.82	7.63	5	49	29	86					0	0	0	0
OH407	OH406	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.06	6.85	5	48	20	92	0.01	0.0	1.380	0.023	4	2	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.83	7.63	5	49	29	86					4	3	0	0
OH410	OH407	A	#4 ACSR 6/	7.55Y	118.9	0.01	3.07	6.31	5	44	18	93	0.01	0.0	1.405	0.025	0	0	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.84	6.96	5	45	27	86					6	4	0	0
OH411	OH410	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.07	6.31	5	44	18	93	0.00	0.0	1.426	0.021	0	0	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.84	5.97	4	39	23	86					0	0	0	0
OH412	OH411	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.07	-0.00	0	0	0	100	0.00	0.0	1.436	0.010	0	0	0	0
OH413	OH411	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.07	0.82	1	6	2	95	0.00	0.0	1.447	0.021	6	2	0	0
OH414	OH411	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.07	5.48	4	38	16	92	0.00	0.0	1.452	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.85	5.97	4	39	23	86					0	0	0	0
OH415	OH414	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	5.48	4	38	16	92	0.00	0.0	1.480	0.028	4	2	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.86	5.97	4	38	23	86					0	0	0	0
OH416	OH415	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	0.82	1	6	2	95	0.00	0.0	1.508	0.028	0	0	0	0
		C		7.50Y	118.1	0.00	3.86	-0.00	0	0	0						0	0	0	0
OH417	OH416	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	0.82	1	6	2	95	0.00	0.0	1.533	0.025	6	2	0	0
		C		7.50Y	118.1	0.00	3.86	-0.00	0	0	0						0	0	0	0
OH418	OH417	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	-0.00	0	0	0		0.00	0.0	1.548	0.015	0	0	0	0
		C		7.50Y	118.1	0.00	3.86	-0.00	0	0	0						0	0	0	0
OH419	OH415	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	4.11	3	29	12	92	0.00	0.0	1.502	0.022	0	0	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.87	5.97	4	39	23	86					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts -Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH420	OH419	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	4.11	3	29	12	92	0.00	0.0	1.532	0.030	0	0	0	0
		B		7.57Y	119.2	-0.00	2.75	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.88	5.97	4	38	23	86					0	0	0	0
OH421	OH420	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	1.37	1	10	4	93	0.00	0.0	1.555	0.023	10	4	0	0
OH422	OH420	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	2.74	2	19	8	92	0.00	0.0	1.563	0.031	10	4	0	0
		B		7.57Y	119.2	-0.00	2.75	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.88	5.98	4	38	23	86					11	6	0	0
OH423	OH422	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	1.37	1	10	4	93	0.00	0.0	1.587	0.024	0	0	0	0
		B		7.57Y	119.2	-0.00	2.75	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.00	3.88	1.66	1	11	6	86					0	0	0	0
OH424	OH423	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	1.37	1	10	4	93	0.00	0.0	1.605	0.018	10	4	0	0
		B		7.57Y	119.2	-0.00	2.75	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.00	3.89	1.66	1	11	6	86					0	0	0	0
OH425	OH424	A	#4 ACSR 6/	7.55Y	118.9	-0.00	3.09	-0.00	0	0	0		0.00	0.0	1.638	0.033	0	0	0	0
		B		7.57Y	119.2	0.00	2.75	-0.00	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.00	3.89	1.66	1	11	6	86					11	6	0	0
OH426	OH425	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	-0.00	0	0	0		0.00	0.0	1.670	0.033	0	0	0	0
		B		7.57Y	119.2	0.00	2.75	-0.00	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.00	3.89	-0.00	0	0	0						0	0	0	0
OH427	OH422	C	#4 ACSR 6/	7.50Y	118.1	0.01	3.89	2.66	2	17	10	86	0.00	0.0	1.610	0.047	0	0	0	0
OH428	OH427	C	#4 ACSR 6/	7.50Y	118.1	0.00	3.89	2.66	2	17	10	86	0.00	0.0	1.625	0.015	0	0	0	0
OH429	OH428	C	#4 ACSR 6/	7.50Y	118.1	0.00	3.89	2.66	2	17	10	86	0.00	0.0	1.675	0.050	11	6	0	0
OH430	OH429	C	#4 ACSR 6/	7.50Y	118.1	0.00	3.90	1.00	1	6	4	83	0.00	0.0	1.725	0.050	6	4	0	0
OH408	OH406	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.06	0.82	1	6	2	95	0.00	0.0	1.377	0.019	6	2	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.00	0	0	0						0	0	0	0
OH112	OH110	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.82	4.51	3	32	13	93	0.00	0.0	0.781	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.50	6.62	5	43	26	86					0	0	0	0
OH362	OH112	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.83	4.11	3	29	12	92	0.00	0.0	0.791	0.010	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.00	3.50	6.62	5	43	26	86					0	0	0	0
OH363	OH362	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.83	4.11	3	29	12	92	0.00	0.0	0.808	0.017	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.51	6.62	5	43	26	86					0	0	0	0
OH364	OH363	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.83	4.11	3	29	12	92	0.00	0.0	0.830	0.022	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.51	6.62	5	43	26	86					21	13	0	0
OH365	OH364	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.83	4.11	3	29	12	92	0.00	0.0	0.878	0.048	19	8	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.52	3.31	2	21	13	86					0	0	0	0
OH366	OH365	A	#4 ACSR 6/	7.57Y	119.2	-0.00	2.83	1.37	1	10	4	93	0.00	0.0	0.917	0.038	10	4	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.52	3.31	2	21	13	86					0	0	0	0
OH367	OH366	C	#4 ACSR 6/	7.52Y	118.5	0.00	3.53	1.66	1	11	6	88	0.00	0.0	0.938	0.022	11	6	0	0
OH368	OH366	A	#4 ACSR 6/	7.57Y	119.2	-0.00	2.83	-0.00	0	0	0	100	0.00	0.0	0.953	0.036	0	0	0	0
		B		7.57Y	119.2	0.00	2.82	-0.00	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.00	3.53	1.66	1	11	6	86					11	6	0	0
OH369	OH112	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.82	0.41	0	3	1	95	0.00	0.0	0.815	0.034	3	1	0	0
OH188	OH186	A	#2 ACSR 6/	7.57Y	119.2	0.01	2.77	32.98	18	235	85	94	0.08	0.0	0.675	0.016	0	0	0	0
		B		7.57Y	119.2	0.02	2.85	44.28	25	316	112	94					0	0	0	0
		C		7.53Y	118.6	0.01	3.39	23.61	13	156	84	88					0	0	0	0

----------- Feeder No. 154 (OCD757) Beginning with Device OCD757 -----------

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----------Element----------- KW	KVAR	Cons On	Cons Thru
OCD757	OH188	A	560 VWE	7.57Y	119.2	0.00	2.77	32.98	0	235	85	94	0.00	0.0	0.675	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.85	44.28	0	316	112	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.39	23.61	0	156	85	88					0	0	0	0
OH189	OCD757	A	#2 ACSR 6/	7.57Y	119.2	0.03	2.79	32.98	18	235	85	94	0.14	0.0	0.702	0.028	0	0	0	0
		B		7.56Y	119.1	0.03	2.88	44.28	25	316	112	94					0	0	0	0
		C		7.53Y	118.6	0.01	3.40	23.61	13	156	85	88					0	0	0	0
OH190	OH189	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.79	-0.00	0	0	0		0.00	0.0	0.727	0.025	0	0	0	0
		B		7.56Y	119.1	0.00	2.88	-0.00	0	0	0						0	0	0	0
OH192	OH189	B	#2 ACSR 6/	7.56Y	119.1	0.00	2.88	0.67	0	5	2	93	0.00	0.0	0.724	0.022	5	2	0	0
OH193	OH189	A	#2 ACSR 6/	7.57Y	119.2	0.03	2.82	32.98	18	235	85	94	0.15	0.0	0.732	0.030	10	4	0	0
		B		7.56Y	119.1	0.03	2.91	43.62	24	311	110	94					0	0	0	0
		C		7.53Y	118.6	0.01	3.41	23.61	13	156	85	88					0	0	0	0
OH194	OH193	C	#2 ACSR 6/	7.53Y	118.6	0.00	3.41	3.36	2	22	12	88	0.00	0.0	0.751	0.019	22	12	0	0
OH195	OH193	A	#2 ACSR 6/	7.57Y	119.2	0.02	2.85	31.58	18	225	81	94	0.12	0.0	0.757	0.025	0	0	0	0
		B		7.56Y	119.1	0.03	2.94	43.62	24	311	110	94					0	0	0	0
		C		7.53Y	118.6	0.01	3.42	20.25	11	134	72	88					0	0	0	0
OH196	OH195	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.85	2.80	2	20	7	94	0.00	0.0	0.776	0.019	20	7	0	0
		C		7.53Y	118.6	0.00	3.42	2.24	1	15	8	88					15	8	0	0
OCD197	OH195	B	50A QR	7.56Y	119.1	0.00	2.94	6.66	13	47	17	94	0.00	0.0	0.757	0.000	0	0	0	0
OH198	OCD197	B	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	6.66	4	47	17	94	0.00	0.0	0.782	0.025	12	4	0	0
OH199	OH198	B	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	4.99	3	36	13	94	0.00	0.0	0.804	0.022	0	0	0	0
OH200	OH199	B	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	4.99	3	36	13	94	0.00	0.0	0.823	0.019	12	4	0	0
OH201	OH200	B	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	3.33	2	24	8	95	0.00	0.0	0.835	0.013	0	0	0	0
OH202	OH201	B	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	1.66	1	12	4	95	0.00	0.0	0.863	0.028	12	4	0	0
OH204	OH201	B	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	1.66	1	12	4	95	0.00	0.0	0.865	0.030	12	4	0	0
OH205	OH195	A	#2 ACSR 6/	7.57Y	119.1	0.02	2.87	28.79	16	205	74	94	0.09	0.0	0.782	0.025	0	0	0	0
		B		7.56Y	119.0	0.02	2.96	36.96	21	263	93	94					12	4	0	0
		C		7.53Y	118.6	0.01	3.43	18.01	10	119	64	88					7	4	0	0
OH206	OH205	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.87	28.79	16	205	74	94	0.03	0.0	0.791	0.009	4	1	0	0
		B		7.56Y	119.0	0.01	2.96	35.30	20	252	89	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.43	16.89	9	112	60	88					0	0	0	0
OH207	OH206	A	#2 ACSR 6/	7.56Y	119.1	0.03	2.90	28.23	16	201	73	94	0.11	0.0	0.824	0.034	0	0	0	0
		B		7.56Y	119.0	0.03	2.99	35.30	20	251	89	94					0	0	0	0
		C		7.53Y	118.6	0.01	3.44	16.89	9	112	60	88					0	0	0	0
OH208	OH207	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.92	28.23	16	201	73	94	0.06	0.0	0.843	0.019	20	7	0	0
		B		7.56Y	119.0	0.02	3.01	35.30	20	251	89	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.44	16.89	9	112	60	88					0	0	0	0
OH219	OH208	A	#2 ACSR 6/	7.56Y	119.1	0.02	2.93	14.25	8	101	37	94	0.03	0.0	0.880	0.036	0	0	0	0
		B		7.55Y	119.0	0.02	3.03	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.44	5.59	3	37	20	88					0	0	0	0
OH220	OH219	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.95	14.26	8	101	37	94	0.03	0.0	0.910	0.031	10	4	0	0
		B		7.55Y	119.0	0.01	3.04	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.44	5.59	3	37	20	88					0	0	0	0
OCD221	OH220	C	50A QR	7.53Y	118.6	0.00	3.44	3.36	7	22	12	88	0.00	0.0	0.910	0.000	0	0	0	0
OH222	OCD221	C	#2 ACSR 6/	7.53Y	118.6	0.00	3.44	3.36	2	22	12	88	0.00	0.0	0.948	0.038	0	0	0	0
OH225	OH222	C	#2 ACSR 6/	7.53Y	118.6	0.00	3.45	3.36	2	22	12	88	0.00	0.0	0.966	0.018	0	0	0	0
OH226	OH225	C	#2 ACSR 6/	7.53Y	118.6	0.00	3.45	3.36	2	22	12	88	0.00	0.0	0.988	0.022	7	4	0	0
OH227	OH226	C	#2 ACSR 6/	7.53Y	118.6	0.00	3.45	1.12	1	7	4	87	0.00	0.0	1.015	0.027	7	4	0	0
OH229	OH226	C	#2 ACSR 6/	7.53Y	118.6	0.00	3.45	1.12	1	7	4	87	0.00	0.0	1.009	0.021	7	4	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH230	OH220	A	#2 ACSR 6/	7.56Y	119.0	0.01	2.96	12.86	7	91	33	94	0.02	0.0	0.932	0.021	0	0	0	0
		B		7.55Y	118.9	0.01	3.05	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.00	3.44	2.24	1	15	8	88					0	0	0	0
OH231	OH230	A	#2 ACSR 6/	7.56Y	119.0	0.01	2.97	12.86	7	91	33	94	0.02	0.0	0.959	0.027	0	0	0	0
		B		7.55Y	118.9	0.01	3.06	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.00	3.43	2.24	1	15	8	88					0	0	0	0
OH232	OH231	A	#2 ACSR 6/	7.56Y	119.0	0.01	2.98	12.86	7	91	33	94	0.02	0.0	0.985	0.026	0	0	0	0
		B		7.55Y	118.9	0.01	3.08	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.00	3.43	2.24	1	15	8	88					15	8	0	0
SW550-A	OH232	A	Open	7.56Y	119.0	0.00	2.98	0.00	0	0	0	100	0.00	0.0	0.985	0.000	0	0	0	0
		B		7.55Y	118.9	0.00	3.08	0.00	0	0	0	100					0	0	0	0
		C		7.53Y	118.6	0.00	3.43	0.00	0	0	0	100					0	0	0	0
OH233	OH232	A	#2 ACSR 6/	7.56Y	119.0	0.01	2.99	12.86	7	91	33	94	0.02	0.0	1.010	0.025	0	0	0	0
		B		7.55Y	118.9	0.01	3.09	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.00	3.43	-0.01	0	0	0						0	0	0	0
OH234	OH233	A	#2 ACSR 6/	7.56Y	119.0	0.02	3.01	12.86	7	91	33	94	0.03	0.0	1.045	0.035	10	4	0	0
		B		7.55Y	118.9	0.02	3.11	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.01	3.42	-0.00	0	0	0						0	0	0	0
OH235	OH234	A	#2 ACSR 6/	7.56Y	119.0	0.01	3.02	11.46	6	81	29	94	0.02	0.0	1.072	0.027	0	0	0	0
		B		7.55Y	118.9	0.01	3.12	19.00	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.01	3.41	-0.00	0	0	0						0	0	0	0
OCD236	OH235	A	50A QR	7.56Y	119.0	0.00	3.02	4.47	9	32	11	95	0.00	0.0	1.072	0.000	0	0	0	0
		B		7.55Y	118.9	0.00	3.12	14.00	28	100	35	94					0	0	0	0
OH238	OCD236	A	#2 ACSR 6/	7.56Y	119.0	0.00	3.02	4.47	2	32	11	95	0.01	0.0	1.096	0.023	0	0	0	0
		B		7.55Y	118.9	0.01	3.13	14.00	8	100	35	94					0	0	0	0
OH239	OH238	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	4.47	2	32	11	95	0.01	0.0	1.117	0.022	0	0	0	0
		B		7.55Y	118.9	0.01	3.14	14.00	8	100	35	94					0	0	0	0
OH240	OH239	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	3.63	2	26	9	94	0.00	0.0	1.148	0.031	0	0	0	0
		B		7.55Y	118.9	0.00	3.14	2.67	1	19	7	94					0	0	0	0
OH241	OH240	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	2.24	1	16	6	94	0.00	0.0	1.188	0.040	0	0	0	0
		B		7.55Y	118.9	0.00	3.14	1.67	1	12	4	94					0	0	0	0
OH242	OH241	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	2.24	1	16	6	94	0.00	0.0	1.219	0.031	10	4	0	0
		B		7.55Y	118.9	0.00	3.14	1.67	1	12	4	94					0	0	0	0
OH247	OH242	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	0.84	0	6	2	95	0.00	0.0	1.247	0.028	6	2	0	0
OH248	OH242	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.14	1.67	1	12	4	95	0.00	0.0	1.235	0.016	0	0	0	0
OH250	OH248	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.14	1.67	1	12	4	95	0.00	0.0	1.269	0.034	12	4	0	0
OH251	OH250	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.14	-0.00	0	0	0		0.00	0.0	1.288	0.019	0	0	0	0
OH252	OH240	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	1.40	1	10	4	93	0.00	0.0	1.175	0.027	10	4	0	0
OH253	OH252	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0	100	0.00	0.0	1.201	0.026	0	0	0	0
OH254	OH240	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.14	1.00	1	7	3	92	0.00	0.0	1.167	0.019	7	3	0	0
OH255	OH239	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	0.84	0	6	2	95	0.00	0.0	1.145	0.028	6	2	0	0
		B		7.55Y	118.9	0.00	3.14	4.83	3	34	12	94					0	0	0	0
OH256	OH255	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.01	0	0	0		0.00	0.0	1.174	0.029	0	0	0	0
		B		7.55Y	118.9	0.00	3.15	4.84	3	34	12	94					0	0	0	0
OH257	OH256	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.01	0	0	0		0.00	0.0	1.204	0.029	0	0	0	0
		B		7.55Y	118.8	0.00	3.15	4.84	3	34	12	94					5	2	0	0
OH258	OH257	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0		0.00	0.0	1.223	0.019	0	0	0	0
		B		7.55Y	118.8	0.00	3.15	4.17	2	30	11	94					12	4	0	0
OH259	OH258	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0		0.00	0.0	1.233	0.010	0	0	0	0
		B		7.55Y	118.8	0.00	3.15	2.50	1	18	6	94					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru
OH260	OH259	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0		0.00	0.0	1.262	0.029	0	0	0	0
		B		7.55Y	118.8	0.00	3.15	2.50	1	18	6	94					18	6	0	0
OH261	OH239	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0		0.00	0.0	1.170	0.052	0	0	0	0
		B		7.55Y	118.9	0.01	3.15	6.50	4	46	16	94					4	1	0	0
OH262	OH261	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.15	6.00	3	43	15	94	0.00	0.0	1.170	0.000	0	0	0	0
OH263	OH262	B	#2 ACSR 6/	7.55Y	118.8	0.01	3.15	6.00	3	43	15	94	0.00	0.0	1.210	0.039	12	4	0	0
OH264	OH263	B	#2 ACSR 6/	7.55Y	118.8	0.01	3.16	4.33	2	31	11	94	0.00	0.0	1.247	0.037	0	0	0	0
OH265	OH264	B	#2 ACSR 6/	7.55Y	118.8	0.01	3.17	4.33	2	31	11	94	0.00	0.0	1.294	0.047	0	0	0	0
OH266	OH265	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.17	4.33	2	31	11	94	0.00	0.0	1.333	0.039	7	3	0	0
OH267	OH266	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.17	3.33	2	24	8	95	0.00	0.0	1.372	0.039	12	4	0	0
OH268	OH267	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.18	1.67	1	12	4	95	0.00	0.0	1.405	0.033	0	0	0	0
OH269	OH268	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.18	1.67	1	12	4	95	0.00	0.0	1.447	0.042	12	4	0	0
OCD270	OH235	A	50A QR	7.56Y	119.0	0.00	3.02	7.00	14	50	18	94	0.00	0.0	1.072	0.000	0	0	0	0
		B		7.55Y	118.9	0.00	3.12	5.00	10	36	13	94					0	0	0	0
OH271	OCD270	A	#2 ACSR 6/	7.56Y	119.0	0.00	3.02	7.00	4	50	18	94	0.00	0.0	1.079	0.007	0	0	0	0
		B		7.55Y	118.9	0.00	3.12	5.00	3	36	13	94					0	0	0	0
OH272	OH271	A	#2 ACSR 6/	7.55Y	119.0	0.01	3.03	7.00	4	50	18	94	0.00	0.0	1.108	0.029	10	4	0	0
		B		7.55Y	118.9	0.00	3.12	5.00	3	36	13	94					0	0	0	0
OH274	OH272	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	5.60	3	40	14	94	0.00	0.0	1.126	0.018	0	0	0	0
		B		7.55Y	118.9	0.00	3.12	5.00	3	36	13	94					0	0	0	0
OH275	OH274	A	#2 ACSR 6/	7.55Y	119.0	0.01	3.04	5.60	3	40	14	94	0.00	0.0	1.167	0.041	20	7	0	0
		B		7.55Y	118.9	0.00	3.13	5.00	3	36	13	94					0	0	0	0
OH276	OH275	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.04	2.80	2	20	7	94	0.00	0.0	1.188	0.021	0	0	0	0
OH277	OH276	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.04	2.80	2	20	7	94	0.00	0.0	1.213	0.025	0	0	0	0
OH278	OH277	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.04	2.80	2	20	7	94	0.00	0.0	1.240	0.026	20	7	0	0
OCD279	OH275	B	25A QA	7.55Y	118.9	0.00	3.13	5.00	20	36	13	94	0.00	0.0	1.167	0.000	0	0	0	0
OH280	OCD279	B	#2 ACSR 6/	7.55Y	118.9	0.01	3.13	5.00	3	36	13	94	0.00	0.0	1.198	0.031	0	0	0	0
OH281	OH280	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.14	5.00	3	36	13	94	0.00	0.0	1.213	0.015	0	0	0	0
OH282	OH281	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.14	5.00	3	36	13	94	0.00	0.0	1.244	0.031	12	4	0	0
OH283	OH282	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.14	3.33	2	24	8	95	0.00	0.0	1.276	0.031	0	0	0	0
OH284	OH283	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.15	3.33	2	24	8	95	0.00	0.0	1.296	0.021	0	0	0	0
OH285	OH284	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.15	3.33	2	24	8	95	0.00	0.0	1.314	0.017	0	0	0	0
OH286	OH285	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.15	3.33	2	24	8	95	0.00	0.0	1.335	0.021	0	0	0	0
OH287	OH286	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.15	3.33	2	24	8	95	0.00	0.0	1.357	0.023	0	0	0	0
OH288	OH287	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.16	3.33	2	24	8	95	0.00	0.0	1.395	0.038	0	0	0	0
OH289	OH288	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.16	3.33	2	24	8	95	0.00	0.0	1.422	0.028	0	0	0	0
OH290	OH289	B	#2 ACSR 6/	7.55Y	118.8	0.00	3.16	3.33	2	24	8	95	0.00	0.0	1.455	0.033	24	8	0	0
OH291	OH208	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.92	8.39	5	60	22	94	0.03	0.0	0.885	0.042	0	0	0	0
		B		7.55Y	119.0	0.02	3.03	15.31	9	109	39	94					0	0	0	0
		C		7.53Y	118.6	0.01	3.45	11.30	6	75	40	88					7	4	0	0
OH292	OH291	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	2.80	2	20	7	94	0.00	0.0	0.933	0.048	0	0	0	0
		B		7.55Y	119.0	0.00	3.03	3.33	2	24	8	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.45	1.68	1	11	6	88					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH293	OH292	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	2.80	2	20	7	94	0.00	0.0	0.947	0.014	20	7	0	0
		B		7.55Y	119.0	0.00	3.03	3.33	2	24	8	94					24	8	0	0
		C		7.53Y	118.6	0.00	3.45	1.68	1	11	6	88					11	6	0	0
OH294	OH293	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	-0.00	0	0	0	100	0.00	0.0	0.969	0.022	0	0	0	0
		B		7.55Y	119.0	0.00	3.03	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.45	-0.00	0	0	0						0	0	0	0
OH295	OH291	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	5.59	3	40	14	94	0.01	0.0	0.917	0.032	0	0	0	0
		B		7.55Y	119.0	0.01	3.04	11.98	7	85	30	94					0	0	0	0
		C		7.53Y	118.5	0.01	3.45	8.50	5	56	30	88					0	0	0	0
OH296	OH295	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	5.59	3	40	14	94	0.00	0.0	0.935	0.018	0	0	0	0
		B		7.55Y	119.0	0.00	3.04	6.99	4	50	18	94					0	0	0	0
		C		7.53Y	118.5	0.00	3.46	8.50	5	56	30	88					0	0	0	0
OH302	OH296	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	5.59	3	40	14	94	0.00	0.0	0.954	0.019	20	7	0	0
		C		7.53Y	118.5	0.00	3.46	3.35	2	22	12	88					0	0	0	0
OH303	OH302	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	2.80	2	20	7	94	0.00	0.0	0.993	0.040	0	0	0	0
		C		7.53Y	118.5	0.00	3.46	3.35	2	22	12	88					15	8	0	0
OH304	OH303	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	2.80	2	20	7	94	0.00	0.0	1.019	0.026	0	0	0	0
		C		7.53Y	118.5	0.00	3.46	1.11	1	7	4	88					0	0	0	0
OH305	OH304	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	2.80	2	20	7	94	0.00	0.0	1.049	0.029	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.11	1	7	4	88					0	0	0	0
OH306	OH305	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	2.80	2	20	7	94	0.00	0.0	1.085	0.036	10	4	0	0
		C		7.53Y	118.5	0.00	3.47	1.12	1	7	4	88					0	0	0	0
OH307	OH306	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	1.40	1	10	4	93	0.00	0.0	1.114	0.029	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.12	1	7	4	88					0	0	0	0
OH308	OH307	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	1.40	1	10	4	93	0.00	0.0	1.140	0.026	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.12	1	7	4	88					0	0	0	0
OH309	OH308	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	1.40	1	10	4	93	0.00	0.0	1.157	0.017	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.12	1	7	4	88					7	4	0	0
OH310	OH309	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	1.40	1	10	4	93	0.00	0.0	1.174	0.017	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH311	OH310	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	1.40	1	10	4	93	0.00	0.0	1.187	0.013	10	4	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH312	OH311	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	-0.00	0	0	0		0.00	0.0	1.199	0.012	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH313	OH296	B	#2 ACSR 6/	7.55Y	119.0	0.01	3.05	6.99	4	50	18	94	0.00	0.0	0.972	0.038	0	0	0	0
		C		7.53Y	118.5	0.00	3.46	5.15	3	34	18	88					0	0	0	0
OH314	OH313	B	#2 ACSR 6/	7.55Y	118.9	0.01	3.06	6.99	4	50	18	94	0.00	0.0	1.009	0.036	24	8	0	0
		C		7.53Y	118.5	0.00	3.46	5.15	3	34	18	88					4	2	0	0
OH315	OH314	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.06	3.66	2	26	9	94	0.00	0.0	1.027	0.019	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	4.48	2	30	16	88					0	0	0	0
OH316	OH315	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.06	3.66	2	26	9	94	0.00	0.0	1.054	0.026	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	4.48	2	30	16	88					0	0	0	0
OH317	OH316	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.06	3.66	2	26	9	94	0.00	0.0	1.073	0.019	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	4.48	2	30	16	88					15	8	0	0
OH318	OH317	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.07	3.66	2	26	9	94	0.00	0.0	1.096	0.023	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	2.24	1	15	8	88					0	0	0	0
OH319	OH318	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.07	3.66	2	26	9	94	0.00	0.0	1.114	0.018	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	2.24	1	15	8	88					0	0	0	0
OH320	OH319	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.07	3.66	2	26	9	94	0.00	0.0	1.142	0.028	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	2.24	1	15	8	88					0	0	0	0
OH321	OH320	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.07	3.66	2	26	9	94	0.00	0.0	1.164	0.022	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	2.24	1	15	8	88					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru
OH322	OH321	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.07	1.00	1	7	2	96	0.00	0.0	1.179	0.015	0	0	0	0
		C		7.53Y	118.5	0.00	3.48	2.24	1	15	8	88					0	0	0	0
OH323	OH322	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.08	1.00	1	7	3	92	0.00	0.0	1.204	0.025	0	0	0	0
		C		7.53Y	118.5	0.00	3.48	2.24	1	15	8	88					0	0	0	0
OH324	OH323	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.08	1.00	1	7	3	92	0.00	0.0	1.218	0.014	0	0	0	0
		C		7.53Y	118.5	0.00	3.48	2.24	1	15	8	88					0	0	0	0
OH325	OH324	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.08	1.00	1	7	3	92	0.00	0.0	1.242	0.024	7	3	0	0
		C		7.53Y	118.5	-0.00	3.48	-0.00	0	0	0						0	0	0	0
OH326	OH325	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.08	-0.00	0	0	0		0.00	0.0	1.267	0.025	0	0	0	0
		C		7.53Y	118.5	0.00	3.48	-0.00	0	0	0						0	0	0	0
OH327	OH324	C	#2 ACSR 6/	7.53Y	118.5	0.00	3.48	2.24	1	15	8	88	0.00	0.0	1.238	0.020	7	4	0	0
OH328	OH327	C	#2 ACSR 6/	7.53Y	118.5	0.00	3.48	1.12	1	7	4	87	0.00	0.0	1.275	0.037	0	0	0	0
OH329	OH328	C	#2 ACSR 6/	7.53Y	118.5	0.00	3.48	1.12	1	7	4	87	0.00	0.0	1.291	0.015	7	4	0	0
OH330	OH321	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.08	2.67	1	19	7	94	0.00	0.0	1.186	0.022	12	4	0	0
OH331	OH330	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.08	1.00	1	7	3	92	0.00	0.0	1.205	0.019	7	3	0	0
OH298	OH295	B	#2 ACSR 6/	7.55Y	119.0	0.00	3.04	5.00	3	36	13	94	0.00	0.0	0.935	0.018	24	8	0	0
OH300	OH298	B	#2 ACSR 6/	7.55Y	119.0	0.00	3.04	1.67	1	12	4	95	0.00	0.0	0.978	0.043	0	0	0	0
OH301	OH300	B	#2 ACSR 6/	7.55Y	119.0	0.00	3.04	1.67	1	12	4	95	0.00	0.0	0.994	0.016	12	4	0	0
OCD209	OH208	A	50A QR	7.56Y	119.1	0.00	2.92	2.79	6	20	7	94	0.00	0.0	0.843	0.000	0	0	0	0
		B		7.56Y	119.0	0.00	3.01	1.00	2	7	2	94					0	0	0	0
OH211	OCD209	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.92	2.79	2	20	7	94	0.00	0.0	0.849	0.005	0	0	0	0
		B		7.56Y	119.0	0.00	3.01	1.00	1	7	2	94					0	0	0	0
OH212	OH211	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.92	2.79	2	20	7	94	0.00	0.0	0.882	0.033	0	0	0	0
		B		7.56Y	119.0	-0.00	3.01	1.00	1	7	2	94					7	3	0	0
OH213	OH212	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.92	2.79	2	20	7	94	0.00	0.0	0.915	0.033	20	7	0	0
		B		7.56Y	119.0	-0.00	3.01	-0.00	0	0	0						0	0	0	0
OH214	OH213	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.92	-0.00	0	0	0		0.00	0.0	0.924	0.009	0	0	0	0
		B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0
OH215	OH214	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.92	-0.00	0	0	0		0.00	0.0	0.950	0.025	0	0	0	0
		B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0
OCD36	OH34	A	75A QA	7.58Y	119.3	0.00	2.69	15.58	21	112	37	95	0.00	0.0	0.626	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.79	19.25	26	138	45	95					0	0	0	0
		C		7.54Y	118.7	0.00	3.32	15.14	20	108	36	95					0	0	0	0
OH37	OCD36	A	#4 ACSR 6/	7.58Y	119.3	0.01	2.69	15.58	11	112	37	95	0.02	0.0	0.650	0.025	112	37	0	0
		B		7.57Y	119.2	0.01	2.80	19.25	14	138	45	95					138	45	0	0
		C		7.54Y	118.7	0.01	3.33	15.14	11	108	36	95					108	36	0	0
OH30	OH28	A	#1/0 ACSR	7.59Y	119.5	0.00	2.47	3.11	1	22	7	95	0.00	0.0	0.576	0.040	22	7	0	0
		B		7.58Y	119.3	0.00	2.65	3.84	2	28	9	95					28	9	0	0
		C		7.55Y	118.9	0.00	3.13	5.04	2	36	12	95					36	12	0	0
OH764	OH27	A	#2/0 ACSR	7.59Y	119.6	0.00	2.44	-0.01	0	0	0		0.00	0.0	0.553	0.039	0	0	0	0
		B		7.58Y	119.4	-0.00	2.63	-0.01	0	0	0						0	0	0	0
		C		7.55Y	118.9	0.00	3.09	-0.01	0	0	0						0	0	0	0
OH765	OH764	A	#2/0 ACSR	7.59Y	119.6	0.00	2.44	-0.00	0	0	0		0.00	0.0	0.611	0.059	0	0	0	0
		B		7.58Y	119.4	0.00	2.63	-0.01	0	0	0						0	0	0	0
		C		7.55Y	118.9	0.00	3.09	-0.00	0	0	0						0	0	0	0

----------- Feeder No. 134 (OCD762) Beginning with Device OCD762 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	-Element- KVAR	Cons On	Cons Thru
OCD762	OH18	A	75A QA	7.63Y	120.1	0.00	1.85	12.54	17	87	39	91	0.00	0.0	0.171	0.000	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	14.78	20	102	49	90					0	0	0	0
		C		7.60Y	119.6	0.00	2.36	22.70	30	157	71	91					0	0	0	0

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
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Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH743	OCD762	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.85	12.54	7	87	39	91	0.02	0.0	0.183	0.012	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	14.78	8	102	49	90					0	0	0	0
		C		7.60Y	119.6	0.01	2.36	22.70	13	157	71	91					0	0	0	0
OH156	OH743	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.86	12.54	7	87	39	91	0.04	0.0	0.211	0.028	3	1	0	0
		B		7.62Y	120.0	0.01	2.04	14.78	8	102	49	90					0	0	0	0
		C		7.60Y	119.6	0.02	2.38	22.70	13	157	71	91					0	0	0	0
OH157	OH156	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.86	12.16	7	85	38	91	0.03	0.0	0.238	0.027	0	0	0	0
		B		7.62Y	119.9	0.01	2.05	14.78	8	102	49	90					0	0	0	0
		C		7.59Y	119.6	0.02	2.40	22.71	13	157	71	91					0	0	0	0
OH158	OH157	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	12.16	7	85	38	91	0.03	0.0	0.262	0.025	0	0	0	0
		B		7.62Y	119.9	0.01	2.06	14.78	8	102	49	90					0	0	0	0
		C		7.59Y	119.6	0.01	2.41	22.71	13	157	71	91					15	6	0	0
OH159	OH158	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	12.16	7	85	38	91	0.03	0.0	0.285	0.022	0	0	0	0
		B		7.62Y	119.9	0.01	2.07	14.78	8	102	49	90					0	0	0	0
		C		7.59Y	119.6	0.01	2.42	20.64	11	142	66	91					0	0	0	0
OH160	OH159	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	12.16	7	85	38	91	0.03	0.0	0.310	0.025	0	0	0	0
		B		7.61Y	119.9	0.01	2.08	14.78	8	102	49	90					0	0	0	0
		C		7.59Y	119.6	0.01	2.44	20.64	11	142	66	91					0	0	0	0
OH161	OH160	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	12.16	7	85	38	91	0.02	0.0	0.331	0.021	2	1	0	0
		B		7.61Y	119.9	0.01	2.09	14.79	8	102	49	90					0	0	0	0
		C		7.59Y	119.6	0.01	2.45	20.64	11	142	66	91					0	0	0	0
OH163	OH161	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.00	0	0	0		0.00	0.0	0.339	0.008	0	0	0	0
		B		7.61Y	119.9	0.00	2.09	-0.00	0	0	0						0	0	0	0
		C		7.59Y	119.6	0.00	2.45	-0.00	0	0	0						0	0	0	0
OH164	OH163	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.00	0	0	0		0.00	0.0	0.346	0.007	0	0	0	0
		B		7.61Y	119.9	0.00	2.09	-0.00	0	0	0						0	0	0	0
		C		7.59Y	119.6	0.00	2.45	-0.00	0	0	0						0	0	0	0
OH165	OH161	A	#2 ACSR 6/	7.63Y	120.1	0.01	1.89	11.91	7	83	38	91	0.05	0.0	0.374	0.043	0	0	0	0
		B		7.61Y	119.9	0.02	2.10	14.79	8	102	49	90					0	0	0	0
		C		7.59Y	119.5	0.02	2.47	20.64	11	142	66	91					0	0	0	0
OH166	OH165	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.89	11.91	7	83	38	91	0.01	0.0	0.383	0.010	0	0	0	0
		B		7.61Y	119.9	0.00	2.11	14.79	8	102	49	90					0	0	0	0
		C		7.59Y	119.5	0.01	2.48	20.64	11	142	66	91					4	2	0	0
OH167	OH166	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.89	-0.00	0	0	0		0.00	0.0	0.409	0.026	0	0	0	0
		B		7.61Y	119.9	0.00	2.11	2.32	1	15	9	87					7	4	0	0
		C		7.59Y	119.5	-0.00	2.48	-0.00	0	0	0						0	0	0	0
OH168	OH167	B	#2 ACSR 6/	7.61Y	119.9	0.00	2.11	1.27	1	8	5	85	0.00	0.0	0.429	0.020	4	2	0	0
OH712	OH168	B	#2 ACSR 6/	7.61Y	119.9	0.00	2.11	0.63	0	4	2	89	0.00	0.0	0.469	0.040	4	2	0	0
OH169	OH166	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.90	11.91	7	83	38	91	0.02	0.0	0.404	0.021	0	0	0	0
		B		7.61Y	119.9	0.01	2.11	12.48	7	86	40	91					0	0	0	0
		C		7.59Y	119.5	0.01	2.49	20.02	11	138	64	91					0	0	0	0
OH170	OH169	A	#2 ACSR 6/	7.63Y	120.1	0.01	1.90	11.91	7	83	38	91	0.03	0.0	0.431	0.027	0	0	0	0
		B		7.61Y	119.9	0.01	2.12	12.48	7	86	40	91					0	0	0	0
		C		7.59Y	119.5	0.01	2.50	20.02	11	138	64	91					0	0	0	0
OH486	OH170	B	#2 ACSR 6/	7.61Y	119.9	0.00	2.12	0.42	0	3	2	83	0.00	0.0	0.461	0.030	3	2	0	0
OH171	OH170	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.91	11.91	7	83	38	91	0.02	0.0	0.456	0.025	0	0	0	0
		B		7.61Y	119.9	0.01	2.13	12.06	7	83	38	91					0	0	0	0
		C		7.59Y	119.5	0.01	2.52	20.02	11	138	64	91					0	0	0	0
OH172	OH171	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.91	11.91	7	83	38	91	0.02	0.0	0.475	0.019	0	0	0	0
		B		7.61Y	119.9	0.01	2.14	12.06	7	83	38	91					4	2	0	0
		C		7.59Y	119.5	0.01	2.53	20.02	11	138	64	91					0	0	0	0
OCD488	OH172	C	50A QR	7.59Y	119.5	0.00	2.53	5.19	10	37	14	94	0.00	0.0	0.475	0.000	0	0	0	0
OH489	OCD488	C	#2 ACSR 6/	7.59Y	119.5	0.00	2.53	5.19	3	37	14	94	0.00	0.0	0.500	0.026	15	6	0	0
OH490	OH489	C	#2 ACSR 6/	7.59Y	119.5	0.00	2.53	3.11	2	22	9	93	0.00	0.0	0.525	0.025	4	2	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH491	OH490	C	#2 ACSR 6/	7.59Y	119.5	0.00	2.54	2.49	1	18	7	93	0.00	0.0	0.547	0.021	9	3	0	0
OH492	OH491	C	#2 ACSR 6/	7.59Y	119.5	0.00	2.54	1.25	1	9	3	95	0.00	0.0	0.564	0.018	9	3	0	0
OH173	OH172	A	#2 ACSR 6/	7.63Y	120.1	0.01	1.92	11.91	7	83	38	91	0.02	0.0	0.502	0.027	0	0	0	0
		B		7.61Y	119.9	0.01	2.14	11.43	6	79	36	91					0	0	0	0
		C		7.59Y	119.5	0.01	2.54	14.85	8	101	50	90					0	0	0	0
OH174	OH173	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.92	11.91	7	83	38	91	0.01	0.0	0.514	0.012	0	0	0	0
		B		7.61Y	119.9	0.00	2.15	11.43	6	79	36	91					0	0	0	0
		C		7.59Y	119.5	0.00	2.54	14.85	8	101	50	90					0	0	0	0
OH175	OH174	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.92	11.91	7	83	38	91	0.01	0.0	0.524	0.010	0	0	0	0
		B		7.61Y	119.9	0.00	2.15	11.43	6	79	36	91					0	0	0	0
		C		7.59Y	119.5	0.00	2.55	14.85	8	101	50	90					0	0	0	0
OH176	OH175	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	11.92	7	83	38	91	0.01	0.0	0.543	0.019	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	11.43	6	79	36	91					0	0	0	0
		C		7.58Y	119.4	0.01	2.55	14.85	8	101	50	90					0	0	0	0
OH493	OH176	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	1.03	1	8	2	97	0.00	0.0	0.569	0.026	5	1	0	0
		B		7.61Y	119.8	0.00	2.15	2.11	1	14	8	87					7	4	0	0
		C		7.58Y	119.4	0.00	2.56	2.07	1	15	6	93					15	6	0	0
OH494	OH493	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	0.39	0	3	1	95	0.00	0.0	0.593	0.024	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.05	1	7	4	87					0	0	0	0
		C		7.58Y	119.4	-0.00	2.55	-0.00	0	0	0						0	0	0	0
OH495	OH494	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	0.39	0	3	1	95	0.00	0.0	0.616	0.023	3	1	0	0
		B		7.61Y	119.8	0.00	2.16	1.06	1	7	4	87					0	0	0	0
OH496	OH495	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	-0.00	0	0	0		0.00	0.0	0.634	0.018	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.06	1	7	4	87					0	0	0	0
OH497	OH496	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	-0.00	0	0	0		0.00	0.0	0.646	0.012	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.06	1	7	4	87					7	4	0	0
OH498	OH176	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	0.26	0	2	1	89	0.00	0.0	0.580	0.037	2	1	0	0
		B		7.61Y	119.8	0.01	2.16	5.70	3	38	21	87					7	4	0	0
		C		7.58Y	119.4	-0.00	2.55	-0.01	0	0	0						0	0	0	0
OH502	OH498	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	-0.00	0	0	0		0.00	0.0	0.615	0.035	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	4.64	3	31	18	87					7	4	0	0
		C		7.59Y	119.4	-0.00	2.55	-0.00	0	0	0						0	0	0	0
OH507	OH502	B	#2 ACSR 6/	7.61Y	119.8	0.00	2.17	3.59	2	24	14	86	0.00	0.0	0.653	0.037	3	2	0	0
OH508	OH507	B	#2 ACSR 6/	7.61Y	119.8	0.00	2.17	3.17	2	21	12	87	0.00	0.0	0.672	0.019	7	4	0	0
OH509	OH508	B	#2 ACSR 6/	7.61Y	119.8	0.00	2.17	2.11	1	14	8	87	0.00	0.0	0.684	0.013	0	0	0	0
OH510	OH509	B	#2 ACSR 6/	7.61Y	119.8	0.00	2.17	2.11	1	14	8	87	0.00	0.0	0.717	0.032	14	8	0	0
OH177	OH176	A	#2 ACSR 6/	7.62Y	120.1	0.01	1.93	10.65	6	73	35	90	0.01	0.0	0.565	0.022	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	3.72	2	28	7	97					0	0	0	0
		C		7.58Y	119.4	0.01	2.56	12.79	7	86	44	89					0	0	0	0
OH178	OH177	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.94	10.65	6	73	35	90	0.01	0.0	0.584	0.020	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	3.72	2	28	7	97					0	0	0	0
		C		7.58Y	119.4	0.01	2.57	12.79	7	86	44	89					0	0	0	0
OH179	OH178	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.94	10.65	6	73	35	90	0.01	0.0	0.600	0.015	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	3.72	2	28	7	97					0	0	0	0
		C		7.58Y	119.4	0.01	2.58	12.79	7	86	44	89					0	0	0	0
SW750-A	OH179	A	Closed	7.62Y	120.1	0.00	1.94	10.65	0	73	35	90	0.00	0.0	0.600	0.000	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	3.72	0	28	7	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.58	12.79	0	86	44	89					0	0	0	0
SW750-B	SW750-A	A	Closed	7.62Y	120.1	0.00	1.94	10.65	0	73	35	90	0.00	0.0	0.600	0.000	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	3.72	0	28	7	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.58	12.79	0	86	44	89					0	0	0	0
OH124	SW750-B	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.94	10.65	6	73	35	90	0.01	0.0	0.615	0.015	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	3.72	2	28	7	97					0	0	0	0
		C		7.58Y	119.4	0.01	2.58	12.79	7	86	44	89					7	4	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH446	OH124	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.95	3.76	2	26	12	91	0.00	0.0	0.638	0.023	17	8	0	0
		B		7.61Y	119.8	-0.00	2.15	1.24	1	9	2	97					9	2	0	0
		C		7.58Y	119.4	0.00	2.59	4.58	3	31	16	89					14	7	0	0
OH447	OH446	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.95	1.25	1	9	4	91	0.00	0.0	0.661	0.023	0	0	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.59	2.50	1	17	9	89					0	0	0	0
OH448	OH447	A	#2 ACSR 6/	7.62Y	120.1	-0.00	1.95	1.25	1	9	4	91	0.00	0.0	0.677	0.015	9	4	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.59	2.50	1	17	9	89					3	1	0	0
OH449	OH448	A	#2 ACSR 6/	7.62Y	120.1	-0.00	1.95	-0.00	0	0	0		0.00	0.0	0.688	0.011	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.59	2.08	1	14	7	89					14	7	0	0
OH450	OH124	C	#2 ACSR 6/	7.58Y	119.4	0.00	2.58	1.45	1	10	5	89	0.00	0.0	0.642	0.027	3	1	0	0
OH451	OH450	C	#2 ACSR 6/	7.58Y	119.4	0.00	2.58	1.04	1	7	4	87	0.00	0.0	0.664	0.022	0	0	0	0
OH452	OH451	C	#2 ACSR 6/	7.58Y	119.4	0.00	2.59	1.04	1	7	4	87	0.00	0.0	0.687	0.022	7	4	0	0
OH453	OH452	C	#2 ACSR 6/	7.58Y	119.4	0.00	2.59	-0.00	0	0	0	100	0.00	0.0	0.707	0.020	0	0	0	0
OH454	OH453	C	#2 ACSR 6/	7.58Y	119.4	0.00	2.59	-0.00	0	0	0	100	0.00	0.0	0.760	0.053	0	0	0	0
OH123	OH124	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.95	6.89	4	47	23	90	0.00	0.0	0.619	0.004	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	2.48	1	18	4	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.58	5.72	3	39	20	89					0	0	0	0
OH122	OH123	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.95	6.89	4	47	23	90	0.00	0.0	0.646	0.027	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	2.48	1	18	4	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.59	5.72	3	39	20	89					0	0	0	0
OH121	OH122	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.95	6.89	4	47	23	90	0.00	0.0	0.655	0.010	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	2.48	1	18	4	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.59	5.72	3	39	20	89					0	0	0	0
OH120	OH121	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.95	6.89	4	47	23	90	0.00	0.0	0.668	0.012	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	2.48	1	18	4	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.59	5.72	3	39	20	89					0	0	0	0
OH119	OH120	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	6.89	4	47	23	90	0.00	0.0	0.690	0.022	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	2.48	1	18	4	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.60	5.72	3	39	20	89					0	0	0	0
OH433	OH119	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	1.88	1	13	6	91	0.00	0.0	0.713	0.024	4	2	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.01	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	2.60	1	18	9	89					4	2	0	0
OH434	OH433	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	1.25	1	9	4	91	0.00	0.0	0.727	0.014	0	0	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	2.08	1	14	7	89					14	7	0	0
OH435	OH434	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	1.25	1	9	4	91	0.00	0.0	0.755	0.028	9	4	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
OH436	OH119	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	5.01	3	34	17	89	0.00	0.0	0.715	0.025	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	2.48	1	18	5	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.60	3.12	2	21	11	89					0	0	0	0
OH437	OH436	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	5.01	3	34	17	89	0.00	0.0	0.727	0.012	17	8	0	0
		B		7.61Y	119.8	0.00	2.16	2.49	1	18	5	97					9	2	0	0
		C		7.58Y	119.4	0.00	2.60	3.12	2	21	11	89					0	0	0	0
OH438	OH437	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	2.51	1	17	8	90	0.00	0.0	0.729	0.002	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.24	1	9	2	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.60	3.12	2	21	11	89					0	0	0	0
OH439	OH438	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	2.51	1	17	8	90	0.00	0.0	0.746	0.017	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.24	1	9	2	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.60	3.12	2	21	11	89					0	0	0	0
OH440	OH439	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.751	0.005	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	-0.00	0	0	0						0	0	0	0

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH441	OH440	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.765	0.014	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	-0.00	0	0	0						0	0	0	0
OH442	OH439	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	2.51	1	17	8	90	0.00	0.0	0.762	0.016	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.24	1	9	2	97					0	0	0	0
		C		7.58Y	119.4	0.00	2.60	3.12	2	21	11	89					0	0	0	0
OH443	OH442	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	2.51	1	17	8	90	0.00	0.0	0.777	0.015	17	8	0	0
		B		7.61Y	119.8	0.00	2.16	1.24	1	9	2	97					9	2	0	0
		C		7.58Y	119.4	0.00	2.60	3.12	2	21	11	89					21	11	0	0
OH444	OH443	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.780	0.002	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
OH445	OH444	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.824	0.044	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
OH118	OH119	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.01	0	0	0		0.00	0.0	0.718	0.028	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	-0.01	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.01	0	0	0						0	0	0	0
OH117	OH118	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.751	0.033	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
OH52	OH117	A	#1/0 ACSR	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.770	0.019	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
SW766-A	OH117	A	Open	7.62Y	120.0	0.00	1.96	0.00	0	0	0	100	0.00	0.0	0.751	0.000	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	0.00	0	0	0	100					0	0	0	0
		C		7.58Y	119.4	0.00	2.60	0.00	0	0	0	100					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total
KW	4066	0	0	0	0	0	62	0.00	4128
KVAR	1542	0	0	-18	0	0	124		1648

Lowest Voltage	Highest Accumulated Voltage Drop	Highest Element Voltage Drop
A-Phase -> 118.91 volts on OH424	3.09 volts on OH424	1.50 volts on VCB
B-Phase -> 118.74 volts on OH669	3.26 volts on OH669	1.65 volts on VCB
C-Phase -> 118.10 volts on OH430	3.90 volts on OH430	1.87 volts on VCB

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Flag	Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru	Flag
	VCB		A	Delta EPA	7.65Y	120.5	1.50	1.50	180.19	0	1319	458	94	26.89	0.7	0.000	0.000	0	0	0	0	
			B		7.64Y	120.4	1.65	1.65	182.50	0	1299	558	92					0	0	0	0	
			C		7.63Y	120.1	1.87	1.87	211.34	0	1510	632	92					0	0	0	0	
	UG7	VCB	A	1/0URD	7.65Y	120.5	0.04	1.55	180.19	79	1310	428	95	1.71	0.0	0.014	0.014	0	0	0	0	
C			B		7.64Y	120.3	0.04	1.69	182.50	80	1291	527	93					0	0	0	0	C
C			C		7.62Y	120.1	0.06	1.93	211.34	93	1500	592	93					0	0	0	0	C
	OH735	OH729	A	#2 ACSR 6/	7.64Y	120.3	0.00	1.73	1.19	1	8	3	94	0.00	0.0	0.367	0.028	8	3	0	0	
			B		7.62Y	120.1	-0.00	1.95	-0.00	0	0	0						0	0	0	0	
			C		7.61Y	119.8	0.00	2.20	-0.00	0	0	0						0	0	0	0	

----------- Feeder No. 124 (OCD744) Beginning with Device OCD744 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OCD744	OH18	A	75A QA	7.63Y	120.1	0.00	1.85	6.18	8	45	13	96	0.00	0.0	0.171	0.000	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	4.62	6	31	17	87					0	0	0	0
		C		7.60Y	119.6	0.00	2.36	5.79	8	41	16	93					0	0	0	0
OH471	OCD470	B	#2 ACSR 6/	7.62Y	120.0	0.00	2.03	-0.01	0	0	0		0.00	0.0	0.375	0.036	0	0	0	0
		C		7.60Y	119.6	0.01	2.39	4.97	3	35	14	93					0	0	0	0
OH473	OH471	B	#2 ACSR 6/	7.62Y	120.0	0.00	2.03	-0.01	0	0	0		0.00	0.0	0.404	0.029	0	0	0	0
		C		7.59Y	119.6	0.00	2.39	4.97	3	35	14	93					0	0	0	0
OH475	OH473	B	#2 ACSR 6/	7.62Y	120.0	0.00	2.03	-0.00	0	0	0		0.00	0.0	0.415	0.011	0	0	0	0
		C		7.59Y	119.6	0.00	2.40	4.14	2	29	11	93					0	0	0	0
OH476	OH475	B	#2 ACSR 6/	7.62Y	120.0	0.00	2.03	-0.00	0	0	0		0.00	0.0	0.458	0.043	0	0	0	0
		C		7.59Y	119.6	0.01	2.40	4.14	2	29	11	93					0	0	0	0
OH147	OH148	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	2.57	1	19	5	97	0.00	0.0	0.368	0.029	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	2.52	1	17	9	87					0	0	0	0
		C		7.60Y	119.6	-0.00	2.38	-0.01	0	0	0						0	0	0	0
OH146	OH147	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.87	2.57	1	19	5	97	0.00	0.0	0.403	0.034	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	2.52	1	17	9	87					3	2	0	0
		C		7.60Y	119.6	-0.00	2.38	-0.01	0	0	0						0	0	0	0
OH145	OH146	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	2.57	1	19	5	97	0.00	0.0	0.440	0.037	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	2.10	1	14	8	87					7	4	0	0
		C		7.60Y	119.6	-0.00	2.38	-0.01	0	0	0						0	0	0	0
OH457	OH456	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	0.64	0	5	1	98	0.00	0.0	0.488	0.027	0	0	0	0
		B		7.62Y	120.0	-0.00	2.04	-0.00	0	0	0						0	0	0	0
OH460	OH459	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	1.93	1	14	4	96	0.00	0.0	0.470	0.020	0	0	0	0
		B		7.62Y	120.0	-0.00	2.04	-0.00	0	0	0						0	0	0	0
OH461	OH460	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	1.93	1	14	4	96	0.00	0.0	0.495	0.025	5	1	0	0
		B		7.62Y	120.0	-0.00	2.04	-0.00	0	0	0						0	0	0	0
OH144	OH145	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.01	0	0	0		0.00	0.0	0.473	0.033	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	-0.01	0	0	0						0	0	0	0
		C		7.60Y	119.6	0.00	2.38	-0.01	0	0	0						0	0	0	0
OH143	OH144	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.00	0	0	0		0.00	0.0	0.500	0.027	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	-0.00	0	0	0						0	0	0	0
		C		7.60Y	119.6	0.00	2.38	-0.00	0	0	0						0	0	0	0
OH142	OH143	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.00	0	0	0		0.00	0.0	0.526	0.026	0	0	0	0
		B		7.62Y	120.0	0.00	2.04	-0.00	0	0	0						0	0	0	0
		C		7.60Y	119.6	0.00	2.38	-0.00	0	0	0						0	0	0	0

----------- Feeder No. 114 (OCD751) Beginning with Device OCD751 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OCD751	OH27	A	560 VWE	7.59Y	119.6	0.00	2.44	26.80	0	196	56	96	0.00	0.0	0.514	0.000	0	0	0	0
		B		7.58Y	119.4	0.00	2.63	40.50	0	274	139	89					0	0	0	0
		C		7.55Y	118.9	0.00	3.09	44.28	0	316	109	95					0	0	0	0
OH518	OH516	A	2ACSR	7.59Y	119.5	-0.00	2.45	-0.00	0	0	0		0.00	0.0	0.740	0.020	0	0	0	0
		C		7.54Y	118.8	0.00	3.20	1.00	1	7	2	95					0	0	0	0
OH519	OH518	A	2ACSR	7.59Y	119.5	-0.00	2.45	-0.00	0	0	0		0.00	0.0	0.768	0.029	0	0	0	0
		C		7.54Y	118.8	0.00	3.20	1.00	1	7	2	94					7	2	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH677	OH676	B	2ACSR	7.55Y	118.9	0.00	3.07	-0.00	0	0	0		0.00	0.0	1.361	0.027	0	0	0	0
OH683	OH682	C	2ACSR	7.52Y	118.5	0.00	3.51	-0.00	0	0	0		0.00	0.0	1.388	0.028	0	0	0	0
OH684	OH621	B	2ACSR	7.55Y	118.9	0.00	3.07	-0.01	0	0	0		0.01	0.0	1.324	0.061	0	0	0	0
		C		7.52Y	118.5	0.02	3.52	11.72	7	83	29	95					0	0	0	0
OH689	OH688	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0		0.00	0.0	1.450	0.028	0	0	0	0
OH693	OH692	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0		0.00	0.0	1.424	0.028	0	0	0	0
OH694	OH684	B	2ACSR	7.55Y	118.9	0.00	3.07	-0.00	0	0	0		0.00	0.0	1.383	0.059	0	0	0	0
		C		7.52Y	118.5	0.01	3.53	3.35	2	24	8	95					0	0	0	0
OH699	OH698	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0		0.00	0.0	1.482	0.029	0	0	0	0
OH700	OH699	C	2ACSR	7.52Y	118.5	0.00	3.53	-0.00	0	0	0		0.00	0.0	1.497	0.015	0	0	0	0
OH670	OH646	A	2ACSR	7.59Y	119.5	-0.00	2.48	-0.01	0	0	0		0.00	0.0	1.540	0.029	0	0	0	0
		B		7.55Y	118.8	0.00	3.18	1.20	1	8	4	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	1.67	1	12	4	95					0	0	0	0
OH671	OH670	A	2ACSR	7.59Y	119.5	-0.00	2.48	-0.01	0	0	0		0.00	0.0	1.569	0.030	0	0	0	0
		B		7.55Y	118.8	0.00	3.18	1.20	1	8	4	89					0	0	0	0
		C		7.52Y	118.5	0.00	3.50	1.67	1	12	4	95					0	0	0	0
OH672	OH671	A	2ACSR	7.59Y	119.5	-0.00	2.48	-0.00	0	0	0		0.00	0.0	1.598	0.029	0	0	0	0
		B		7.55Y	118.8	0.00	3.18	1.20	1	8	4	89					8	4	0	0
		C		7.52Y	118.5	0.00	3.51	1.67	1	12	4	95					0	0	0	0
OH673	OH672	A	2ACSR	7.59Y	119.5	-0.00	2.48	-0.00	0	0	0		0.00	0.0	1.613	0.015	0	0	0	0
		B		7.55Y	118.8	0.00	3.18	-0.00	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.00	3.51	1.67	1	12	4	94					12	4	0	0
OH601	OCD600	A	2ACSR	7.59Y	119.5	0.00	2.47	-0.00	0	0	0		0.00	0.0	1.051	0.005	0	0	0	0
		C		7.53Y	118.6	0.00	3.40	-0.00	0	0	0						0	0	0	0
OH604	OH603	A	2/0ACSR	7.59Y	119.5	0.00	2.47	0.81	0	6	2	95	0.00	0.0	1.129	0.028	6	2	0	0
		C		7.53Y	118.6	0.00	3.40	-0.00	0	0	0						0	0	0	0
OH605	OH603	A	2/0ACSR	7.59Y	119.5	0.00	2.47	0.40	0	3	1	95	0.00	0.0	1.131	0.029	3	1	0	0
		C		7.53Y	118.6	0.00	3.40	-0.00	0	0	0						0	0	0	0
OH606	OH605	A	2/0ACSR	7.59Y	119.5	0.00	2.47	-0.00	0	0	0		0.00	0.0	1.158	0.027	0	0	0	0
		C		7.53Y	118.6	0.00	3.40	-0.00	0	0	0						0	0	0	0
OH609	OH608	A	2/0ACSR	7.59Y	119.5	0.00	2.47	1.34	0	10	3	96	0.00	0.0	1.191	0.024	10	3	0	0
		C		7.53Y	118.6	0.00	3.41	-0.00	0	0	0						0	0	0	0
OH611	OH608	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	-0.00	0	0	0		0.00	0.0	1.196	0.029	0	0	0	0
		C		7.53Y	118.6	0.00	3.41	1.67	1	12	4	95					0	0	0	0
OH612	OH611	A	2/0ACSR	7.59Y	119.5	-0.00	2.47	-0.00	0	0	0		0.00	0.0	1.219	0.023	0	0	0	0
		C		7.53Y	118.6	0.00	3.41	1.67	1	12	4	94					12	4	0	0
OH615	OH612	A	2/0ACSR	7.59Y	119.5	0.00	2.47	-0.00	0	0	0		0.00	0.0	1.232	0.013	0	0	0	0
		C		7.53Y	118.6	0.00	3.41	-0.00	0	0	0						0	0	0	0
OH579	OH578	A	2ACSR	7.59Y	119.5	0.00	2.48	-0.00	0	0	0		0.00	0.0	1.033	0.023	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.35	-0.00	0	0	0						0	0	0	0
OH590	OH589	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.01	0	0	0		0.00	0.0	1.311	0.023	0	0	0	0
		B		7.56Y	119.1	0.00	2.94	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.38	2.67	1	19	7	95					0	0	0	0
OH591	OH590	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.01	0	0	0		0.00	0.0	1.321	0.010	0	0	0	0
		B		7.56Y	119.1	0.00	2.95	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.38	2.67	1	19	7	95					0	0	0	0
OH593	OH591	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.00	0	0	0	100	0.00	0.0	1.341	0.020	0	0	0	0
		B		7.56Y	119.1	0.00	2.95	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.38	1.67	1	12	4	95					12	4	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH592	OH593	A	2ACSR	7.59Y	119.5	0.00	2.50	-0.00	0	0	0	100	0.00	0.0	1.359	0.017	0	0	0	0
		B		7.56Y	119.1	0.00	2.95	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.38	-0.00	0	0	0						0	0	0	0
OH594	OH591	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.00	0	0	0		0.00	0.0	1.360	0.038	0	0	0	0
		C		7.53Y	118.6	0.00	3.38	1.00	1	7	2	95					0	0	0	0
OH595	OH594	A	2ACSR	7.59Y	119.5	-0.00	2.50	-0.00	0	0	0		0.00	0.0	1.387	0.027	0	0	0	0
		C		7.53Y	118.6	0.00	3.38	1.00	1	7	2	94					7	2	0	0
OH596	OH589	B	2ACSR	7.56Y	119.1	0.00	2.94	-0.00	0	0	0		0.00	0.0	1.298	0.010	0	0	0	0
OH597	OH596	B	2ACSR	7.56Y	119.1	0.00	2.94	-0.00	0	0	0		0.00	0.0	1.331	0.034	0	0	0	0
OH535	OCD534	A	2ACSR	7.59Y	119.5	-0.00	2.47	-0.02	0	0	0		0.00	0.0	0.861	0.033	0	0	0	0
		B		7.56Y	119.1	0.01	2.87	5.52	3	37	19	89					0	0	0	0
		C		7.54Y	118.7	0.00	3.28	2.67	1	19	6	95					0	0	0	0
OH536	OH535	A	2ACSR	7.59Y	119.5	-0.00	2.46	-0.02	0	0	0		0.00	0.0	0.897	0.035	0	0	0	0
		B		7.56Y	119.1	0.01	2.88	5.53	3	37	19	89					16	8	0	0
		C		7.54Y	118.7	0.00	3.28	2.67	1	19	6	95					0	0	0	0
OH537	OH536	A	2ACSR	7.59Y	119.5	-0.00	2.46	-0.01	0	0	0		0.00	0.0	0.939	0.042	0	0	0	0
		B		7.56Y	119.1	0.00	2.88	3.12	2	21	11	89					0	0	0	0
		C		7.54Y	118.7	0.00	3.28	2.67	1	19	7	95					7	2	0	0
OH538	OH537	A	2ACSR	7.59Y	119.5	-0.00	2.46	-0.01	0	0	0		0.00	0.0	0.969	0.030	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	3.12	2	21	11	89					0	0	0	0
		C		7.54Y	118.7	0.00	3.28	1.67	1	12	4	95					0	0	0	0
OH539	OH538	A	2ACSR	7.59Y	119.5	-0.00	2.46	-0.01	0	0	0		0.00	0.0	0.995	0.026	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	3.12	2	21	11	89					0	0	0	0
		C		7.54Y	118.7	-0.00	3.28	1.67	1	12	4	95					12	4	0	0
OH544	OH539	A	2ACSR	7.59Y	119.5	0.00	2.46	-0.01	0	0	0		0.00	0.0	1.022	0.027	0	0	0	0
		B		7.56Y	119.1	-0.00	2.89	-0.01	0	0	0						0	0	0	0
		C		7.54Y	118.7	0.00	3.28	-0.01	0	0	0						0	0	0	0
OH545	OH544	A	2ACSR	7.59Y	119.5	0.00	2.46	-0.00	0	0	0		0.00	0.0	1.057	0.035	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	-0.00	0	0	0						0	0	0	0
		C		7.54Y	118.7	0.00	3.28	-0.00	0	0	0						0	0	0	0
OH546	OH545	A	2ACSR	7.59Y	119.5	0.00	2.46	-0.00	0	0	0		0.00	0.0	1.083	0.026	0	0	0	0
		B		7.56Y	119.1	0.00	2.89	-0.00	0	0	0						0	0	0	0
		C		7.54Y	118.7	0.00	3.28	-0.00	0	0	0						0	0	0	0
OH564	OH563	B	2ACSR	7.56Y	119.1	0.00	2.91	-0.00	0	0	0		0.00	0.0	1.049	0.029	0	0	0	0
OH54	OH33	A	#4 ACSR 6/	7.58Y	119.4	-0.00	2.59	-0.00	0	0	0		0.00	0.0	0.605	0.016	0	0	0	0
		B		7.57Y	119.3	0.00	2.74	-0.00	0	0	0						0	0	0	0
		C		7.54Y	118.7	0.00	3.25	10.09	7	72	24	95					72	24	0	0

----------- Feeder No. 164 (OCD758) Beginning with Device OCD758 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OCD758	OH185	A	560 VWE	7.57Y	119.2	0.00	2.79	48.82	0	358	93	97	0.00	0.0	0.690	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.83	14.15	0	101	36	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.43	44.00	0	311	115	94					0	0	0	0
OH74	OH73	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	4.78	3	36	0	100	0.00	0.0	0.959	0.001	0	0	0	0
		B		7.57Y	119.2	-0.00	2.85	-0.00	0	0	0						0	0	0	0
		C		7.52Y	118.4	0.00	3.55	-0.00	0	0	0						0	0	0	0
OH75	OH74	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	4.78	3	36	0	100	0.00	0.0	0.982	0.023	0	0	0	0
		C		7.52Y	118.4	0.00	3.55	-0.00	0	0	0						0	0	0	0
OH81	OH80	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.87	2.39	1	18	0	100	0.00	0.0	1.020	0.023	18	0	0	0
		B		7.57Y	119.2	-0.00	2.85	-0.00	0	0	0						0	0	0	0
		C		7.52Y	118.4	0.00	3.55	1.36	1	10	0	-100					10	0	0	0
OH340	OH339	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.90	1.40	1	10	4	93	0.00	0.0	0.958	0.015	10	4	0	0
		C		7.53Y	118.5	0.00	3.46	-0.00	0	0	0						0	0	0	0
OH341	OH339	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.90	8.38	5	60	21	94	0.00	0.0	0.965	0.023	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.02	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.46	1.11	1	7	4	89					0	0	0	0

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH342	OH341	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.91	8.38	5	60	21	94	0.00	0.0	0.992	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.02	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.11	1	7	4	89					0	0	0	0
OH343	OH342	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.92	8.38	5	60	22	94	0.00	0.0	1.018	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.11	1	7	4	89					0	0	0	0
OH344	OH343	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.92	8.39	5	60	22	94	0.00	0.0	1.051	0.033	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	1.11	1	7	4	89					7	4	0	0
OH345	OH344	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.93	8.39	5	60	22	94	0.00	0.0	1.073	0.022	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.02	0	0	0						0	0	0	0
OH346	OH345	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.94	6.99	4	50	18	94	0.00	0.0	1.111	0.038	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.01	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.01	0	0	0						0	0	0	0
OH347	OH346	A	#2 ACSR 6/	7.56Y	119.1	0.01	2.94	6.99	4	50	18	94	0.00	0.0	1.139	0.028	10	4	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.01	0	0	0						0	0	0	0
OH348	OH347	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.94	-0.00	0	0	0	100	0.00	0.0	1.172	0.033	0	0	0	0
		B		7.57Y	119.2	0.00	2.79	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH354	OH347	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	2.80	2	20	7	94	0.00	0.0	1.177	0.038	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.01	0	0	0						0	0	0	0
OH355	OH354	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	2.80	2	20	7	94	0.00	0.0	1.206	0.029	20	7	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH358	OH355	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	-0.00	0	0	0		0.00	0.0	1.219	0.013	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH359	OH358	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	-0.00	0	0	0		0.00	0.0	1.247	0.028	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH360	OH345	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	1.40	1	10	4	93	0.00	0.0	1.096	0.022	10	4	0	0
		C		7.53Y	118.5	0.00	3.47	-0.01	0	0	0						0	0	0	0
OH361	OH360	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	-0.00	0	0	0		0.00	0.0	1.159	0.063	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH377	OH376	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.91	13.83	10	97	40	92	0.03	0.0	0.945	0.025	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.06	0	0	0						0	0	0	0
		C		7.52Y	118.4	0.02	3.63	15.57	11	101	60	86					6	4	0	0
OH378	OH377	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.92	13.83	10	97	40	92	0.02	0.0	0.970	0.025	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.06	0	0	0						0	0	0	0
		C		7.52Y	118.4	0.02	3.65	14.58	10	94	56	86					0	0	0	0
OH379	OH378	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.93	13.84	10	97	40	92	0.02	0.0	0.995	0.025	6	2	0	0
		B		7.57Y	119.2	-0.00	2.81	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.02	3.67	14.58	10	94	56	86					0	0	0	0
OH380	OH379	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.93	-0.00	0	0	0		0.00	0.0	1.002	0.007	0	0	0	0
		B		7.57Y	119.2	0.00	2.81	-0.00	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.00	3.67	1.00	1	6	4	86					6	4	0	0
OH381	OH379	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.94	13.01	9	91	38	92	0.02	0.0	1.014	0.019	0	0	0	0
		B		7.57Y	119.2	-0.00	2.81	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.68	13.58	10	88	52	86					0	0	0	0
OH382	OH381	A	#4 ACSR 6/	7.56Y	119.1	0.01	2.94	13.01	9	91	38	92	0.01	0.0	1.027	0.013	0	0	0	0
		B		7.57Y	119.2	-0.00	2.81	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.69	13.58	10	88	52	86					0	0	0	0
OH383	OH382	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.01	0	0	0		0.00	0.0	1.039	0.011	0	0	0	0
		C		7.51Y	118.3	0.00	3.69	4.31	3	28	17	86					0	0	0	0
OH386	OH383	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.01	0	0	0		0.00	0.0	1.055	0.016	0	0	0	0
		C		7.51Y	118.3	0.00	3.69	4.31	3	28	17	86					4	3	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH387	OH386	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.01	0	0	0		0.00	0.0	1.069	0.014	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	3.65	3	24	14	86					0	0	0	0
OH389	OH387	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.01	0	0	0		0.00	0.0	1.096	0.027	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	2.65	2	17	10	86					0	0	0	0
OH390	OH389	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.00	0	0	0		0.00	0.0	1.114	0.018	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	2.65	2	17	10	86					3	2	0	0
OH391	OH390	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.00	0	0	0		0.00	0.0	1.140	0.026	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	2.16	2	14	8	86					3	2	0	0
OH392	OH391	A	#4 ACSR 6/	7.56Y	119.1	-0.00	2.94	-0.00	0	0	0		0.00	0.0	1.170	0.030	0	0	0	0
		C		7.51Y	118.3	0.00	3.70	1.66	1	11	6	86					11	6	0	0
OH385	OH382	A	#4 ACSR 6/	7.56Y	119.0	0.01	2.96	13.02	9	91	38	92	0.02	0.0	1.057	0.029	0	0	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.70	9.28	7	60	35	86					4	3	0	0
OH393	OH385	A	#4 ACSR 6/	7.56Y	119.0	0.01	2.97	13.02	9	91	38	92	0.01	0.0	1.076	0.019	4	2	0	0
		B		7.57Y	119.2	-0.00	2.80	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.71	8.61	6	56	33	86					0	0	0	0
OH394	OH393	A	#4 ACSR 6/	7.56Y	119.0	0.01	2.98	12.47	9	87	36	92	0.02	0.0	1.103	0.027	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.05	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.72	8.61	6	56	33	86					0	0	0	0
OH395	OH394	A	#4 ACSR 6/	7.56Y	119.0	0.01	2.99	12.47	9	87	36	92	0.01	0.0	1.129	0.027	14	6	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.04	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.73	8.61	6	56	33	86					0	0	0	0
OH396	OH395	A	#4 ACSR 6/	7.56Y	119.0	0.01	3.00	10.41	7	73	30	92	0.01	0.0	1.157	0.028	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.04	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.01	3.74	8.62	6	56	33	86					0	0	0	0
OH397	OH396	A	#4 ACSR 6/	7.56Y	119.0	0.00	3.00	10.41	7	73	30	92	0.00	0.0	1.165	0.007	0	0	0	0
		B		7.57Y	119.2	-0.00	2.79	-0.04	0	0	0						0	0	0	0
		C		7.51Y	118.3	0.00	3.75	8.62	6	56	33	86					0	0	0	0
OH398	OH397	A	#4 ACSR 6/	7.56Y	119.0	0.02	3.02	10.41	7	73	30	92	0.02	0.0	1.211	0.047	10	4	0	0
		B		7.57Y	119.2	-0.01	2.78	-0.04	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.02	3.77	8.62	6	56	33	86					0	0	0	0
OH399	OH398	A	#4 ACSR 6/	7.56Y	119.0	0.00	3.02	1.37	1	10	4	93	0.00	0.0	1.249	0.038	10	4	0	0
		B		7.57Y	119.2	-0.00	2.78	-0.00	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.00	3.77	1.00	1	6	4	86					6	4	0	0
OH400	OH398	A	#4 ACSR 6/	7.55Y	119.0	0.01	3.02	7.67	5	54	22	93	0.01	0.0	1.235	0.023	0	0	0	0
		B		7.57Y	119.2	-0.00	2.78	-0.03	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.01	3.78	7.62	5	49	29	86					0	0	0	0
OH403	OH400	A	#4 ACSR 6/	7.55Y	119.0	0.01	3.03	7.67	5	54	22	93	0.01	0.0	1.275	0.041	0	0	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.03	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.02	3.79	7.62	5	49	29	86					0	0	0	0
OH404	OH403	A	#4 ACSR 6/	7.55Y	119.0	0.01	3.04	7.67	5	54	22	93	0.01	0.0	1.300	0.024	0	0	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.03	0	0	0						0	0	0	0
		C		7.51Y	118.2	0.01	3.80	7.63	5	49	29	86					0	0	0	0
OH405	OH404	A	#4 ACSR 6/	7.55Y	118.9	0.01	3.05	7.68	5	53	22	92	0.01	0.0	1.336	0.037	0	0	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.03	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.81	7.63	5	49	29	86					0	0	0	0
OH406	OH405	A	#4 ACSR 6/	7.55Y	118.9	0.01	3.06	7.68	5	53	22	92	0.01	0.0	1.357	0.021	0	0	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.03	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.82	7.63	5	49	29	86					0	0	0	0
OH407	OH406	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.06	6.85	5	48	20	92	0.01	0.0	1.380	0.023	4	2	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.83	7.63	5	49	29	86					4	3	0	0
OH410	OH407	A	#4 ACSR 6/	7.55Y	118.9	0.01	3.07	6.31	5	44	18	93	0.01	0.0	1.405	0.025	0	0	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.84	6.96	5	45	27	86					6	4	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Cons On	Cons Thru
OH411	OH410	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.07	6.31	5	44	18	93	0.00	0.0	1.426	0.021	0	0	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.2	0.01	3.84	5.97	4	39	23	86					0	0	0	0
OH414	OH411	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.07	5.48	4	38	16	92	0.00	0.0	1.452	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.85	5.97	4	39	23	86					0	0	0	0
OH415	OH414	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	5.48	4	38	16	92	0.00	0.0	1.480	0.028	4	2	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.02	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.86	5.97	4	38	23	86					0	0	0	0
OH416	OH415	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	0.82	1	6	2	95	0.00	0.0	1.508	0.028	0	0	0	0
		C		7.50Y	118.1	0.00	3.86	-0.00	0	0	0						0	0	0	0
OH417	OH416	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	0.82	1	6	2	95	0.00	0.0	1.533	0.025	6	2	0	0
		C		7.50Y	118.1	0.00	3.86	-0.00	0	0	0						0	0	0	0
OH418	OH417	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	-0.00	0	0	0		0.00	0.0	1.548	0.015	0	0	0	0
		C		7.50Y	118.1	0.00	3.86	-0.00	0	0	0						0	0	0	0
OH419	OH415	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.08	4.11	3	29	12	92	0.00	0.0	1.502	0.022	0	0	0	0
		B		7.57Y	119.2	-0.00	2.76	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.87	5.97	4	39	23	86					0	0	0	0
OH420	OH419	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	4.11	3	29	12	92	0.00	0.0	1.532	0.030	0	0	0	0
		B		7.57Y	119.2	-0.00	2.75	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.88	5.97	4	38	23	86					0	0	0	0
OH422	OH420	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	2.74	2	19	8	92	0.00	0.0	1.563	0.031	10	4	0	0
		B		7.57Y	119.2	-0.00	2.75	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.01	3.88	5.98	4	38	23	86					11	6	0	0
OH423	OH422	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	1.37	1	10	4	93	0.00	0.0	1.587	0.024	0	0	0	0
		B		7.57Y	119.2	-0.00	2.75	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.00	3.88	1.66	1	11	6	86					0	0	0	0
OH424	OH423	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	1.37	1	10	4	93	0.00	0.0	1.605	0.018	10	4	0	0
		B		7.57Y	119.2	-0.00	2.75	-0.01	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.00	3.89	1.66	1	11	6	86					0	0	0	0
OH425	OH424	A	#4 ACSR 6/	7.55Y	118.9	-0.00	3.09	-0.00	0	0	0		0.00	0.0	1.638	0.033	0	0	0	0
		B		7.57Y	119.2	0.00	2.75	-0.00	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.00	3.89	1.66	1	11	6	86					11	6	0	0
OH426	OH425	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.09	-0.00	0	0	0		0.00	0.0	1.670	0.033	0	0	0	0
		B		7.57Y	119.2	0.00	2.75	-0.00	0	0	0						0	0	0	0
		C		7.50Y	118.1	0.00	3.89	-0.00	0	0	0						0	0	0	0
OH408	OH406	A	#4 ACSR 6/	7.55Y	118.9	0.00	3.06	0.82	1	6	2	95	0.00	0.0	1.377	0.019	6	2	0	0
		B		7.57Y	119.2	-0.00	2.77	-0.00	0	0	0						0	0	0	0
OH112	OH110	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.82	4.51	3	32	13	93	0.00	0.0	0.781	0.026	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.50	6.62	5	43	26	86					0	0	0	0
OH362	OH112	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.83	4.11	3	29	12	92	0.00	0.0	0.791	0.010	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.00	3.50	6.62	5	43	26	86					0	0	0	0
OH363	OH362	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.83	4.11	3	29	12	92	0.00	0.0	0.808	0.017	0	0	0	0
		B		7.57Y	119.2	-0.00	2.83	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.51	6.62	5	43	26	86					0	0	0	0
OH364	OH363	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.83	4.11	3	29	12	92	0.00	0.0	0.830	0.022	0	0	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.51	6.62	5	43	26	86					21	13	0	0
OH365	OH364	A	#4 ACSR 6/	7.57Y	119.2	0.00	2.83	4.11	3	29	12	92	0.00	0.0	0.878	0.048	19	8	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.52	3.31	2	21	13	86					0	0	0	0
OH366	OH365	A	#4 ACSR 6/	7.57Y	119.2	-0.00	2.83	1.37	1	10	4	93	0.00	0.0	0.917	0.038	10	4	0	0
		B		7.57Y	119.2	-0.00	2.82	-0.01	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.01	3.52	3.31	2	21	13	86					0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-----Element----- KW	KVAR	Cons On	Cons Thru
OH368	OH366	A	#4 ACSR 6/	7.57Y	119.2	-0.00	2.83	-0.00	0	0	0	100	0.00	0.0	0.953	0.036	0	0	0	0
		B		7.57Y	119.2	0.00	2.82	-0.00	0	0	0						0	0	0	0
		C		7.52Y	118.5	0.00	3.53	1.66	1	11	6	86					11	6	0	0

----------- Feeder No. 154 (OCD757) Beginning with Device OCD757 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	KW	KVAR	Cons On	Cons Thru
OCD757	OH188	A	560 VWE	7.57Y	119.2	0.00	2.77	32.98	0	235	85	94	0.00	0.0	0.675	0.000	0	0	0	0
		B		7.57Y	119.2	0.00	2.85	44.28	0	316	112	94					0	0	0	0
		C		7.53Y	118.6	0.00	3.39	23.61	0	156	85	88					0	0	0	0
OH190	OH189	A	#2 ACSR 6/	7.57Y	119.2	0.00	2.79	-0.00	0	0	0		0.00	0.0	0.727	0.025	0	0	0	0
		B		7.56Y	119.1	0.00	2.88	-0.00	0	0	0						0	0	0	0
OH233	OH232	A	#2 ACSR 6/	7.56Y	119.0	0.01	2.99	12.86	7	91	33	94	0.02	0.0	1.010	0.025	0	0	0	0
		B		7.55Y	118.9	0.01	3.09	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.00	3.43	-0.01	0	0	0						0	0	0	0
OH234	OH233	A	#2 ACSR 6/	7.56Y	119.0	0.02	3.01	12.86	7	91	33	94	0.03	0.0	1.045	0.035	10	4	0	0
		B		7.55Y	118.9	0.02	3.11	18.99	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.01	3.42	-0.00	0	0	0						0	0	0	0
OH235	OH234	A	#2 ACSR 6/	7.56Y	119.0	0.01	3.02	11.46	6	81	29	94	0.02	0.0	1.072	0.027	0	0	0	0
		B		7.55Y	118.9	0.01	3.12	19.00	11	135	48	94					0	0	0	0
		C		7.53Y	118.6	-0.01	3.41	-0.00	0	0	0						0	0	0	0
OH251	OH250	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.14	-0.00	0	0	0		0.00	0.0	1.288	0.019	0	0	0	0
OH256	OH255	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.01	0	0	0		0.00	0.0	1.174	0.029	0	0	0	0
		B		7.55Y	118.9	0.00	3.15	4.84	3	34	12	94					0	0	0	0
OH257	OH256	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.01	0	0	0		0.00	0.0	1.204	0.029	0	0	0	0
		B		7.55Y	118.8	0.00	3.15	4.84	3	34	12	94					5	2	0	0
OH258	OH257	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0		0.00	0.0	1.223	0.019	0	0	0	0
		B		7.55Y	118.8	0.00	3.15	4.17	2	30	11	94					12	4	0	0
OH259	OH258	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0		0.00	0.0	1.233	0.010	0	0	0	0
		B		7.55Y	118.8	0.00	3.15	2.50	1	18	6	94					0	0	0	0
OH260	OH259	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0		0.00	0.0	1.262	0.029	0	0	0	0
		B		7.55Y	118.8	0.00	3.15	2.50	1	18	6	94					18	6	0	0
OH261	OH239	A	#2 ACSR 6/	7.55Y	119.0	0.00	3.03	-0.00	0	0	0		0.00	0.0	1.170	0.052	0	0	0	0
		B		7.55Y	118.9	0.01	3.15	6.50	4	46	16	94					4	1	0	0
OH294	OH293	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.93	-0.00	0	0	0	100	0.00	0.0	0.969	0.022	0	0	0	0
		B		7.55Y	119.0	0.00	3.03	-0.00	0	0	0						0	0	0	0
		C		7.53Y	118.6	0.00	3.45	-0.00	0	0	0						0	0	0	0
OH310	OH309	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	1.40	1	10	4	93	0.00	0.0	1.174	0.017	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH311	OH310	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	1.40	1	10	4	93	0.00	0.0	1.187	0.013	10	4	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH312	OH311	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.95	-0.00	0	0	0		0.00	0.0	1.199	0.012	0	0	0	0
		C		7.53Y	118.5	0.00	3.47	-0.00	0	0	0						0	0	0	0
OH325	OH324	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.08	1.00	1	7	3	92	0.00	0.0	1.242	0.024	7	3	0	0
		C		7.53Y	118.5	-0.00	3.48	-0.00	0	0	0						0	0	0	0
OH326	OH325	B	#2 ACSR 6/	7.55Y	118.9	0.00	3.08	-0.00	0	0	0		0.00	0.0	1.267	0.025	0	0	0	0
		C		7.53Y	118.5	0.00	3.48	-0.00	0	0	0						0	0	0	0
OH213	OH212	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.92	2.79	2	20	7	94	0.00	0.0	0.915	0.033	20	7	0	0
		B		7.56Y	119.0	-0.00	3.01	-0.00	0	0	0						0	0	0	0
OH214	OH213	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.92	-0.00	0	0	0		0.00	0.0	0.924	0.009	0	0	0	0
		B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0
OH215	OH214	A	#2 ACSR 6/	7.56Y	119.1	0.00	2.92	-0.00	0	0	0		0.00	0.0	0.950	0.025	0	0	0	0
		B		7.56Y	119.0	0.00	3.01	-0.00	0	0	0						0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	KVAR	Cons On	Cons Thru
OH764	OH27	A	#2/0 ACSR	7.59Y	119.6	0.00	2.44	-0.01	0	0	0		0.00	0.0	0.553	0.039	0	0	0	0
		B		7.58Y	119.4	-0.00	2.63	-0.01	0	0	0						0	0	0	0
		C		7.55Y	118.9	0.00	3.09	-0.01	0	0	0						0	0	0	0
OH765	OH764	A	#2/0 ACSR	7.59Y	119.6	0.00	2.44	-0.00	0	0	0		0.00	0.0	0.611	0.059	0	0	0	0
		B		7.58Y	119.4	0.00	2.63	-0.01	0	0	0						0	0	0	0
		C		7.55Y	118.9	0.00	3.09	-0.00	0	0	0						0	0	0	0

----------- Feeder No. 134 (OCD762) Beginning with Device OCD762 -----------

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	-Element- KW	KVAR	Cons On	Cons Thru
OCD762	OH18	A	75A QA	7.63Y	120.1	0.00	1.85	12.54	17	87	39	91	0.00	0.0	0.171	0.000	0	0	0	0
		B		7.62Y	120.0	0.00	2.03	14.78	20	102	49	90					0	0	0	0
		C		7.60Y	119.6	0.00	2.36	22.70	30	157	71	91					0	0	0	0
OH163	OH161	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.00	0	0	0		0.00	0.0	0.339	0.008	0	0	0	0
		B		7.61Y	119.9	0.00	2.09	-0.00	0	0	0						0	0	0	0
		C		7.59Y	119.6	0.00	2.45	-0.00	0	0	0						0	0	0	0
OH164	OH163	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.88	-0.00	0	0	0		0.00	0.0	0.346	0.007	0	0	0	0
		B		7.61Y	119.9	0.00	2.09	-0.00	0	0	0						0	0	0	0
		C		7.59Y	119.6	0.00	2.45	-0.00	0	0	0						0	0	0	0
OH167	OH166	A	#2 ACSR 6/	7.63Y	120.1	0.00	1.89	-0.00	0	0	0		0.00	0.0	0.409	0.026	0	0	0	0
		B		7.61Y	119.9	0.00	2.11	2.32	1	15	9	87					7	4	0	0
		C		7.59Y	119.5	-0.00	2.48	-0.00	0	0	0						0	0	0	0
OH494	OH493	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	0.39	0	3	1	95	0.00	0.0	0.593	0.024	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.05	1	7	4	87					0	0	0	0
		C		7.58Y	119.4	-0.00	2.55	-0.00	0	0	0						0	0	0	0
OH496	OH495	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	-0.00	0	0	0		0.00	0.0	0.634	0.018	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.06	1	7	4	87					0	0	0	0
OH497	OH496	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	-0.00	0	0	0		0.00	0.0	0.646	0.012	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	1.06	1	7	4	87					7	4	0	0
OH498	OH176	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	0.26	0	2	1	89	0.00	0.0	0.580	0.037	2	1	0	0
		B		7.61Y	119.8	0.01	2.16	5.70	3	38	21	87					7	4	0	0
		C		7.58Y	119.4	-0.00	2.55	-0.01	0	0	0						0	0	0	0
OH502	OH498	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.93	-0.00	0	0	0		0.00	0.0	0.615	0.035	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	4.64	3	31	18	87					7	4	0	0
		C		7.59Y	119.4	-0.00	2.55	-0.00	0	0	0						0	0	0	0
OH447	OH446	A	#2 ACSR 6/	7.62Y	120.1	0.00	1.95	1.25	1	9	4	91	0.00	0.0	0.661	0.023	0	0	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.59	2.50	1	17	9	89					0	0	0	0
OH448	OH447	A	#2 ACSR 6/	7.62Y	120.1	-0.00	1.95	1.25	1	9	4	91	0.00	0.0	0.677	0.015	9	4	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.59	2.50	1	17	9	89					3	1	0	0
OH449	OH448	A	#2 ACSR 6/	7.62Y	120.1	-0.00	1.95	-0.00	0	0	0		0.00	0.0	0.688	0.011	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.59	2.08	1	14	7	89					14	7	0	0
OH433	OH119	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	1.88	1	13	6	91	0.00	0.0	0.713	0.024	4	2	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.01	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	2.60	1	18	9	89					4	2	0	0
OH434	OH433	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	1.25	1	9	4	91	0.00	0.0	0.727	0.014	0	0	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	2.08	1	14	7	89					14	7	0	0
OH435	OH434	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	1.25	1	9	4	91	0.00	0.0	0.755	0.028	9	4	0	0
		B		7.61Y	119.8	-0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
OH440	OH439	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.751	0.005	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	-0.00	0	0	0						0	0	0	0
OH441	OH440	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.765	0.014	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	-0.00	0	0	0						0	0	0	0

Unbalanced Voltage Drop Report
Source: VCB

Database: P:\PUBLIC\904 WINDMIL FILES\ITTA BENA\2018_PHASE 3.WM\
Title:
Case:

Units Displayed In Volts
-Base Voltage:120.0-

Element Name	Parent Name	Cnf	Type/ Conductor	Pri kV	Base Volt	Element Drop	Accum Drop	Thru Amps	% Cap	Thru KW	KVAR	% PF	kW Loss	% Loss	mi From Src	Length (mi)	Element KW	Element KVAR	Element Cons On	Element Cons Thru
OH444	OH443	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.780	0.002	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
OH445	OH444	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.824	0.044	0	0	0	0
		B		7.61Y	119.8	0.00	2.16	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
OH118	OH119	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.01	0	0	0		0.00	0.0	0.718	0.028	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	-0.01	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.01	0	0	0						0	0	0	0
OH117	OH118	A	#2 ACSR 6/	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.751	0.033	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0
OH52	OH117	A	#1/0 ACSR	7.62Y	120.0	0.00	1.96	-0.00	0	0	0		0.00	0.0	0.770	0.019	0	0	0	0
		B		7.61Y	119.8	0.00	2.15	-0.00	0	0	0						0	0	0	0
		C		7.58Y	119.4	0.00	2.60	-0.00	0	0	0						0	0	0	0

KEY-> L = Low Voltage H = High Voltage C = Capacity Over Limit (%capacity or load amps) G = Generator Out of kvar Limits P = Power Factor Low

	Load	Adjustment	Capacitance	Charging	Gen&Motors	Loops&Metas	Losses	No Load Losses	Total
KW	4066	0	0	0	0	0	62	0.00	4128
KVAR	1542	0	0	-18	0	0	124		1648

Lowest Voltage	Highest Accumulated Voltage Drop	Highest Element Voltage Drop
A-Phase -> 118.91 volts on OH424	3.09 volts on OH424	1.50 volts on VCB
B-Phase -> 118.74 volts on OH669	3.26 volts on OH669	1.65 volts on VCB
C-Phase -> 118.10 volts on OH430	3.90 volts on OH430	1.87 volts on VCB

Substation Summary:

Substation	KW	KVAR	KVA	KW Losses	KVAR Losses	% Capacity	No Load Loss	Rated No Load Loss
VCB	4128.22	1647.62	4444.87	62.00	124.00	0.00	0.00	0.00
Total:	4128.22	1647.62	4444.87	62.00	124.00		0.00	0.00

Appendix
E

Annual Loss Savings for Recommended 2019 System

MONTH	PEAK DEMAND	ENERGY (KWH)	MONTHLY LOAD FACTOR	AVERAGE COST PER KWH
June-17	3,100	1,813,701	0.786	$0.05777
July-17	3,700	1,674,100	0.608	$0.05597
August-17	3,700	1,370,800	0.551	$0.05836
September-17	3,200	1,089,800	0.458	$0.05824
October-17	3,000	844,200	0.391	$0.06433
November-17	1,800	976,600	0.729	$0.06926
December-17	2,000	1,095,000	0.760	$0.06671
January-18	2,200	831,700	0.508	$0.06405
February-18	1,900	802,400	0.568	$0.08354
March-18	1,400	787,700	0.781	$0.08106
April-18	1,500	1,405,901	1.260	$0.04773
May-18	3,300	1,697,300	0.714	$0.05132
June-18	3,900	1,850,000	0.638	$0.05010
One Year Average			**0.673**	**$0.06219**

Existing 2018 Distribution System Losses = 143 kW

Proposed 2019 Distribution System Losses = 62 kW

Total Reduction = 143 - 62 = 81 KW

Reduction in Cost of Losses = 81 kW x 8760 Hrs. x 0.673 x $0.06219 = $29,710 Annually

Appendix F

Total Cost Analysis for 4 kV to 13 kV Voltage Conversion

YEAR	PEAK DEMAND	LOSS SAVINGS (K$)	PRINCIPAL & INTEREST (K$)	NET COST (K$)
2019	3,970	$29,710	$83,884	$54,174
2020	3,970	$30,304	$83,884	$53,580
2021	3,970	$30,910	$83,884	$52,974
2022	3,970	$31,528	$83,884	$52,356
2023	3,970	$32,159	$83,884	$51,725
2024	3,970	$32,802	$83,884	$51,082
2025	3,970	$33,458	$83,884	$50,426
2026	3,970	$34,127	$83,884	$49,757
2027	3,970	$34,810	$83,884	$49,074
2028	3,970	$35,506	$83,884	$48,378
2029	3,970	$36,216	$83,884	$47,668
2030	3,970	$36,941	$83,884	$46,943
2031	3,970	$37,679	$83,884	$46,205
2032	3,970	$38,433	$83,884	$45,451
2033	3,970	$39,202	$83,884	$44,682
2034	3,970	$39,986	$83,884	$43,898
2035	3,970	$40,785	$83,884	$43,099
2036	3,970	$41,601	$83,884	$42,283
2037	3,970	$42,433	$83,884	$41,451
2038	3,970	$43,282	$83,884	$40,602
TOTAL NET COST OVER 20 YEAR TERM				**$955,805**

<u>Assumptions:</u>

Capital Cost of $1,151,080 for Recommended CWP Items
Annual Growth Rate of 0.0%
Annual Inflation Rate of 2.0%
Interest Rate = 4%
20 Year Amortization, Quarterly Payments

Appendix
G

RUS Bulletin 1730-1 “Electric System O&M”

UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Utilities Service

Bulletin 1730-1

SUBJECT: **<u>Electric System Operation and Maintenance (O&M)</u>**

To: RUS Electric Borrowers and RUS Electric Staff

Effective Date: Date of Approval

Office of Primary Interest: Engineering Standards Branch, Office of Policy, Outreach, and Standards

Filing Instructions: This Bulletin replaces Bulletin 1730-1, Electric System Operation and Maintenance, dated April 12, 2011.

Purpose: This bulletin contains guidelines related to electric borrowers' operation and maintenance (O&M) and outlines the Rural Utilities Service's (RUS) standard practices with respect to review and evaluation of O&M practices.

9/23/16

Assistant Administrator
Electric Program

Date

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ABBREVIATIONS

ANSI	American National Standards Institute
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
CT	Current Transformer
EMF	Electric and Magnetic Fields
EPA	Environmental Protection Agency
ERP	Emergency Response Plan
FERC	Federal Energy Regulatory Commission
GFR	General Field Representative
IFT	Interfacial Tension
kVA	Kilovolt-Ampere
kW	Kilowatt
kWh	Kilowatt-hour
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
O&M	Operation and Maintenance
OCR	Oil Circuit Recloser
PCB	Polychlorinated Biphenyl
PSD	Power Supply Division
PT	Potential Transformer
REA	Rural Electrification Administration
RUS	Rural Utilities Service

1. Purpose

This bulletin contains guidelines related to electric borrowers' operation and maintenance (O&M) and outlines the Rural Utilities Service's (RUS) standard practices with respect to review and evaluation of O&M practices. 7 CFR 1730 contains the policies and procedures of RUS related to electric borrowers' O&M practices and RUS's review and evaluation thereof. The express and exclusive purpose of this bulletin is to protect RUS by protecting and preserving its loan collateral. This bulletin does not supersede or replace any practices or procedures as they relate to safety, including, but not limited to those practices or procedures referenced herein, and does not address any safety aspects in regard to the electric borrowers' electric infrastructure or safety practices or procedures.

Borrowers that are required to be registered on the NERC Compliance Registry are responsible for meeting all of the applicable standards as required by the borrowers' specific functional registrations. It is not the intent of this bulletin to encompass, supersede or replace the reliability requirements enforced by NERC and its associated regional reliability organizations. Borrowers may choose to research, implement or incorporate some or all of the NERC standards into their operational procedures.

2. Borrower Guidelines

a. Records: Each borrower is responsible for maintaining records of the physical and electrical condition of its electric system. Any or all of these records may be reviewed by RUS during its review and evaluation. Such records include, but are not limited to:

(1) Service interruption and power supply outage reports.
(2) Overhead and underground line patrol, inspection and maintenance records, including pole inspection.
(3) Substation inspection and maintenance records.
(4) Overcurrent (non-fuse) apparatus records (recloser, sectionalizing, relay-protected)
(5) Line voltage regulator records.
(6) Distribution transformer records.
(7) Oil handling and storage records

(8) Meter records.

(9) Right-of-way maintenance records.

(10) Line voltage and amperage records.

(11) Avian protection/contact records

(12) System maps.

(13) System loss records.

(14) Idle services records.

(15) Power quality investigation records.

(16) Other records as required by local, state or other governmental entities

b. Emergency Restoration Plan (ERP): Each borrower should have a written plan detailing how to restore its system in the event of large area or system-wide outage resulting from a major natural disaster or other cause. This plan should include how to contact emergency agencies, borrower management and other key personnel, material suppliers, contractors and equipment suppliers, other utilities, and any others who might need to be contacted in an emergency. It should also include recovery from loss of power to the headquarters, key offices, and/or operation center facilities. It should be readily accessible at all times by appropriate personnel, and under any and all circumstances. RUS Guide 1730B-2 contains the procedures for developing an ERP.

c. System Ratings: RUS Form 300, Review Rating Summary, includes a numerical rating system as follows:

0: Unsatisfactory – no records

1: Unsatisfactory – corrective action needed

2: Acceptable, but could be improved – see attached recommendations

3: Satisfactory – no additional action required at this time

N/A: Not Applicable

Exhibit A provides a guide for the conditions normally needed to justify a rating of 3 for each of the items on RUS Form 300. The explanatory notes section of RUS Form 300 should include a list of all items rated as unsatisfactory (ratings 0 or 1) along with comments indicating the action or implementation that is proposed. This is in addition to the Corrective Action Plan (CAP) required by 7 CFR 1730. Additional expenditures required for deferred maintenance should be indicated in the O&M Budgets, Part IV of RUS Form 300. These may be distributed over a period of two or three years as indicated on the form.

3. Review and Evaluation of O&M Practices by RUS

a. RUS will conduct a periodic review and evaluation of each borrower's O&M programs and practices. The purpose of this review is to assess loan security and to determine borrower compliance with RUS policy as outlined in Part 7 CFR 1730.

b. The General Field Representative (GFR) is responsible, within the GFR's assigned territory, for initiating and conducting a periodic review and evaluation of each borrower's O&M programs, practices, and records. This review and evaluation is normally done at least once every three years.

c. The GFR may review and evaluate facilities as well as records, and may also observe construction and maintenance work in the field. Key borrower personnel responsible for these facilities should accompany the GFR during such reviews.

d. If adequate information is available, the GFR will complete the review and evaluation and consult with the borrower regarding its programs and records for operation, maintenance, and system improvements. The GFR's signature on the Form 300 signifies concurrence with the borrower's analysis, ratings, and explanatory notes unless indicated otherwise.

e. If adequate information is not available, the GFR's review and evaluation will be deferred until the borrower has remedied the deficiencies identified by the GFR.

f. Upon completion of the O&M review and evaluation, the GFR will communicate his/her findings to the borrower verbally (exit interview), and in writing.

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EXHIBIT A

RUS FORM 300 RATING GUIDE

CONDITIONS NORMALLY NEEDED TO JUSTIFY A RATING OF 3

PART I - TRANSMISSION and DISTRIBUTION FACILITIES

1. Substations (Transmission and Distribution)

a. Safety, Clearance Code Compliance: No known violations of RUS, or NESC requirements are present in any substation, including clearances, grounding, and separations. All substations are accessible by authorized personnel only. Operating manual and one-line diagram are available for each substation. Appropriate safety equipment and operational tools are serviceable and available on site.

b. Physical Condition – Structure, Major Equipment, and Appearance: Utility is able to present records that reflect rare instances of rust, weeds, dangerous insects, and bird nesting exist; only minor material associated with maintenance of the substation equipment are stored in yard; no leaks, no temporary bus or grounding being used on an ongoing basis; no debris inside or around the substation; no openings under fence greater than three inches (76 mm); and no broken insulators exist. Power transformers are properly fault-protected. Circuits, phases, and airbreak switch handles are properly identified.

c. Inspection Records of Each Substation: Written monthly inspection reports are completed and reviewed by responsible personnel.

   1. Infrared inspection of all connectors, arrestors and other applicable apparatus as recommended by manufacturer;

   2. Dielectric, dissolved gas, and interfacial tension (IFT) tests of oil-filled equipment performed as recommended by manufacturer;

CONDITIONS NORMALLY NEEDED TO JUSTIFY A RATING OF 3

3. Annual Power factor tests of all applicable equipment;

4. Protective relays are functionally tested annually. Additional tests may be required per regulatory and/or manufactures recommendations and acceptable industry practice.

d. Oil Spill Prevention: Oil spill prevention and mitigation plans are prepared and available for all substations. On-site oil containment systems are inspected and serviceable.

2. Transmission Lines

a. Vegetation and Line Maintenance: Borrower is responsible for having a documented Vegetation and Line Maintenance program compliant with RUS and industry standards. Documented inspections should be completed and reviewed by qualified personnel for all transmission lines at intervals consistent with accepted industry and local practices.

b. Right-of-Way (ROW) – Clearing, Erosion, Appearance, and Intrusions: A process is in place to identify and address uncontrolled erosion. Gates or gaps exist at all fence crossings as necessary for proper access. Structures and lines are not impacted by untrimmed ROW. Structures are generally accessible by service vehicles.

1. Floor Maintenance: All transmission ROW floors should be maintained either mechanically or by herbicide to allow for access and prevention of grow-ins.

2. Danger Trees: All transmission ROWs should be patrolled to identify trees that may cause an outage. A process should be in place to document such trees' locations and provide for their immediate removal.

3. Side Trimming: All transmission line ROW should be trimmed as needed. Appropriate techniques should be used based on terrain and type of vegetation.

CONDITIONS NORMALLY NEEDED TO JUSTIFY A RATING OF 3

c. Physical Condition – Structure, Conductor, and Guying: All structures are plumb and all guys taut. Conductors are serviceable with infrequent damage, few splices, and are properly sagged. A process is in place to identify and repair broken insulators, crossarms, and overvoltage-protection devices, as well as unauthorized attachments and encroachments. Essentially all structures are numbered. Poles, structures and hardware have minimal structural defects and corrosion. Structures and attachments conform to NESC requirements. Wood poles should be inspected at regular intervals to prevent decay and are replaced when less than 67% of the original required strength is remaining.

d. Line Patrol Program and Records: All overhead lines (including those on private ROW) are patrolled at intervals of at least once per year. Records of line patrol activity showing dates and locations where line patrol has been performed and any apparent deficiencies are readily available in summary form. Line patrol is defined as simple visual inspection, of applicable electrical equipment and structures, which is designed to identify obvious structural problems and potential hazards. Records are maintained and line patrol deficiencies are corrected in a timely manner.

e. Pole Inspection Program and Records: Above and below ground pole inspections are performed on a cycle based upon decay zone, or as experience as shown to be necessary, using experienced inspectors and accepted industry practices. Records of all poles inspected, treated, rejected and changed out readily available in summary form.

CONDITIONS NORMALLY NEEDED TO JUSTIFY A RATING OF 3

3. Distribution Lines - Overhead

a. Pole Inspection - Program and Records: Above and below ground pole inspections are performed on a cycle based upon decay zone, or as experience as shown to be necessary, using experienced inspectors. Records of all poles inspected, treated, rejected and changed out readily available in summary form.

b. Line Patrol Program and Records - All overhead lines are patrolled at intervals of three years. Records of line patrol activity showing dates and locations where line patrol has been performed and any apparent deficiencies are readily available in summary form. Line patrol is defined as a simple visual inspection, of applicable electrical equipment, clearances, structures, and joint attachments so as to identify obvious problems and potential hazards. Records are maintained for deficiencies which are to be corrected in a timely manner.

c. Compliance with Safety Codes – Clearances: All facilities staked prior to construction are done by personnel familiar with NESC requirements. Conditions requiring greater clearances identified in line patrols are addressed as soon as practical.

Compliance with Safety Codes – Foreign Structures: Utility has policy and practice of promptly remedying foreign structures that conflict with primary lines upon observation.

Compliance with Safety Codes – Attachments: All overhead attachments meet NESC separation and clearance requirements. Up-to-date joint-use and pole rental agreements are in effect. Utility has policy and practice of periodic attachment inspection. Unauthorized attachments and violations of the NESC are promptly remedied.

d. Observed Physical Condition from Field Checking – Right-of-Way: Structures and lines are not impacted by ROW vegetation and structures. ROW vegetation trimming cycles to be dictated by local conditions. Clearance issues with structures are remediated as soon as possible.

CONDITIONS NORMALLY NEEDED TO JUSTIFY A RATING OF 3

Observed Physical Condition from Field Checking – Other: Rare instances of leaning poles, slack guys, broken grounds, damaged or corroded conductors, excessive splices, loose hardware, and/or superfluous material on structures exist. No broken crossarms or insulators exist, and no pole steps are on wood poles. Installation of miscellaneous distribution equipment meets NESC requirements. Neutral conductor is properly identified when located on crossarm. Dated pole inspection tags are installed on all inspected wood poles. These dated pole inspection tags can either be physical or electronic.

4. Distribution - Underground Cable

a. Grounding and Corrosion Control: Ground rods are properly installed at each transformer, in addition to a minimum of four per mile (1.6 km), not including grounds at individual services, in accordance with the NESC. Appropriate and timely actions are taken to correct any unsatisfactory conditions.

b. Surface Grading, Appearance: Rare instances of earth settling, which could create hazards to the general public, exist, and timely action is taken to correct any deficiency.

c. Riser Poles – Hazards, Guying, Condition: Cut-outs are mounted per RUS requirements. Riser cable is covered with conduit to within four feet (1.2m) of the bottom of the potheads. Damaged conduits are promptly replaced or repaired. Adequate overvoltage protection is installed.

5. Distribution Line Equipment: Conditions and Records

a. Voltage Regulators: Voltage regulators are inspected and maintained in accordance with the manufacturer's recommendations, accepted industry practices and experience, and as local conditions dictate. Knowledge of and compliance with EPA requirements with respect to PCB-contaminated oil and equipment. Dielectric, dissolved gas, and IFT tests of oil-filled equipment are performed every five years or at intervals consistent with

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accepted industry practices, vendor recommendations, borrower experience, and local conditions or events such as storms, faults, and related equipment failure.

b. Sectionalizing Equipment: Oil circuit reclosers (OCRs) and breakers are inspected and maintained in accordance with the manufacturer's recommended timetable. Records reflect inspection results, maintenance performed, and date. Protective relaying controls are tested at periodic times as considered good industry practice or every three years.

c. Distribution Transformers: Complete records are kept as to size, location, and date installed. Knowledge of and compliance with EPA requirements with respect to PCB-contaminated oil and equipment. Transformer loading analysis is performed periodically as needed.

d. Pad-Mounted Equipment – Safety – Locking, Dead Front, Barriers: All pad-mount enclosures meet RUS dead-front requirements (secondary barriers, recessed penta-head nut, and separate pad-lock). Grounding is ensured in accordance with RUS and NESC requirements. "Danger" signs are installed inside all enclosures and "Warning" signs are installed on the exterior in accordance with ANSI Z535.

e. Pad-Mounted Equipment – Appearance – Settlement, Condition: Rare instances of leaning or undermined enclosures exist. Prompt action is taken to correct deficiencies. Equipment exterior and interior surfaces are relatively free of rust and corrosion and are still intact (i.e., no holes).

f. Watt-hour and Demand Meter Reading and Testing: All meters are tested in accordance with state regulations (where applicable) or ANSI C12.1. PT, CT, and demand meters are generally tested on at least a three-year cycle. Complete records are kept as to size, location, and date installed.

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PART II - OPERATION AND MAINTENANCE

6. Line Maintenance and Work Order Procedures

a. Work Planning and Scheduling: All lines are staked prior to construction by personnel familiar with NESC requirements. Work order inspections are performed in accordance with 7 CFR 1724, Electric Engineering, Architectural Services and Design Policies and Procedures (i.e., within six months of completion of construction). Utility shall document that all remedial work has been completed and provide notice to any contracted work order inspection entities of the same. Construction Work Plan projects are completed in time to meet load-level requirements. New service connections are completed in reasonable timeframes.

b. Work Backlogs – Right-of-Way Maintenance: Adequate resources are provided to address re-clearing on timely basis. ROW re-trimming cycles to be dictated by local conditions.

c. Work Backlogs – Poles: All reject poles are replaced within six months of inspection. "Danger" and "Hazard" poles are replaced as soon as possible.

d. Work Backlogs – Idle Services - Retirement of: Policy and procedures are in place to address retirement of idle services so ratio of idle services to total is less than 10% unless specific local conditions dictate otherwise.

e. Work Backlogs – Other: Job orders from line inspections are completed in reasonable timeframes.

7. Service Interruptions

a. System Average Interruption Duration Index (SAIDI): Service continuity objectives are described in Section 5 of RUS Bulletin 1730A-119. For Form 300, Part II, 7(a), the “All

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Other SAIDI" classification will be the primary category for evaluation. The current guideline is an "All Other SAIDI" of 200 minutes or less for a "Satisfactory" rating of 3.

b. Emergency Restoration Plan: Emergency restoration plan is readily available and covers multiple scenarios, including loss of power to the headquarters, key offices, and/or operations centers.

8. Power Quality

General Freedom from Complaints: Minimal complaints are received with respect to television and radio interference, voltage flicker, neutral-to-earth voltage, harmonics, and EMF. Complaints are generally resolved quickly and effectively. Summary of complaints is maintained and analyzed periodically.

9. Loading and Load Balance

a. Coop shall provide evidence of transformer load studies that identify underutilized capacity or overloaded transformers. Transformers consistently loaded to 50% or less of nameplate capacity, or over 140% of nameplate capacity, should be considered for replacement.

b. Load Control Apparatus: Have records of individual controllers showing location, type of load being controlled, and any maintenance. Load control results are summarized.

c. Substation and Feeder Loading: All feeders are balanced among phases to within 20% during peak loads.

10. Maps and Plant Records

a. Operating Maps – Accurate and Up-to-Date: Consumers are identifiable by location with a set of maps carried by all service personnel. Maps depict roads, grid lines, waterways, railroads, and other landmarks necessary to locate consumers. Maps are of a functional

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size and permit location of consumers irrespective of date of service. Detail maps are current and up-to-date, generally 1 year old or less.

b. Circuit Diagrams: Current and up-to-date maps depicting a multiple line layout of distribution facilities of the utility are kept at the utility's office. The locations and sizes of substations, distribution lines, line regulators, reclosers, capacitors, and substation boundaries are clearly shown. Primary voltage drops are indicated at the ends of primary feeder lines. All transmission lines within the service territory are depicted and identified as to voltage and ownership.

c. Staking Sheets: Staking sheets are prepared for projects prior to construction. The sketch and construction units are consistent and sheets shall provide sufficient engineering detail to note all aspects of construction and unit specification, including but not limited to orientation, geographic location, operating voltage, ruling span, and special notes. Final staking sheets are consistent with the "as-built" conditions.

d. Electronic Maps: Operational electronic maps or other field force automation applications may contain the required aforementioned information in user accessible attribute form.

11. Oil Storage & Handling

Records of oil testing, storage, spills, and spill prevention are present and maintained in accordance with federal requirements. Where applicable, a current spill prevention containment and control (SPCC) plan shall be in place and followed.

12. Avian Protection and Response Plan

Records of system improvements for purposes of avian protection and responses to avian contacts with utility plant are present and maintained in accordance with federal requirements.

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PART III - ENGINEERING

13. System Load Conditions and Losses

a. Annual System Losses: System losses are appropriate for the conditions encountered. Reasonable efforts are made to reduce system losses.

b. Annual Load Factor: Load factor is appropriate for the conditions encountered. Reasonable efforts made to improve load factor, where possible.

c. Power Factor at Monthly Peak: Each distribution substation maintains a power factor as required by the wholesale power supplier.

14. Voltage Conditions

Substation Transformer Output Voltage Spread: All substations include automatic voltage regulators or voltage regulating transformers. Each substation has continuous voltage recording, which is monitored monthly. Regulated substation output voltage and line regulators are maintained so Range A service voltage per RUS Bulletin 1724D-113 is provided to all consumers.

15. Load Studies and Planning

a. Long Range Engineering Plan: System planning study is valid and meets the requirements of 7 CFR 1710, can be used as a guide for preparing the next Construction Work Plan, and is prepared in accordance with RUS Bulletin 1724D-101A.

b. Construction Work Plan: Work Plan is up-to-date, meets the requirements of 7 CFR 1710, and is prepared in accordance with RUS Bulletin 1724D-101B.

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c. Sectionalizing Study: System sectionalizing is reviewed and updated as needed concurrently with each Construction Work Plan and when significant changes occur in fault current conditions in accordance with RUS Bulletin 1724E-102.

d. Load Data for Engineering Studies: An integrated database automatically assigns consumers and their load to specific geographical locations that are associated with specific distribution line sections. Data is sufficiently accurate so the difference between the calculated and measured substation kW is less than 5%.

e. Power Requirements Study: Power Requirements Study is current and completed in compliance with the requirements stated in 7 CFR 1710.

PART IV - OPERATION AND MAINTENANCE BUDGETS

16. Budgeting

Adequacy of Budgets For Needed Work: Utility prepares an annual O&M budget with specific item quantities and dollars prior to the beginning of each year for each department. The O&M budget is broken down to show each program, the quantities of work to be accomplished and the time during the year when the proposed work is to be performed.

17. Date discussed with Board of Directors

Date that budget was discussed with the Board of Directors.