COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)))))	**CASE NO. 2019-00326**

APPLICATION

Comes now Jackson Purchase Energy Corporation ("Jackson Purchase" or "Applicant"), by and through the undersigned counsel, pursuant to KRS 278.020(1), 807 KAR 5:001 Sections 14 and 15, and other applicable law, and for its Application requesting that the Kentucky Public Service Commission ("Commission") enter an Order (i) granting Applicant a Certificate of Public Convenience and Necessity ("CPCN") to construct a new headquarters facility; and, (ii) awarding Applicant the relief requested herein on an expedited basis, *to wit*, on or before January 15, 2020, Applicant respectfully pleads as follows:

I. INTRODUCTION

1. Jackson Purchase is a not-for-profit, member-owned, rural electric distribution cooperative organized under KRS Chapter 279. Jackson Purchase is engaged in the business of distributing retail electric power to approximately 30,000 members in the Kentucky counties of Ballard, Carlisle, Graves, Livingston, Marshall and McCracken.

2. Pursuant to 807 KAR 5:001 Section 14(1), Jackson Purchase's mailing address is 2900 Irvin Cobb Dr., P.O. Box 4030, Paducah, Kentucky, 42002, and its electronic mail address

is jeff.williams@jpenergy.com. This Application, including the Exhibits attached hereto and incorporated herein, contain fully the facts on which Jackson Purchase's request for relief is based, and an Order from the Commission granting the CPCN and all other relief proposed herein is requested, consistent with KRS 278.020 and other applicable law.

3. Pursuant to 807 KAR 5:001 Section 14(2), Jackson Purchase states that it incorporated in Kentucky on June 12, 1937, and attests that it presently is a Kentucky corporation in good standing.

4. Copies of Orders, pleadings and other communications related to this proceeding should be sent to:

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II. BACKGROUND

5. Applicant's existing headquarters facility ("Existing Headquarters") sits upon approximately 19 acres of real estate, rectilinear in shape, located at 2900 Irvin Cobb Drive, Paducah, Kentucky. Approximately 10 acres of the site is used for buildings, storage, pavement and parking. The balance is either used for stormwater management or is undeveloped. The Existing Headquarters consists of three separate masonry building structures containing approximately 41,000 sq. ft. and connected by a covered walkway, with a material yard and parking for employees and the members of Jackson Purchase on the current site. The office building contains approximately 17,500 sq. ft. on a single level with a mechanical mezzanine and

is used for administrative personnel and providing services to Jackson Purchase's members. The warehouse building is approximately 11,750 sq. ft. and consists of an elevated slab at dock height and is used for receiving, storage, and distribution of materials along with limited office space for the staff associated with the material handling. The garage building is approximately 11,750 sq. ft. on a single level and is used for storing the vehicles that construct and maintain Jackson Purchase's power system, support spaces for the linemen, and a vehicle maintenance bay with support spaces for the mechanics.

6. The Existing Headquarters was originally constructed in 1969-70 with no substantial renovations occurring to the present date. Applicant's annual cost to operate and maintain the Existing Headquarters is approximately $297,626.

7. Due to the inadequate size, work-flow inefficiencies, substandard design and location of the Existing Headquarters, it cannot adequately satisfy the current and future needs of Applicant and its members. The issues associated with the Existing Headquarters that demonstrate its obsolescence for Applicant's unique purposes are largely structural in nature and include, but are not limited to:

- All three buildings on the Existing Headquarters campus are in poor condition due to structural settling and age;
- Removal and replacement of the roofs on all three buildings is necessary along with adding insulation;
- Demolition sufficient to expose and strengthen the steel framing and foundations for additional bracing anchorage is required;
- Replacement of masonry veneer, HVAC mechanical system and ductwork, electrical and plumbing systems, concrete slab demolition and replacement and

architectural space planning revisions are all necessary to accommodate Jackson Purchase's current uses and needs for a modern headquarters;

- Because Jackson Purchase provides essential services to the public, all buildings would have to remain in some form of operation during the demolition and construction phases which would require temporary but extended relocation to alternate spaces. Especially problematic would be relocation of dispatch and Information Technology work areas;
- The current facility has significant size and spacing problems and does not comfortably accommodate individuals with certain physical limitations. For example, there are no public restrooms available in the office building;
- The current buildings were not designed to accommodate new technologies, developing privacy considerations or 21st century operational efficiencies so essential for reliable service to members. For example, the structure of the building being all concrete including the interior walls, does not allow for secure installation for network equipment. Jackson Purchase has to surface mount all cables and in some places access is not even available. There is also an increased cost associated with this type of installation. Jackson Purchase has installed some access controls but with the settling of the building Jackson Purchase faces constant issues with exterior doors not closing properly, which is a security risk to the employees. In addition, there is also no reliable wireless network due to the concrete interior walls.

8. When the Existing Headquarters was constructed in 1969-70 Jackson Purchase served approximately 10,000 members with a staff of 54. Today, Jackson Purchase serves approximately 30,000 members with a staff of 75. It has become very difficult for Jackson

Purchase to provide safe and reliable service which its members have come to expect, and this Commission requires, from such antiquated facilities.

9. Because these buildings are at or near the end of their useful lives it is neither cost-effective nor feasible to sufficiently renovate, expand, and retrofit the Existing Headquarters campus to adequately satisfy the current and future needs of Applicant and the consumers Applicant serves.

III. THE PROJECT

10. Because of the infeasibility of renovating the Existing Headquarters, Applicant proposes to construct a new headquarters facility ("Proposed Headquarters") that will adequately satisfy the current and future needs of Applicant and the Applicant's members.

11. Because it provides a significantly more cost-effective and logistically feasible option than the renovation of the Existing Headquarters, Applicant intends to relocate the Proposed Headquarters to [redacted], Paducah, Kentucky 42001 ("[redacted] Property"). The [redacted] Property is presently owned by [redacted] ("[redacted], [redacted]").

12. On or about May 24, 2019, Applicant and [redacted] entered into a Letter of Intent ("LOI") for the purchase of the real estate, fixtures and appurtenances associated with the [redacted] Property. The total purchase price Applicant proposes to pay to [redacted] for the [redacted] Property is [redacted] cash. A commercial appraisal determined that the current fair market value of the [redacted] Property is [redacted].

13. The [redacted] Property is located in an area of Jackson Purchase's service territory that is very convenient and conducive to the provision of quality service to its members. In its current state, the [redacted] Property consists of approximately [redacted] acres of developed real estate

improved with a large commercial building ([redacted] sq. ft.), constructed in 2008. The site includes approximately three acres of paved area which is available for parking and outside operations. If the CPCN is granted by the Commission, Jackson Purchase intends to modify/remodel the entire [redacted] sq. ft. building to accommodate its needs for administrative offices, warehouse, material storage, operations, maintenance, and covered parking area. Approximately [redacted] sq. ft. will be renovated for administration offices, [redacted] sq. ft for engineering and operations support, [redacted] sq. ft. for vehicle storage, [redacted] sq. ft. for warehouse and material storage and [redacted] sq. ft. for vehicle maintenance. An office entry addition of [redacted] sq. ft. will also be provided. Please refer to Exhibit 2 to this Application for a visual representation of these modifications.

14. Applicant has employed Cooperative Building Solutions ("CBS") St. Louis, Missouri, to provide a comprehensive facilities planning study and to provide design, pre-construction and construction administration services for the Proposed Headquarters. CBS works with electric cooperatives throughout the country to document their goals regarding facilities and performs Facility Planning Studies that provide an objective tool allowing the clients to make prudent business decisions concerning facility conditions, functionality and needs that affect the quality of service to their members, life safety of their employees and overall operational efficiencies. Once a decision is made regarding facility improvements, CBS is then able to provide the turnkey services of planning, design and construction management required to complete the facility project. CBS estimates that the construction cost of the Proposed Headquarters, including architect's fee, insurance and contingency, will be $[redacted]. When the [redacted] cost of acquiring the [redacted] Property is taken into account, the total estimated net cost of the Proposed Headquarters is [redacted].

15. Construction of the Proposed Headquarters will not have a substantial impact on Applicant's overall financial condition or on the rates paid by its members. Further discussion of the financial matters related to the Proposed Headquarters is contained in the attached Direct Testimony of Jeffrey R. Williams, Applicant's Chief Financial Officer and Vice President of Finance, Accounting and Member Services.[1]

IV. REQUEST FOR ISSUANCE OF A CPCN

16. Pursuant to KRS 278.020(1), Applicant requests that this Commission issue a CPCN for the construction of the Proposed Headquarters.

17. Pursuant to 807 KAR 5:001 Section 15(2)(a), Applicant states that the facts relied upon to show that construction of the Proposed Headquarters is required by public convenience or necessity are as follows: due to its size, inefficiencies, design and location, the Existing Headquarters cannot adequately satisfy the current and future needs of Applicant and its members; it is neither cost-effective nor feasible to renovate, expand and retrofit the Existing Headquarters to adequately satisfy the current and future needs of Applicant and its members; the Proposed Headquarters is not excessive in terms of investment or scope and will not result in a wasteful duplication of facilities; and Applicant has thoroughly reviewed and considered alternatives to the Proposed Headquarters and determined that the Proposed Headquarters represents a reasonable, least-cost solution to Applicant's needs. The need for and reasonableness of the Proposed Headquarters is more fully described in the attached Direct Testimony of Greg Grissom, Applicant's President and Chief Executive Officer.[2]

[1] *See* Exhibit 4 to this Application.

[2] *See* Exhibit 3 to this Application.

18. Pursuant to 807 KAR 5:001 Section 15(2)(b), Applicant states that the permits needed to construct the Proposed Headquarters will be acquired by CBS and/or the contractors/subcontractors at the appropriate time and in accordance with relevant law. Applicant anticipates needing the following permits: (1) McCracken County Planning & Zoning Approval; (2) Kentucky Building Code Permit Application with McCracken County; (3) Electrical Permit Application with McCracken County; (4) Mechanical & Plumbing Permits with the State of Kentucky; (5) Paducah McCracken Joint Sewer Agency (JSA); (6) Kentucky Division of Water, Notice of Intent (for land disturbance); (7) Kentucky Division of Water for sanitary sewer extension; and, (8) United States Corps of Engineers for construction abutting a small creek.

19. Pursuant to 807 KAR 5:001 Section 15(2)(c), Applicant states that a full description of the location of the Proposed Headquarters, including a description of the manner in which the Proposed Headquarters will be constructed, is contained herein and in the attached Direct Testimony of Tim Masa, President of CBS.[3] Applicant further states that there are no public utilities, corporations, or persons with whom the Proposed Headquarters is likely to compete.

20. Pursuant to 807 KAR 5:001 Section 15(2)(d)(1), Applicant states that maps to suitable scale showing the proposed location of the Proposed Headquarters are attached at Exhibit 1.[4]

21. Pursuant to 807 KAR 5:001 Section 15(2)(d)(2), Applicant states that plans and specifications and drawings of the Proposed Headquarters are attached at Exhibit 2.[5]

[3] *See* Exhibit 5 to this Application.

[4] Two copies of the map are provided in paper medium along with one copy in portable document format ("pdf").

[5] Two copies of the plans and specifications are provided in paper medium along with one copy in pdf.

22. Pursuant to 807 KAR 5:001Section 15(2)(e), Applicant states that it intends to finance the entire Proposed Headquarters project initially by a [redacted] short-term "bridge" loan, in the form of a variable-rate supplemental line-of-credit ("LOC") from either National Rural Utilities Cooperative Finance Corporation (" CFC") or CoBank. The LOC's terms will require it to be payable within a period of not more than two (2) years. Currently, Jackson Purchase intends to include the Proposed Headquarters in its 2020 Construction Work Plan and borrow from RUS on a 35-year long-term note with level debt service. Because the project has an 18-24-month timeline, the LOC will be drawn down as needed to supply capital to complete the project. Upon completion, the long-term loan through RUS will then be utilized to pay off the LOC. Commission approval for the financing associated with construction of the Proposed Headquarters is not being requested by Applicant because of the exemptions contained in KRS 278.300(8) and (10).

23. Pursuant to 807 KAR 5:001 Section 15(2)(f), Applicant states the estimated annual cost of the operation of the Proposed Headquarters after it is placed into service will be $1,311,251.

24. For all of the reasons stated above, construction of the Proposed Headquarters is necessary, is in the public interest, and will not result in wasteful duplication of facilities. The Commission is therefore respectfully requested to issue a CPCN to Applicant as set forth herein.

V. REQUEST FOR RELIEF ON AN EXPEDITED BASIS

28. By its terms, the LOI entered into by and between Applicant and [redacted] requires that a Definitive Agreement be entered into by [redacted], with one extension to [redacted], upon request by Jackson Purchase, but no later than [redacted] following Jackson Purchase obtaining all necessary regulatory approvals.

29. Applicant requests that the relief prayed for herein be awarded by the Commission on an expedited basis, *to wit,* on or before January 15, 2020 in order to meet the [redacted]

extension deadline. Obtaining a decision from the Commission by this date will afford the parties sufficient time to finalize documentation and procedural details necessary to allow the design and construction bidding process to commence.

30. Based upon the facts described herein and the reasonable nature of the timeframe set forth by Applicant, the Commission is respectfully requested to award the relief for which Applicant prays on or before January 15, 2020.

VI. OVERVIEW OF TESTIMONY

31. In support of this Application, Applicant is tendering the Direct Testimony of several witnesses, including:

a. Mr. Greg Grissom, President and Chief Executive Officer, in which he offers testimony describing the condition and obsolescence of the Existing Headquarters, the need and space requirements for the Proposed Headquarters and why the Proposed Headquarters is the most reasonable, least cost option for Applicant. Mr. Grissom's testimony is attached hereto as Exhibit 3 and incorporated herein by reference.

b. Mr. Jeffrey R. Williams, Chief Financial Officer and Vice President of Finance, Accounting and Member Services, in which he offers testimony describing the method by which Applicant will finance the Proposed Headquarters, how Applicant arrived at estimated costs for several significant and necessary project expenditures, and the anticipated effect that the project will have on several of Applicant's key financial metrics. Mr. Williams' testimony is attached hereto as Exhibit 4 and incorporated herein by reference.

c. Mr. Tim Masa, President of CBS, in which he offers testimony describing the process employed to arrive at the chosen option and determine space requirements and layout for the Proposed Headquarters, the method by which the various estimated cost components of the

project were calculated, construction and bidding details and related technical information. Mr. Masa's testimony is attached hereto as Exhibit 5 and incorporated herein by reference.

d. Mr. Ronald S. Bacon, Partner with Bacon Farmer Workman Engineering and Testing, Inc., in which he offers testimony describing the process employed to assess the condition of Jackson Purchase's current Headquarters campus consisting of the office, garage, and warehouse. Mr. Bacon's testimony is attached hereto as Exhibit 6 and incorporated herein by reference.

VII. CONCLUSION

WHEREFORE, on the basis of the foregoing, Applicant respectfully requests that the Commission issue an Order:

(1) Pursuant to KRS 278.020, granting to Applicant a CPCN to construct the Proposed Headquarters;

(2) Awarding the relief requested herein on an expedited basis no later than January 15, 2020; and

(3) Awarding to Applicant such other or additional relief to which it may appear entitled.

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF McCracken)

Comes now Greg Grissom, President and Chief Executive Officer of Jackson Purchase Energy Corporation, and, after being duly sworn, does hereby verify, swear and affirm that the averments set forth in this Application are true and correct based upon my personal knowledge and belief, formed after reasonable inquiry, as of this 3rd day of September, 2019.

Greg Grissom
President and Chief Executive Officer
Jackson Purchase Energy Corporation

The foregoing Verification was verified, sworn to and affirmed before me, a NOTARY PUBLIC, by Greg Grissom, President and Chief Executive Officer of Jackson Purchase Energy Corporation, on this 3rd day of September, 2019.

NOTARY PUBLIC

My Commission Expires: 8/25/2022

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Counsel for Jackson Purchase Energy Corporation

EXHIBIT 1

TWO COPIES IN PAPER MEDIUM AND ONE ON A CD IN PDF FORMAT ARE BEING FILED UNDER SEAL PURSUANT TO A MOTION FOR CONFIDENTIAL TREATMENT

EXHIBIT 2

TWO COPIES IN PAPER MEDIUM
AND ONE ON A CD IN PDF FORMAT
ARE BEING FILED UNDER SEAL
PURSUANT TO A MOTION FOR
CONFIDENTIAL TREATMENT

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)))))	**CASE NO. 2019-00326**

DIRECT TESTIMONY OF GREG GRISSOM, PRESIDENT AND CHIEF EXECUTIVE OFFICER ON BEHALF OF JACKSON PURCHASE ENERGY CORPORATION

Filed: September 13, 2019

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)	CASE NO. 2019-00 326

VERIFICATION OF GREG GRISSOM

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF McCracken)

Greg Grissom, President and Chief Executive Officer of Jackson Purchase Energy Corporation, being duly sworn, states that he has supervised the preparation of his Direct Testimony in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Greg Grissom

The foregoing Verification was signed, acknowledged and sworn to before me this 3rd day of September, 2019, by Greg Grissom.

AMY VICK
NOTARY PUBLIC
STATE AT LARGE, KENTUCKY
NOTARY ID #607437
COMMISSION EXPIRES 08/25/2022

Commission expiration: 8/22/2022

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Greg Grissom and I serve as President and Chief Executive Officer of Jackson Purchase Energy Corporation ("Jackson Purchase" or the "Cooperative"). My business address is 2900 Irvin Cobb Dr., Paducah, Kentucky 42002.

Q. PLEASE STATE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. I have enjoyed a nearly twenty (20) year affiliation with electric cooperatives as an executive at multiple organizations and have developed a rich understanding for the challenges and opportunities presented within this important industry. I served as President and Chief Executive Officer of Hickman Fulton Electric Cooperative in Hickman, Kentucky, from 2000 through 2015; after serving three (3) years as Chief Executive Officer and President at Pennyrile Rural Electric Cooperative Corporation in Hopkinsville, Kentucky, I assumed my current role at Jackson Purchase in September of 2018. I am a graduate of Murray State University with a degree in Area Occupational Safety & Health Engineering and also a graduate of the Management Internship Program of the National Rural Electric Cooperative Association.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR DUTIES AT JACKSON PURCHASE.

A. As the chief executive, I oversee all departments at Jackson Purchase and lead an experienced team responsible for the overall operational and financial success of the organization. My primary duty is to ensure cooperative activities are completed

consistent with good business practices, established policies, regulatory oversight and the direction provided by Jackson Purchase's eight-member Board of Directors.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to describe the condition of Jackson Purchase's current headquarters facility (the "Existing Headquarters") and why it no longer meets Jackson Purchase's needs; to describe the need and space requirements for the new headquarters facility that Jackson Purchase proposes to construct (the "Proposed Headquarters"); to describe the reasons why the construction of the Proposed Headquarters on the [redacted] Property (as that term is later defined herein) is the most reasonable, least cost option for Jackson Purchase; and, finally, to describe the advantages to Jackson Purchase's members of construction of the Proposed Headquarters.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. No.

Q. PLEASE GENERALLY DESCRIBE THE BUSINESS OPERATIONS OF JACKSON PURCHASE.

A. Jackson Purchase is a not-for-profit, member-owned rural electric cooperative corporation with its headquarters in Paducah, Kentucky. The Cooperative provides retail electric service to approximately 30,000 customers in all or a portion of Ballard, Carlisle, Graves, Livingston, Marshall and McCracken Counties. The Cooperative is one of three (3) member-owners of Big Rivers Electric Corporation

("Big Rivers"), which serves as the wholesale electricity provider for the Cooperative. Jackson Purchase owns and maintains approximately 2,964 miles of distribution lines connecting 27 substations. During the test year in this case, Jackson Purchase's average residential customer used 1,134 kWh per month.

Q. WHERE IS JACKSON PURCHASE'S EXISTING HEADQUARTERS LOCATED?

A. Jackson Purchase's Existing Headquarters sits upon approximately 19 acres of real estate located in Paducah, McCracken County, Kentucky at 2900 Irvin Cobb Drive.

Q. PLEASE PROVIDE A GENERAL DESCRIPTION OF THE EXISTING HEADQUARTERS.

A. The Existing Headquarters was originally designed and constructed in 1969-70 using techniques and materials typically employed at the time for similar commercial buildings. There have not been any significant renovations to the Existing Headquarters since original construction. The 19-acre campus is rectangular in shape and is bounded on each side by public streets. It contains three principal buildings totaling approximately 41,000 sq. ft. that are connected by a covered walkway, with a material yard and parking for both employees and the general public. The three buildings are: an office of approximately 17,500 sq. ft. on one level; a warehouse of approximately 11,750 sq. ft. including an elevated concrete slab at dock height; and, a vehicle storage and maintenance building on a single level containing approximately 11,750 sq. ft.

Q. CAN THE EXISTING HEADQUARTERS ADEQUATELY SATISFY THE CURRENT AND FUTURE NEEDS OF JACKSON PURCHASE AND THE CONSUMERS IT SERVES?

A. No. Due to the size, inefficiencies, design, substandard condition and location of the Existing Headquarters, it cannot adequately satisfy the current and future needs of Jackson Purchase and its members.

Q. PLEASE DESCRIBE IN DETAIL WHY THE EXISTING HEADQUARTERS IS INADEQUATE.

A. As stated in greater detail in the testimony of both Tim E. Masa of Cooperative Building Solutions ("CBS") and Ronald S. Bacon of Bacon, Farmer and Workman Engineering and Testing, Inc., the essential buildings and site space restrictions at the Existing Headquarters prohibit their efficient current (and future) use without extraordinary building and site modifications at an extremely high cost. By way of example:

- All three buildings on the Existing Headquarters campus are in poor condition due to structural settling and age;
- Removal and replacement of the roofs on all three buildings is necessary along with adding insulation;
- Demolition sufficient to expose and strengthen the steel framing and foundations for additional bracing anchorage is required;
- Replacement of masonry veneer, HVAC mechanical system and ductwork, electrical and plumbing systems, concrete slab demolition and replacement and architectural space planning revisions are all necessary to accommodate

Jackson Purchase's current uses and needs for a modern headquarters will also be required;

- Compounding the problem is the fact that because Jackson Purchase provides essential services to the public, all buildings would have to remain in some form of operation during the demolition and construction phases which would require temporary but extended relocation to alternate spaces. Especially problematic would be relocation of dispatch and Information Technology work areas;
- The current facility has significant size and spacing problems and does not comfortably accommodate individuals with certain physical limitations. For example, there are no public restrooms available in the office building;
- The current buildings were not designed to accommodate new technologies, developing privacy considerations or 21st century operational efficiencies so essential for reliable service to members. For example, the structure of the building being all concrete including the interior walls, does not allow for secure installation for network equipment. Jackson Purchase has to surface mount all cables and in some places access is not even available. There is also an increased cost associated with this type of installation. Jackson Purchase has installed some access controls but with the settling of the building Jackson Purchase faces constant issues with exterior doors not closing properly, which is a security risk to the employees. In addition, there is also no reliable wireless network due to the concrete interior walls.

- When the current facility was built in 1969-70 it was meant to service Jackson Purchase's 10,674 members and staff of 54. Now, 49 years later, Jackson Purchase serves 30,000 members utilizing a staff of 75 from the same facility.

Q. IS IT FEASIBLE FOR JACKSON PURCHASE TO RENOVATE, EXPAND, AND/OR RETROFIT THE EXISTING HEADQUARTERS TO ENABLE ITS CONTINUED USE?

A. No. As explained in both Mr. Masa's and Mr. Bacon's testimony, it is clearly cost-prohibitive to do so.

Q. CONSIDERING THE COST-PROHIBITIVE NATURE OF RENOVATING THE EXISTING HEADQUARTERS BUILDINGS WHAT ALTERNATIVE DOES JACKSON PURCHASE INTEND TO PURSUE?

A. Jackson Purchase's Board of Directors has known for a significant period of time that some action was necessary to address the substandard condition of the Existing Headquarters. In early 2019 the Board directed me to move forward with a plan to assess the situation and develop an analytical framework meant to provide the Board with reasonable and cost-effective options for its consideration. I then sought out and employed CBS which has a long and successful history of providing help to rural electric cooperatives in understanding and solving their building and facility challenges. Jackson Purchase's activities began by retaining CBS to complete a Comprehensive Planning and Feasibility Study. The purpose of this study was to assist Jackson Purchase with an objective way to make prudent business decisions concerning both current and future facilities.

Q. GENERALLY SPEAKING WHAT WERE THE RESULTS OF CBS's PLANNING AND FEASIBILITY STUDY?

A. The details of how the study was conducted is more particularly discussed in Mr. Masa's testimony. However, CBS's "Facility Planning Study" determined that there were three viable options available to Jackson Purchase to address its Existing Headquarters obsolescence issues. First, Jackson Purchase could remodel the Existing Headquarters facility to bring it up to current occupancy codes and space needs; second, it could construct a completely new headquarters facility on a hypothetical greenfield site somewhere in its service territory; or third, it could construct and repurpose an existing multi-use facility conveniently located for Jackson Purchase's purposes ("[redacted] Option"). Following several months of site visits, interviews with Jackson Purchase management and staff about space needs, and consultation with third-party engineers, architects and commercial construction experts, CBS developed estimated cost information for each option which was further refined and discussed with Jackson Purchase's Board of Directors via several virtual and in-person presentations.

Q. WHAT DID CBS DETERMINE AND RECOMMEND TO THE JACKSON PURCHASE BOARD OF DIRECTORS AS THE MOST COST-EFFICIENT AND PREFERABLE OPTION?

A. CBS's cost analysis of the three options available to Jackson Purchase are summarized in the table below:

OPTION	ESTIMATE COST (AVERAGE OF HIGH AND LOW)
Refurbish Existing Headquarters	$22,303,500
New Construction on Greenfield Site (Includes Property Acquisition)	$21,685,000
Repurpose [redacted] Building (Includes Property Acquisition)	[redacted]

Following extensive discussion at a special Board of Directors meeting held on August 27, 2019, Jackson Purchase's Board voted to proceed with the [redacted] Option both because it was the lowest cost option and provided for a more favorable construction timeline since the main building to be used for the Proposed Headquarters is already constructed, basic grade and drain has already been performed and a large concrete parking lot is in place and ready for use.

Q. PLEASE GENERALLY DESCRIBE THE [redacted] PROPERTY.

A. In its current state, the [redacted] Property consists of approximately [redacted] acres of developed real estate and [redacted] sq. ft. of useable space.

Q. DOES JACKSON PURCHASE CURRENTLY OWN THE [redacted] PROPERTY?

A. No. The [redacted] Property is presently owned by [redacted]

Q. DOES JACKSON PURCHASE INTEND TO ACQUIRE THE [redacted] PROPERTY?

A. Yes. On May 24, 2019, Jackson Purchase and [redacted] entered into a Letter of Intent for Purchase of Real Estate with respect to the [redacted] (the "LOI"). The total purchase price Applicant proposes to pay to [redacted]

[redacted] for the [redacted] Property is [redacted] less than a recent commercial appraisal of the property. Among other things, the LOI provides that purchase of the property is conditional upon approval of the CPCN by the Commission.

Q. WHY DID JACKSON PURCHASE CHOOSE THE [redacted] PROPERTY AS THE LOCATION FOR ITS PROPOSED HEADQUARTERS?

A. As stated previously, the [redacted] option was the least-cost and most reasonable option available. Moreover, the existing building on the [redacted] Property adapts very nicely to all of Jackson Purchase's warehousing, transportation, maintenance, storage, and fleet parking needs. Additionally, due to its location and footprint, the [redacted] Property includes room for future expansion which is important to Jackson Purchase since it does not have district offices elsewhere in its service territory to absorb future customer growth. For these reasons and others discussed herein, the [redacted] Property is an excellent location for Jackson Purchase's Proposed Headquarters.

Q. DOES JACKSON PURCHASE INTEND TO MODIFY AND/OR REMODEL THE [redacted] PROPERTY?

A. Yes. Jackson Purchase intends to modify/remodel approximately [redacted] sq. ft. of the existing large building to enable its use as warehouse, storage, operations, maintenance, and covered parking area. Further discussion of the size and design of the Proposed Headquarters is contained in Mr. Masa's testimony, attached as Exhibit 5 to Jackson Purchase's Application.

Q. WHAT DOES JACKSON PURCHASE INTEND TO DO WITH THE EXISTING HEADQUARTERS IF THE PROPOSED HEADQUARTERS IS APPROVED, CONSTRUCTED, AND UTILIZED?

A. If the Proposed Headquarters is approved, constructed, and utilized, Jackson Purchase intends to sell the Existing Headquarters. The cost estimates related to the Proposed Headquarters do not include any credit for the funds that Jackson Purchase may realize upon the sale of the Existing Headquarters. Because the Existing Headquarters would no longer be used by or useful to Jackson Purchase in providing electric service to its customers those assets would be considered obsolete and Jackson Purchase does not believe Commission approval is required to sell them. Jackson Purchase would sell the Existing Headquarters at a fair market value price as established by at least one appraisal prepared by a real estate appraiser licensed in the State of Kentucky.

Q. PLEASE BRIEFLY DESCRIBE IN WHAT WAYS THE PROPOSED HEADQUARTERS IMPROVES UPON THE EXISTING HEADQUARTERS.

A. The Proposed Headquarters is designed to address a number of issues associated with the Existing Headquarters. The Proposed Headquarters will be able to more comfortably accommodate individuals with certain physical limitations, will be safer for employees and visitors in both emergency situations and with respect to general ingress and egress, and will include needed technological improvements essential to 21st century business. The Proposed Headquarters also represents a departure from the ineffective and fragmented layout associated with the Existing

Headquarters in meeting Jackson Purchase's needs; it is designed with adequate workspace and appropriate space for employee and community activities, parking, restrooms, and common areas. In addition, it is worth noting that the Existing Headquarters is not located in Jackson Purchase's service territory and for the last 50 years the cooperative has instead paid Paducah Power System a monthly power bill. The Proposed Headquarters will be located in Jackson Purchase's service territory thereby saving approximately 35-45% off its current power bill with Paducah Power. In short, the Proposed Headquarters improves upon the Existing Headquarters in nearly every way imaginable.

Q. HOW DOES JACKSON PURCHASE INTEND TO PAY FOR CONSTRUCTION OF THE PROPOSED HEADQUARTERS?

A. Jackson Purchase will be required to borrow up to [redacted] to finance construction of the Proposed Headquarters. The details of that borrowing are contained in the testimony of Jeffrey R. Williams found at Exhibit 4 to the Application. It is worth noting, however, that Jackson Purchase's financial analysis embodied in a 10-year Financial Forecast developed by Mr. Williams and Jackson Purchase's rate consultant, John Wolfram, demonstrates that while very small rate increases are projected for Jackson Purchase's operation during that period, these increases were the same in both scenarios.

Q. WILL ANY PORTION OF THE FINANCING PACKAGE ASSOCIATED WITH CONSTRUCTION OF THE PROPOSED HEADQUARTERS REQUIRE COMMISSION APPROVAL?

A. No, the structure of the financing package needed for construction of the Proposed Headquarters does not require Commission approval under KRS 278.300(8) and (10).

Q. PLEASE DESCRIBE ANY ADDITIONAL RELIEF SOUGHT BY JACKSON PURCHASE IN THIS PROCEEDING.

A. Besides the CPCN to construct the Proposed Headquarters Jackson Purchase requests that the Commission consider and adjudge this case on an expedited basis, *to wit*, on or before January 15, 2020. Jackson Purchase requests this relief because the Letter of Intent to purchase the [redacted] Property expires on [redacted]. While it is possible that the owners of the property could agree to extend the purchasing deadline beyond [redacted] that is certainly not guaranteed, and Jackson Purchase believes the opportunity presented to it and its members from this project should not be lost because of a technical contractual deadline. Jackson Purchase is certainly aware of the Commission's current resource challenges and makes this request with all humility and respect to the Commission, its processes and caseload.

Q. UPON WHAT FACTS DOES JACKSON PURCHASE RELY TO SHOW THAT THE PROPOSED HEADQUARTERS IS REQUIRED FOR THE PUBLIC'S CONVENIENCE AND NECESSITY?

A. As stated in the Application to which this testimony is attached and as supported by the other testimony submitted, (1) due to its size, inefficiencies, design, and location, the Existing Headquarters cannot adequately satisfy the current and future needs of Jackson Purchase and its owner-members; (2) it is neither cost-effective

nor feasible to sufficiently renovate, expand, and retrofit the Existing Headquarters to adequately satisfy the current and future needs of Jackson Purchase and its owner-members; (3) the Proposed Headquarters is not excessive in terms of investment or scope, and will not result in a wasteful duplication of facilities; and (4) Jackson Purchase has thoroughly reviewed and considered alternatives to the Proposed Headquarters and determined that the Proposed Headquarters represents a reasonable, least-cost solution to Jackson Purchase's needs.

Q. WILL THE PROPOSED HEADQUARTERS RESULT IN WASTEFUL DUPLICATION OF FACILITIES?

A. No. The Proposed Headquarters will reasonably satisfy Jackson Purchase's current and future needs for office and warehouse space and is necessary to address significant inadequacies for Jackson Purchase associated with the Existing Headquarters. The Proposed Headquarters will not compete with other utility facilities, nor will the Proposed Headquarters in any way clutter the relevant landscape. In sum, because the Proposed Headquarters is the most reasonable, least cost, feasible alternative available to Jackson Purchase, it does not represent excessive investment in relation to efficiency and will not result in an unnecessary multiplicity of physical properties.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. Due to the size, design, inefficiencies, and location of the Existing Headquarters, it cannot adequately satisfy the current and future needs of Jackson Purchase and its owner-members. To paraphrase an old saying, "the crib has gotten too small for the baby." For this reason, Jackson Purchase believes it necessary to construct a

new headquarters facility. Jackson Purchase, in conjunction with its chosen facilities consultant, has determined that the Proposed Headquarters represents the most reasonable, least cost solution for addressing its needs. If approved by the Commission, the Proposed Headquarters will be constructed at the [redacted] Property site, which is well-suited for the project with an estimated all-in cost of [redacted]. Furthermore, the [redacted] Property will provide ease of access to Jackson Purchase's members in light of its location near schools, shopping and residential areas. This is a unique opportunity for Jackson Purchase to positively impact its community while creating more efficient operations, enhancing services to members, and allowing Jackson Purchase to utilize the energy-efficient technologies that it promotes to its members, all at a very attractive cost considering the sizeable project scope and demonstrable benefits to the cooperative and its members.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)))))	**CASE NO. 2019-00326**

DIRECT TESTIMONY OF JEFFREY R. WILLIAMS, CHIEF FINANCIAL OFFICER AND VICE PRESIDENT OF FINANCE, ACCOUNTING & MEMBER SERVICES, ON BEHALF OF JACKSON PURCHASE ENERGY CORPORATION

Filed: September 13, 2019

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)	Case No. 2019-00326

VERIFICATION OF JEFFREY R. WILLIAMS

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF McCracken)

Jeffrey R. Williams, Chief Financial Officer and Vice-President, Accounting, Finance and Member Services of Jackson Purchase Energy Corporation, being duly sworn, states that he has supervised the preparation of his Direct Testimony in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Jeffrey R. Williams

The foregoing Verification was signed, acknowledged and sworn to before me this 3rd day of September, 2019, by Jeffrey R. Williams.

AMY VICK
NOTARY PUBLIC
STATE AT LARGE, KENTUCKY
NOTARY ID #601437
COMMISSION EXPIRES 08/25/2022

Commission expiration: 8/25/2022

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Jeffrey R. Williams and I serve as Chief Financial Officer and Vice President of Finance, Accounting & Member Services for Jackson Purchase Energy Corporation ("Jackson Purchase" or the "Cooperative"). My business address is 2900 Irvin Cobb Dr., Paducah, Kentucky 42002.

Q. PLEASE STATE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. I received my Bachelor of Business Administration in Finance from the University of Kentucky in 1992 and a Master of Business Administration from Murray State University in 2014. I have served in various roles in the utility industry for approximately twenty (20) years, including as a Senior Budget Analyst and Manager of Budgeting at Big Rivers Electric Corporation. I accepted my current position at Jackson Purchase in April of 2018.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR DUTIES AT JACKSON PURCHASE.

A. In my role as CFO at Jackson Purchase, I am responsible for all finance, accounting, regulatory and member service activities for the Cooperative. This includes managing Jackson Purchase's debt portfolio through regular communication with representatives of Rural Utilities Service ("RUS"), Cooperative Finance Corporation ("CFC"), CoBank, and Federal Financing Bank ("FFB").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to describe the method by which Jackson Purchase intends to finance the construction of a new headquarters facility (the "Proposed Headquarters"), how Jackson Purchase arrived at estimated costs for several significant and necessary project expenditures, the anticipated effect that the project will have on several of Jackson Purchase's key financial metrics and generally to support Jackson Purchase's request to construct the Proposed Headquarters.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I am providing and sponsoring the following exhibit which was prepared in conjunction with Mr. John Wolfram, Jackson Purchase's rate and financial consultant, and which I ask be incorporated into my testimony by reference:

- Exhibit JRW-1, Jackson Purchase's Summary of 10-Year Financial Forecast.

Q. WHAT IS JACKSON PURCHASE'S ANNUAL COST TO OPERATE AND MAINTAIN ITS EXISTING HEADQUARTERS FACILITY?

A. Jackson Purchase's existing headquarters facility (the "Existing Headquarters") was constructed in 1969-70. The annual operation and maintenance ("O&M") costs for the Existing Headquarters is $297,626 allocated as follows:

Water & Sewer	$	5,068
Electricity		119,491
Property Tax		20,512
Property Insurance		7,877
Interest		-
Depreciation		43,614
Buildings & Grounds		35,683
Cleaning Service		42,298
Repairs		23,083
Total	$	297,626

Q. WHERE DOES JACKSON PURCHASE INTEND TO CONSTRUCT THE PROPOSED HEADQUARTERS?

A. Jackson Purchase intends to purchase and construct the Proposed Headquarters on approximately [redacted] acres of real estate located at [redacted] in Paducah, McCraken County, Kentucky (the "[redacted]"). The details surrounding the decision to construct the Proposed Headquarters is contained in the testimonies of Greg Grissom, Tim Masa and Ronald Bacon and not addressed in my testimony.

Q. WHAT IS THE ESTIMATED TOTAL COST OF THE PROPOSED HEADQUARTERS?

A. The total estimated net cost to purchase the [redacted] and construct the Proposed Headquarters is [redacted] the two main components of this amount are design and construction costs of [redacted], and property acquisition costs of [redacted].

Q. DOES JACKSON PURCHASE INTEND TO FINANCE THE COSTS ASSOCIATED WITH THE PROPOSED HEADQUARTERS?

A. Yes. Jackson Purchase intends to finance the full cost for construction of the Proposed Headquarters, including the cost of acquiring the [redacted].

Q. PLEASE DESCRIBE HOW JACKSON PURCHASE INTENDS TO FINANCE THE COSTS ASSOCIATED WITH THE PROPOSED HEADQUARTERS.

A. Jackson Purchase has engaged in detailed conversations with CFC and CoBank to provide [redacted] of short-term "bridge" financing, in the form of a supplemental variable-rate line-of-credit (LOC). Currently, Jackson Purchase

intends to include the Proposed Headquarters in its 2020 Construction Work Plan and borrow from Rural Utilities Service ("RUS") on a 35-year long-term note with level debt service. Because the project has an 18-24-month timeline, the LOC will be drawn down as needed to supply capital to complete the project. Upon completion, the long-term loan through RUS will then be utilized to pay off the LOC.

Q. WILL ANY PORTION OF THE FINANCING PACKAGE ASSOCIATED WITH CONSTRUCTION OF THE PROPOSED HEADQUARTERS REQUIRE COMMISSION APPROVAL?

A. No. As stated in Mr. Grissom's testimony the structure of the financing package needed for construction of the Proposed Headquarters does not require Commission approval under KRS 278.300(8) and (10).

Q. WHY IS IT ADVANTAGEOUS FOR JACKSON PURCHASE TO FINANCE THE PROPOSED HEADQUARTERS IN THIS FASHION?

A. Interest rates on long-term notes are very low currently though RUS. The LOC agreement through CFC or CoBank offers Jackson Purchase the capital to complete the project in the interim also at low rates. For example, the current effective rate for the LOC through CoBank with patronage is 3.09% (stated rate of 3.57%).

Q. DID JACKSON PURCHASE PREPARE AN ESTIMATE OF THE FINANCIAL AND RATE IMPACTS THAT THE COST OF THE PROPOSED HEADQUARTERS WILL HAVE ON JACKSON PURCHASE'S OVERALL FINANCIAL CONDITION?

A. Yes. I prepared a 10-year financial forecast for Jackson Purchase that is based on the current expectations for annual revenues, expenses, and investments through the year 2028. This forecast is prepared in the format of the Statement of Operations, along with corresponding TIER and Operating TIER (OTIER) metrics for the respective years. The forecast was prepared with and without the Proposed Headquarters, with all other financial factors unrelated to the transaction being equal, in order to isolate the financial effects of the transaction.

Q. PLEASE DESCRIBE THE ESTIMATED IMPACT THAT THE COST OF THE PROPOSED HEADQUARTERS WILL HAVE ON JACKSON PURCHASE'S OVERALL FINANCIAL CONDITION.

A. Please refer to JRW-1. Note there are three pages in the Exhibit. The first page is the "Base Case" or an "As-Is" scenario with the Proposed Headquarters. The second page is the "HQ-Build" scenario with the Proposed Headquarters, and the third page is a variance sheet showing the differences between the two options. Pursuant to the Commission's Orders in Case No. 2018-00407[1], Jackson Purchase expects to utilize the streamlined rate filing process to secure small rate increases in 2021, 2023, 2025 and 2027 during the 10-year forecast period. The cumulative percent increases are forecasted to be approximately 4% over the 10-year period. This applies to both the Base Case scenario and the HQ-Build scenario.

Exhibit JRW-1 shows that the HQ-Build scenario results in changes to annual Administrative and General Expenses, Depreciation and Amortization Expenses, Interest on Long Term Debt and Interest Expense – Other. Those changes result in

[1] *In the Matter of: A Review of the Rate Case Procedure for Electric Distribution Cooperatives,* Case No. 2018-00407, Orders (Ky. P.S.C. Dec. 1, 2018 and March 26, 2019).

reductions to margins and net margins. While the annual margins will be less than those in the base case scenario every year due to the proposed project cost, Jackson Purchase will maintain positive margins and the margins will be sufficient to meet current loan covenants with RUS for the entire 10-year forecasted period.

The variance page is summarized best in the following table:

(Decreases)/Increases in Costs:	2020	2021	2022	2023	2024	2025	2026	2027	2028
Electricity			(41,822)	(41,822)	(41,822)	(41,822)	(41,822)	(41,822)	(41,822)
Property Tax				132,772	129,851	126,930	124,008	121,087	118,166
Property Insurance			45,798	45,798	45,798	45,798	45,798	45,798	45,798
Interest			475,836	467,049	458,039	448,802	439,330	429,620	419,664
Depreciation			427,436	427,436	427,436	427,436	427,436	427,436	427,436
LOC Interest	96,563	376,594							
Repairs			(23,083)	(23,083)	(23,083)	(23,083)	(23,083)	(23,083)	(23,083)
Interest Income	877	4,305	8,773	19,219	36,323	53,524	70,817	88,200	105,672
Total	97,439	380,899	892,939	1,027,370	1,032,543	1,037,585	1,042,486	1,047,237	1,051,831

The (decreases)/increases shown in the above table are reflective of the incremental (savings)/costs associated with the new headquarters building as opposed to the old headquarters building. The HQ-Build option assumes the old headquarters is sold or divested as soon as the new headquarters building is operational. The projected in-service date for the new headquarters building is January 2022.

Q. PLEASE DESCRIBE THE ESTIMATED IMPACT THAT THE COST OF THE PROPOSED HEADQUARTERS WILL HAVE ON THE RETAIL RATES PAID BY JACKSON PURCHASE'S MEMBERS.

A. Jackson Purchase estimates that the Proposed Headquarters will have no incremental impact on the retail rates paid by Jackson Purchase's members. While Jackson Purchase does anticipate periodic, small rate increases over the 10-year forecast period, these increases are identical in the Base Case scenario and the HQ-Build scenario. The results of the HQ-Build scenario indicate that Jackson

Purchase's base case scenario rate structure will not require adjustment due to the additional costs of the proposed project. Jackson Purchase anticipates that it will be able to maintain sufficient TIER and OTIER metrics over the 10-year forecast period without any rate revisions different than those assumed for the base case scenario.

Q. WHAT DOES JACKSON PURCHASE ANTICIPATE WILL BE ITS ANNUAL COST TO OPERATE AND MAINTAIN THE PROPOSED HEADQUARTERS ONCE COMPLETED AND UTILIZED?

A. Jackson Purchase estimates that the annual O&M expenses associated with the Proposed Headquarters once completed and utilized will be $1,311,251 for the first year of operation in 2022 (although property tax will not be owed or paid until 2023) and decreasing annually thereafter as debt retirement reduces interest expense. The increased O&M expenses for the Proposed Headquarters are a function of the increased size of the facilities, depreciation and interest expense.

Water & Sewer	$	5,068
Electricity		77,669
Property Tax		149,972
Property Insurance		53,675
Interest		475,836
Depreciation		471,050
Buildings & Grounds		35,683
Cleaning Service		42,298
Total	$	1,311,251

For purposes of this analysis it is assumed that the Existing Headquarters will be sold or divested at the end of 2021.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. As described in the testimony of Mr. Grissom and Mr. Bacon, the Existing Headquarters is in disrepair both structurally and cosmetically, is woefully inadequate from a space perspective for office and field staff, rolling fleet and materials storage, is unable to accept installation of new desperately needed technology and is not a candidate for remodel or expansion due to unreasonably high cost.

The [redacted] is well-suited to be transformed into Jackson Purchase's new headquarters because of the infrastructure and site-improvements already in place and will result in decreased capital expenditures for construction such that it is the clear choice to meet the company's future facilities' needs.

It is estimated that the all-in cost of the Proposed Headquarters Project is [redacted]. Jackson Purchase intends to finance the project's cost by utilizing a short-term variable-rate line of credit with CFC or Co-Bank to draw against as construction costs arise which would later be paid off after project completion by a long-term fixed-rate loan with RUS.

Jackson Purchase's 10-year Financial Forecast demonstrates a need for very modest rate increases totaling approximately 4% over that period in both the (1) Base Case As-is sceneario or the (2) HQ build scenario. While annual margins will be less in the HQ build scenario, they will be sufficient to meet loan covenant requirements with RUS. Additionally, JPEC can borrow at very low rates to lock in interest for the next 35 years for our members.

Jackson Purchase respectfully requests that the Commission approve the requested CPCN for construction of the Proposed Headquarters by allowing it to spend up to [redacted]

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Jackson Purchase Energy
Base Case
CPCN for HQ Building

Statement of Operations

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1. Operating Revenue and Patronage Capital	76,095,923	77,225,626	78,891,972	79,414,968	81,122,102	81,719,702	82,818,144	83,404,132	84,479,589	85,095,562
2. Power Production Expense	-	-	-	-	-	-	-	-	-	-
3. Cost of Purchased Power	56,274,000	56,561,781	56,906,453	57,245,781	57,624,701	58,004,321	58,393,314	58,741,927	59,088,964	59,439,942
C. Operating Revenue less Cost of Power	**19,821,923**	**20,663,845**	**21,985,519**	**22,169,187**	**23,497,402**	**23,715,381**	**24,424,831**	**24,662,205**	**25,390,625**	**25,655,621**
4. Transmission Expense		-	-	-	-	-	-	-	-	-
5. Regional Market Operations Expense	-	-	-	-	-	-	-	-	-	-
6. Distribution Expense - Operation	3,100,053	3,162,054	3,225,296	3,289,801	3,355,597	3,422,709	3,491,164	3,560,987	3,632,207	3,704,851
7. Distribution Expense - Maintenance	3,942,264	4,021,110	4,101,532	4,183,562	4,267,234	4,352,578	4,439,630	4,528,422	4,618,991	4,711,371
8. Consumer Accounts Expense	1,579,203	1,610,787	1,643,003	1,675,863	1,709,380	1,743,567	1,778,439	1,814,008	1,850,288	1,887,293
9. Customer Service and Informational Expense	82,856	84,513	86,203	87,927	89,686	91,479	93,309	95,175	97,079	99,020
10. Sales Expense	-	-	-	-	-	-	-	-	-	-
11. Administrative and General Expense	2,900,000	2,958,000	3,076,320	3,091,702	3,215,370	3,231,447	3,360,704	3,377,508	3,512,608	3,530,171
12. Total Operation & Maintenance Expense (2 thru 11)	**67,878,376**	**68,358,245**	**69,038,805**	**69,574,636**	**70,261,967**	**70,846,102**	**71,556,559**	**72,118,027**	**72,800,136**	**73,372,648**
13. Depreciation & Amortization Expense	6,023,306	6,293,331	6,570,661	6,913,158	7,258,463	7,492,227	7,724,963	7,963,553	8,204,198	8,448,916
14. Tax Expense - Property & Gross Receipts	-	-	-	-	-	-	-	-	-	-
15. Tax Expense - Other	90,335	91,239	92,151	93,073	94,003	94,943	95,893	96,852	97,820	98,799
16. Interest on Long-Term Debt	1,985,287	2,065,488	1,753,735	1,826,033	1,890,647	1,885,231	1,866,350	1,851,770	1,846,122	1,828,227
17. Interest Charged to Construction (Credit)		-	-	-	-	-	-	-	-	-
18. Interest Expense - Other	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
19. Other Deductions	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816
20. Total Cost of Electric Service (12 thru 19)	**76,044,121**	**76,915,119**	**77,522,169**	**78,473,716**	**79,571,896**	**80,385,320**	**81,310,581**	**82,097,018**	**83,015,092**	**83,815,406**
21. Patronage Capital & Operating Margins (1 minus 20)	**51,802**	**310,508**	**1,369,803**	**941,252**	**1,550,206**	**1,334,382**	**1,507,564**	**1,307,115**	**1,464,497**	**1,280,157**
22. Non Operating Margins - Interest	424,617	303,015	79,948	87,313	92,738	108,660	127,439	144,272	164,056	179,532
23. Allowance for Funds Used During Construction	-	-	-	-	-	-	-	-	-	-
24. Income (Loss) from Equity Investments	-	-	-	-	-	-	-	-	-	-
25. Non Operating Margins - Other	26,636	26,636	26,636	26,636	26,636	26,636	26,636	26,636	26,636	26,636
26. Generation & Transmission Capital Credits	-	-	-	-	-	-	-	-	-	-
27. CFC & Other Capital Credits & Patronage Dividends	251,919	248,305	239,117	230,109	221,067	212,077	204,712	197,804	190,933	184,184
28. Extraordinary Items		-	-	-	-	-	-	-	-	-
29. Patronage Capital or Margins (21 thru 28)	**754,974**	**888,464**	**1,715,504**	**1,285,310**	**1,890,647**	**1,681,755**	**1,866,350**	**1,675,827**	**1,846,122**	**1,670,509**
OTIER	**1.03**	**1.15**	**1.78**	**1.52**	**1.82**	**1.71**	**1.81**	**1.71**	**1.79**	**1.70**
TIER	**1.38**	**1.43**	**1.98**	**1.70**	**2.00**	**1.89**	**2.00**	**1.90**	**2.00**	**1.91**

Jackson Purchase Energy
HQ Build Scenario
CPCN for HQ Building

Statement of Operations

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1. Operating Revenue and Patronage Capital	76,095,923	77,225,626	78,891,972	79,414,968	81,122,102	81,719,702	82,818,144	83,404,132	84,479,589	85,095,562
2. Power Production Expense	-	-	-	-	-	-	-	-	-	-
3. Cost of Purchased Power	56,274,000	56,561,781	56,906,453	57,245,781	57,624,701	58,004,321	58,393,314	58,741,927	59,088,964	59,439,942
C. Operating Revenue less Cost of Power	**19,821,923**	**20,663,845**	**21,985,519**	**22,169,187**	**23,497,402**	**23,715,381**	**24,424,831**	**24,662,205**	**25,390,625**	**25,655,621**
4. Transmission Expense	-	-	-	-	-	-	-	-	-	-
5. Regional Market Operations Expense	-	-	-	-	-	-	-	-	-	-
6. Distribution Expense - Operation	3,100,053	3,162,054	3,225,296	3,289,801	3,355,597	3,422,709	3,491,164	3,560,987	3,632,207	3,704,851
7. Distribution Expense - Maintenance	3,942,264	4,021,110	4,101,532	4,183,562	4,267,234	4,352,578	4,439,630	4,528,422	4,618,991	4,711,371
8. Consumer Accounts Expense	1,579,203	1,610,787	1,643,003	1,675,863	1,709,380	1,743,567	1,778,439	1,814,008	1,850,288	1,887,293
9. Customer Service and Informational Expense	82,856	84,513	86,203	87,927	89,686	91,479	93,309	95,175	97,079	99,020
10. Sales Expense	-	-	-	-	-	-	-	-	-	-
11. Administrative and General Expense	2,900,000	2,958,000	3,076,320	3,072,595	3,329,036	3,342,191	3,468,528	3,482,410	3,614,589	3,629,231
12. Total Operation & Maintenance Expense (2 thru 11)	**67,878,376**	**68,398,245**	**69,038,805**	**69,555,530**	**70,375,633**	**70,956,847**	**71,664,383**	**72,222,929**	**72,902,116**	**73,471,707**
13. Depreciation & Amortization Expense	6,023,306	6,293,331	6,570,661	7,340,594	7,685,899	7,919,664	8,152,399	8,390,930	8,631,635	8,876,353
14. Tax Expense - Property & Gross Receipts	-	-	-	-	-	-	-	-	-	-
15. Tax Expense - Other	90,335	91,239	92,151	93,073	94,003	94,943	95,893	96,852	97,820	98,799
16. Interest on Long-Term Debt	1,985,287	2,065,488	1,753,735	2,301,870	2,357,696	2,343,270	2,315,152	2,291,100	2,275,742	2,247,890
17. Interest Charged to Construction (Credit)	-	-	-	-	-	-	-	-	-	-
18. Interest Expense - Other	65,000	161,563	441,594	65,000	65,000	65,000	65,000	65,000	65,000	65,000
19. Other Deductions	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816
20. Total Cost of Electric Service (12 thru 19)	**76,044,121**	**77,011,681**	**77,898,763**	**79,357,882**	**80,580,047**	**81,381,540**	**82,294,642**	**83,068,686**	**83,974,129**	**84,761,565**
21. Patronage Capital & Operating Margins (1 minus 20)	**51,802**	**213,945**	**993,209**	**57,086**	**542,055**	**338,162**	**513,502**	**335,446**	**505,460**	**333,997**
22. Non Operating Margins - Interest	424,617	302,139	75,543	78,540	73,520	72,336	73,915	73,455	75,855	73,860
23. Allowance for Funds Used During Construction	-	-	-	-	-	-	-	-	-	-
24. Income (Loss) from Equity Investments	-	-	-	-	-	-	-	-	-	-
25. Non Operating Margins - Other	26,636	26,636	26,636	26,636	26,636	26,636	26,636	26,636	26,636	26,636
26. Generation & Transmission Capital Credits	-	-	-	-	-	-	-	-	-	-
27. CFC & Other Capital Credits & Patronage Dividends	251,919	248,305	239,117	230,109	221,067	212,077	204,712	197,804	190,933	184,184
28. Extraordinary Items	-	-	-	-	-	-	-	-	-	-
29. Patronage Capital or Margins (21 thru 28)	**754,974**	**791,024**	**1,334,505**	**392,371**	**863,278**	**649,212**	**828,765**	**633,341**	**798,884**	**618,677**
OTIER	**1.03**	**1.10**	**1.57**	**1.02**	**1.23**	**1.14**	**1.23**	**1.15**	**1.22**	**1.15**
TIER	**1.38**	**1.38**	**1.76**	**1.17**	**1.37**	**1.28**	**1.36**	**1.28**	**1.35**	**1.28**

Jackson Purchase Energy
Base Case vs. HQ Build - Variance
CPCN for HQ Building

Statement of Operations

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1. Operating Revenue and Patronage Capital	-	-	-	-	-	-	-	-	-	-
2. Power Production Expense	-	-	-	-	-	-	-	-	-	-
3. Cost of Purchased Power	-	-	-	-	-	-	-	-	-	-
C. Operating Revenue less Cost of Power	-	-	-	-	-	-	-	-	-	-
4. Transmission Expense	-	-	-	-	-	-	-	-	-	-
5. Regional Market Operations Expense	-	-	-	-	-	-	-	-	-	-
6. Distribution Expense - Operation	-	-	-	-	-	-	-	-	-	-
7. Distribution Expense - Maintenance	-	-	-	-	-	-	-	-	-	-
8. Consumer Accounts Expense		-	-	-	-	-	-	-	-	-
9. Customer Service and Informational Expense	-	-	-	-	-	-	-	-	-	-
10. Sales Expense	-	-	-	-	-	-	-	-	-	-
11. Administrative and General Expense	-	-	-	(19,106)	113,666	110,745	107,823	104,902	101,981	99,059
12. Total Operation & Maintenance Expense (2 thru 11)	-	-	-	**(19,106)**	**113,666**	**110,745**	**107,823**	**104,902**	**101,981**	**99,059**
13. Depreciation & Amortization Expense	-	-	-	427,436	427,436	427,436	427,436	427,436	427,436	427,436
14. Tax Expense - Property & Gross Receipts	-	-	-	-	-	-	-	-	-	-
15. Tax Expense - Other	-	-	-	-	-	-	-	-	-	-
16. Interest on Long-Term Debt	-	-	-	475,836	467,049	458,039	448,802	439,330	429,620	419,664
17. Interest Charged to Construction (Credit)	-	-	-	-	-	-	-	-	-	-
18. Interest Expense - Other	-	96,563	376,594	-		-	-	-	-	-
19. Other Deductions	-	-	-	-	-	-	-	-	-	-
20. Total Cost of Electric Service (12 thru 19)	-	**96,563**	**376,594**	**884,166**	**1,008,151**	**996,220**	**984,061**	**971,669**	**959,037**	**946,159**
21. Patronage Capital & Operating Margins (1 minus 20)	-	**(96,563)**	**(376,594)**	**(884,166)**	**(1,008,151)**	**(996,220)**	**(984,061)**	**(971,669)**	**(959,037)**	**(946,159)**
22. Non Operating Margins - Interest	-	(877)	(4,305)	(8,773)	(19,219)	(36,323)	(53,524)	(70,817)	(88,200)	(105,672)
23. Allowance for Funds Used During Construction	-	-	-	-	-	-	-	-	-	-
24. Income (Loss) from Equity Investments	-	-	-	-	-	-	-	-	-	-
25. Non Operating Margins - Other	-	-	-	-	-	-	-	-	-	-
26. Generation & Transmission Capital Credits	-	-	-	-	-	-	-	-	-	-
27. CFC & Other Capital Credits & Patronage Dividends	-	-	-	-	-	-	-	-	-	-
28. Extraordinary Items	-	-	-	-	-	-	-	-	-	-
29. Patronage Capital or Margins (21 thru 28)	-	**(97,439)**	**(380,899)**	**(892,939)**	**(1,027,370)**	**(1,032,543)**	**(1,037,585)**	**(1,042,486)**	**(1,047,237)**	**(1,051,831)**
OTIER	-	**(0.05)**	**(0.21)**	**(0.49)**	**(0.59)**	**(0.56)**	**(0.58)**	**(0.56)**	**(0.57)**	**(0.55)**
TIER	-	**(0.05)**	**(0.22)**	**(0.53)**	**(0.63)**	**(0.62)**	**(0.64)**	**(0.63)**	**(0.65)**	**(0.64)**

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)))))	**CASE NO. 2019-00326**

DIRECT TESTIMONY OF

TIM E. MASA

PRESIDENT, COOPERATIVE BUILDING SOLUTIONS

ON BEHALF OF JACKSON PURCHASE ENERGY CORPORATION

Filed: September 13, 2019

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)	Case No. 2019-00326

VERIFICATION OF TIM E. MASA

STATE OF MISSOURI)
)
COUNTY OF St. Louis)

Tim E. Masa, President of Cooperative Building Solutions, on behalf of Jackson Purchase Energy Corporation, being duly sworn, states that he has supervised the preparation of his Direct Testimony in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Tim E. Masa

The foregoing Verification was signed, acknowledged and sworn to before me this 3rd day of September, 2019, by Tim E. Masa.

CYNTHIA RUSSELL
My Commission Expires 04/17/2023
NOTARY PUBLIC NOTARY SEAL
15174159
Lincoln County
STATE OF MISSOURI

Commission expiration: 04/17/23

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Tim E. Masa. I am the President of Cooperative Building Solutions ("CBS"). My business address is 77 Westport Plaza, Suite 250, St. Louis, Missouri, 63146.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Jackson Purchase Energy Corporation ("Jackson Purchase").

Q. PLEASE STATE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. Washington University, St. Louis, MO – Bachelor of Science in Civil Engineering
Washington University, St. Louis, MO – Masters in Construction Management
Twenty-Two (22) years of experience in the general contracting, construction management and design/build industry. The past eleven (11) years have been exclusively working with electric cooperatives throughout the country helping them plan, design and construct their facility projects. I have worked with over 80 different electric cooperatives in 22 different states.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR DUTIES AT CBS.

A. As the President of CBS, I am responsible for the overall performance of the company operations. In CBS's Client-Centered Business Model, I serve as the customer advocate and facilitator on our projects. I develop an intimate knowledge of our client's goals, expectations and business plans and am responsible for

marshalling all of the necessary in-house and external resources in order to achieve our client's goals.

Q. PLEASE BRIEFLY DESCRIBE CBS AND THE TYPES OF ACTIVITIES IT ROUTINELY PERFORMS FOR UTILITIES LIKE JACKSON PURCHASE AND OTHER NON-UTILITY COMPANIES HAVING NEEDS SIMILAR TO THOSE OF JACKSON PURCHASE IN THIS CASE.

A. CBS works with electric cooperatives throughout the country to document their goals regarding facilities. We perform Facility Planning Studies that provide an objective tool allowing our clients to make prudent business decisions concerning facility conditions, functionality and needs that affect the quality of service to their members, life safety of their employees and overall operational efficiencies. Once a decision is made regarding facility improvements, we are then able to provide the turnkey services of planning, design and construction management required to complete the facility project.

Q. PLEASE BRIEFLY DESCRIBE CBS's FAMILIARITY WITH JACKSON PURCHASE'S FACILITIES AND OPERATIONS.

A. CBS was hired to prepare a Facility Planning Study for Jackson Purchase and consult with the cooperative on our findings. We toured Jackson Purchase's existing headquarters facilities in the winter of 2018 and finalized our report in February 2019. We held several facility planning coordination meetings and phone calls to help prepare this Facility Planning Study. We looked at three facility options: renovating the 50-year-old existing facilities, building an entire new

campus at a hypothetical greenfield site for all facilities, or renovating an existing building in the Paducah area to accommodate Jackson Purchase's facility needs.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to describe the process employed to determine which of the three facility options was best for Jackson Purchase both in terms of its present and future needs to provide safe and reliable service to its members and which was the most financially prudent for the Company. Next, my testimony discusses the space requirements and layout for the new headquarters facility that Jackson Purchase proposes to construct (the "Proposed Headquarters"), the method by which the various estimated cost components of the project were calculated, and construction details and related technical information.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes, I am sponsoring the following exhibits which support my testimony:

- Exhibit TEM-1 - Facility Planning Study dated February 22, 2019;
- Exhibit TEM-2 - Schematic Design Package Outline Specifications dated August 9, 2019;
- Exhibit TEM-3 - Schematic Design Cost Estimate dated August 16, 2019;
- Exhibit TEM-4 - Schematic Design Phase Project Schedule dated August 15, 2019.

I am also sponsoring Exhibits 1 and 2 to the Application.

Q. EXPLAIN IN DETAIL WHAT THE FACILITY PLANNING STUDY CONCLUDES IS THE BEST OPTION AVAILABLE TO JACKSON PURCHASE FOR ITS PRESENT AND FUTURE FACILITIES NEEDS.

A. The Facility Planning Study for Jackson Purchase was conducted in order to provide information for Jackson Purchase to make prudent business decisions concerning current and future facility needs. Jackson Purchase's existing facilities have been maintained well, as described in detail in the testimony of Ronald S. Bacon who performed a structural assessment of the existing facilities,[1] but are in poor condition due to structural settling and age. The Facility Planning Study evaluated the buildings using three industry standard components to assess and identify current and future facility needs for Jackson Purchase. As discussed previously three options were identified and analyzed and the following conclusion was collectively reached by Jackson Purchase's Board, management and consultants. Renovation of the Existing Headquarters is not feasible. The current buildings and site space restrictions prohibit the efficient use of the existing facilities without major building and site modifications at an extremely high cost. Construction of a new headquarters on a greenfield site would have also been an expensive option. The availability of suitable land in the area is also very limited or nonexistent. Therefore, it was collectively decided that the purchase and repurposing of the [redacted] property ("[redacted] Property") would be Jackson Purchase's best option. This decision was supported by CBS' cost analysis of the three options as discussed in Mr. Greg Grissom's testimony.[2]

[1] *See* Exhibit 6 to the Application.
[2] *See* Exhibit 3 to the Application.

Q. NOW THAT JACKSON PURCHASE HAS CHOSEN TO PROCEED WITH THE PROPOSED HEADQUARTERS OPTION DESCRIBE THE NATURE OF THE SERVICES CBS WILL PROVIDE TO JACKSON PURCHASE GOING FORWARD.

A. CBS provided a proposal dated June 17, 2019 to provide services for the schematic design phase and preconstruction for the Proposed Headquarters project. CBS will continue to provide design and preconstruction services for design development phase, construction documents phase, bidding phase, and construction phase. These services include programming, architecture, interior design, civil engineering, landscape design, structural design, mechanical design, and electrical design. Services will be provided through the design, bidding and construction contract administration phases where the individual subcontracted work will be competitively bid on the project.

Q. IS THE [redacted] PROPERTY A DESIRABLE LOCATION FOR THE PROPOSED HEADQUARTERS?

A. Yes. The [redacted] Property is located in an area of Jackson Purchase's service territory that is very convenient and conducive to the provision of quality service to its members.

Q. PLEASE GENERALLY DESCRIBE THE [redacted] PROPERTY.

A. In its current state, the [redacted] Property consists of approximately [redacted] acres of developed real estate improved with a large commercial building ([redacted] sq. ft.), constructed in 2008. The site includes approximately three acres of paved area which is available for parking and outside operations.

Q. DOES JACKSON PURCHASE INTEND TO MODIFY AND/OR REMODEL THE [redacted] PROPERTY?

A. Yes. Jackson Purchase intends to modify/remodel the entire [redacted] sq. ft. building to accommodate its needs for administrative offices, warehouse, material storage, operations, maintenance, and covered parking area. Approximately [redacted] sq. ft. will be renovated for administration offices, [redacted] sq. ft for engineering and operations support, [redacted] sq. ft. for vehicle storage, [redacted] sq. ft. for warehouse and material storage and [redacted] sq. ft. for vehicle maintenance. An office entry addition of [redacted] sq. ft. will also be provided. Please refer to Exhibit 2 to the Application for a visual representation of these modifications.

Q. PLEASE DESCRIBE IN DETAIL THE UNCOVERED PARKING AREA THAT JACKSON PURCHASE WILL UTILIZE AS PART OF THE PROJECT.

A. The uncovered parking area is already constructed as part of the previous facility. Extensive areas of the site are already paved. A total of 76 parking spaces will be marked at the front and the sides of the office building. The final site design will look to utilize as much of the existing site paving as possible.

Q. IS THE TOTAL SQUARE FOOTAGE AREA OF THE ADMINISTRATIVE OFFICES, WAREHOUSE, STORAGE, OPERATIONS, MAINTENANCE, AND COVERED PARKING AREA SLIGHTLY GREATER THAN JACKSON PURCHASE'S NEEDS?

A. The total square footage of the existing [redacted] facilities will be able to accommodate the current office and operations of Jackson Purchase. It will also

accommodate some of the future needs of Jackson Purchase's employees, equipment and materials. The warehouse space will provide 1,144 sq. ft. more space than the Needs Assessment spreadsheet identified in the Facility Planning Study. This extra space will be used for additional warehouse shelving, material storage and forklift maneuvering. Because of its size the [redacted] Property allows for future expansion of the existing building should the needs of Jackson Purchase change in the future.

Q. PLEASE DESCRIBE THE PROCESS EMPLOYED TO DETERMINE THE DESIGN AND LAYOUT FOR THE PROPOSED HEADQUARTERS.

A. CBS held several design coordination meetings with Jackson Purchase to understand the square footage needs of the different spaces for the Company. CBS evaluated the Company's organizational chart to make sure all employees were accounted for in the design. CBS also reviewed Jackson Purchase's vehicle equipment list to determine what vehicles needed to be parked inside of the building. Finally, CBS quantified the amount of material storage required to be included inside of the building.

Q. PLEASE DESCRIBE IN DETAIL THE MANNER IN WHICH THE PROPOSED HEADQUARTERS WILL BE CONSTRUCTED.

A. The Proposed Headquarters building will be renovated to accommodate the floor plan design. A new office entry will be built with a partial masonry façade at the south elevation in order to provide an appropriate appearance for Jackson Purchase's members who will visit the facility. The remaining building elevations will have the existing metal panels repaired as required and painted. New windows

will be installed. The existing high roof will remain and the low roof will be replaced. A security fence will be installed to protect materials in the yard area and to enclose all employee parking. A complete demolition of the interior spaces of the existing building will take place in order to accommodate the designed floor plan. Utilization of existing plumbing rough-in will occur where available to help with the renovation process.

Q. PLEASE PROVIDE A DETAILED ESTIMATED TIMELINE FOR CONSTRUCTION OF THE PROPOSED HEADQUARTERS AND THE IMPORTANT CONSTITUENTS NECESSARY TO MAINTAIN THE TIMELINE.

A. Exhibit TEM-4 depicts the project schedule. Assuming approval by the Commission of the requests made by Jackson Purchase in this case and following acquisition of the Proposed Headquarters property in February 2020 pre-construction activities will begin culminating in the award of a construction contract by March 2021. The design process will take approximately another 13 weeks to complete. Once the design documents are completed we will then submit the drawings to receive the necessary approvals and permits. We will then competitively bid the project out to the subcontractor market. Once all bids have been evaluated and reviewed, we will then finalize our guaranteed contract amount and schedule for the project. We currently estimate the project to take 10 months to complete, which would mean that the Proposed Headquarters would be ready for occupancy by January 2022.

Q. PLEASE DESCRIBE THE PERMITS THAT MUST BE OBTAINED TO CONSTRUCT AND UTILIZE THE PROPOSED HEADQUARTERS.

A. Although none have yet been obtained the following permits will be necessary for the project:

- McCracken County Planning & Zoning Approval
- Kentucky Building Code Permit Application with McCracken County
- Electrical Permit Application with McCracken County
- Mechanical & Plumbing Permits with the State of Kentucky
- Paducah McCracken Joint Sewer Agency (JSA)
- Kentucky Division of Water, Notice of Intent (for land disturbance)
- Kentucky Division of Water for sanitary sewer extension.
- U.S. Army Corps of Engineers Permit for construction abutting a small creek.

Q. WHAT IS THE ESTIMATED TOTAL CONSTRUCTION COST OF THE PROPOSED HEADQUARTERS?

A. CBS estimates that the construction cost of the Proposed Headquarters, including architect and engineer's fee, insurance, and contingency, less property acquisition and any credit ultimately obtained by the sale of Jackson Purchase's existing headquarters campus will be $[redacted]. When property acquisition costs are included the total estimated project cost will be [redacted]

Q. PLEASE DESCRIBE THE PROCESS AND METHODOLOGY BY WHICH CBS ARRIVED AT ITS ESTIMATED TOTAL CONSTRUCTION COST OF THE PROPOSED HEADQUARTERS.

A. CBS used the Schematic Design Documents and site due diligence information provided to develop the Schematic Design Cost Estimate. We performed a detailed quantity take off of the project scope of work and then applied our pricing from either our cost history database or from subcontractor budget proposals.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. CBS has been engaged by Jackson Purchase to serve as the Facility Consultant and Design/Builder (planning, design and construction) for the Proposed Headquarters. Upon analysis of Jackson Purchase's existing headquarters facility, discussion with Jackson Purchase, and review of similar projects, CBS has prepared a preliminary design of the Proposed Headquarters and preliminarily estimates its total construction cost at $[redacted] and with property acquisition $[redacted]. The Proposed Headquarters is to be sited upon the [redacted] Property, which property is well-suited for the project. Jackson Purchase is the beneficiary of a large amount of additional warehouse/operations space by virtue of it already being in place as part of the facility. Jackson Purchase also benefits from a greatly-reduced scope for site work and paving as that part of the project is also in place. CBS estimates that upon completion of the project, Jackson Purchase will have a very functional, convenient and attractive headquarters facility for only roughly $175/SF. This cost is much less than the current average cost per sq. ft. for new construction of similar facilities by other organizations. It is CBS's opinion that, by any measure, a cost-benefit analysis of this project strongly favors the construction of the Proposed Headquarters as requested by Jackson Purchase.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

FACILITY PLANNING STUDY

FEBRUARY 22, 2019

COOPERATIVE BUILDING SOLUTIONS

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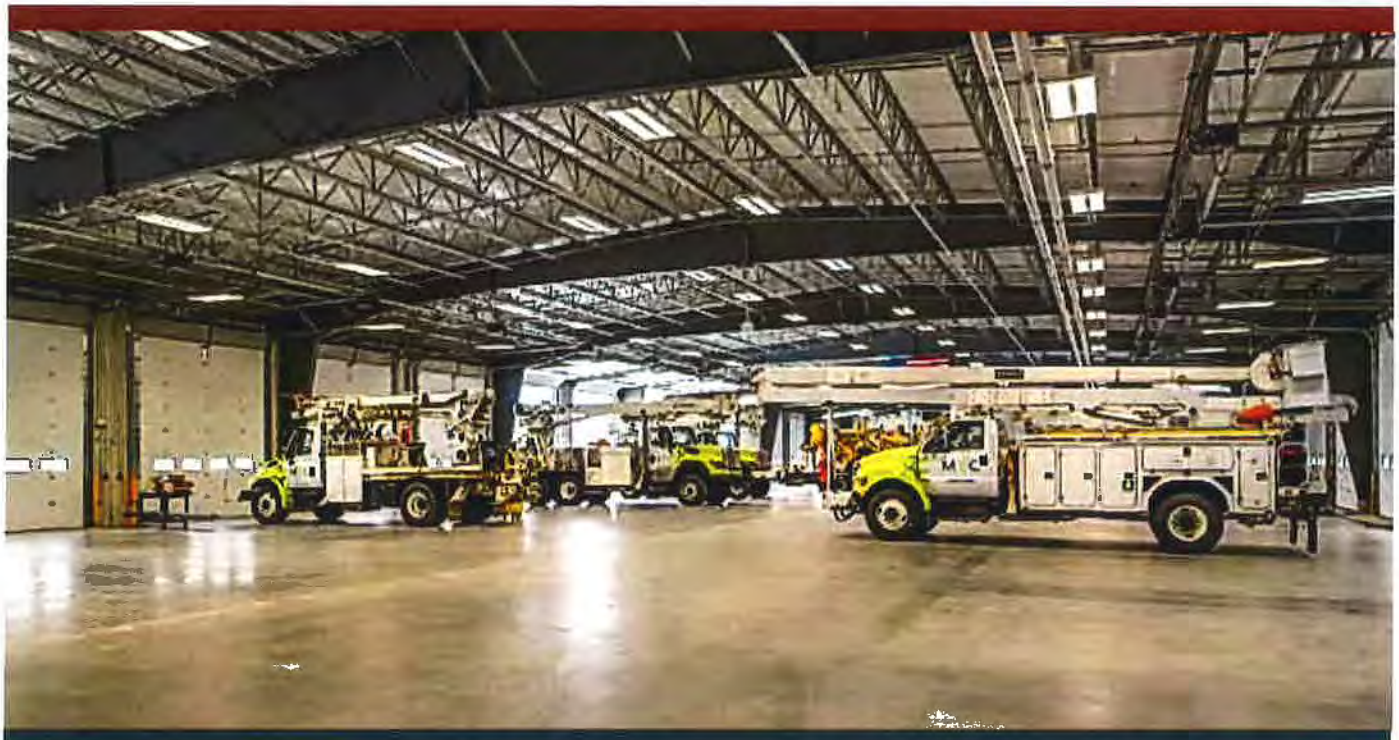


01 PURPOSE AND SCOPE OF THE STUDY

COOPERATIVE
BUILDING SOLUTIONS

01 PURPOSE AND STUDY OF THE STUDY

PURPOSE OF STUDY

The Purpose of this Study is to provide Jackson Purchase Energy Corporation an objective tool to make prudent business decisions concerning facility planning that affect quality member service, life safety and operational efficiencies.

SCOPE OF SERVICES – FACILITY PLANNING STUDY

This Facility Planning Study uses three components to create an industry standard method of evaluating the overall physical condition and functional use of the current Jackson Purchase Energy Corporation Facility.

- Property Condition Assessment (PCA)
- Functionality Assessment (FA)
- Needs Assessment (NA)

The PCA identifies the physical condition of the facilities, the FA evaluates the functionality and efficiency of the facilities and the NA evaluates the current and future space needs of the facilities.

The Facility Planning Study incorporates industry standard evaluations and ratings from the PCA, FA and NA and combines them into an objective report that blends each of these considerations into best options and solutions as to how your organization should proceed in solving their current and future facility requirements.

02 FACILITY PLANNING GOALS

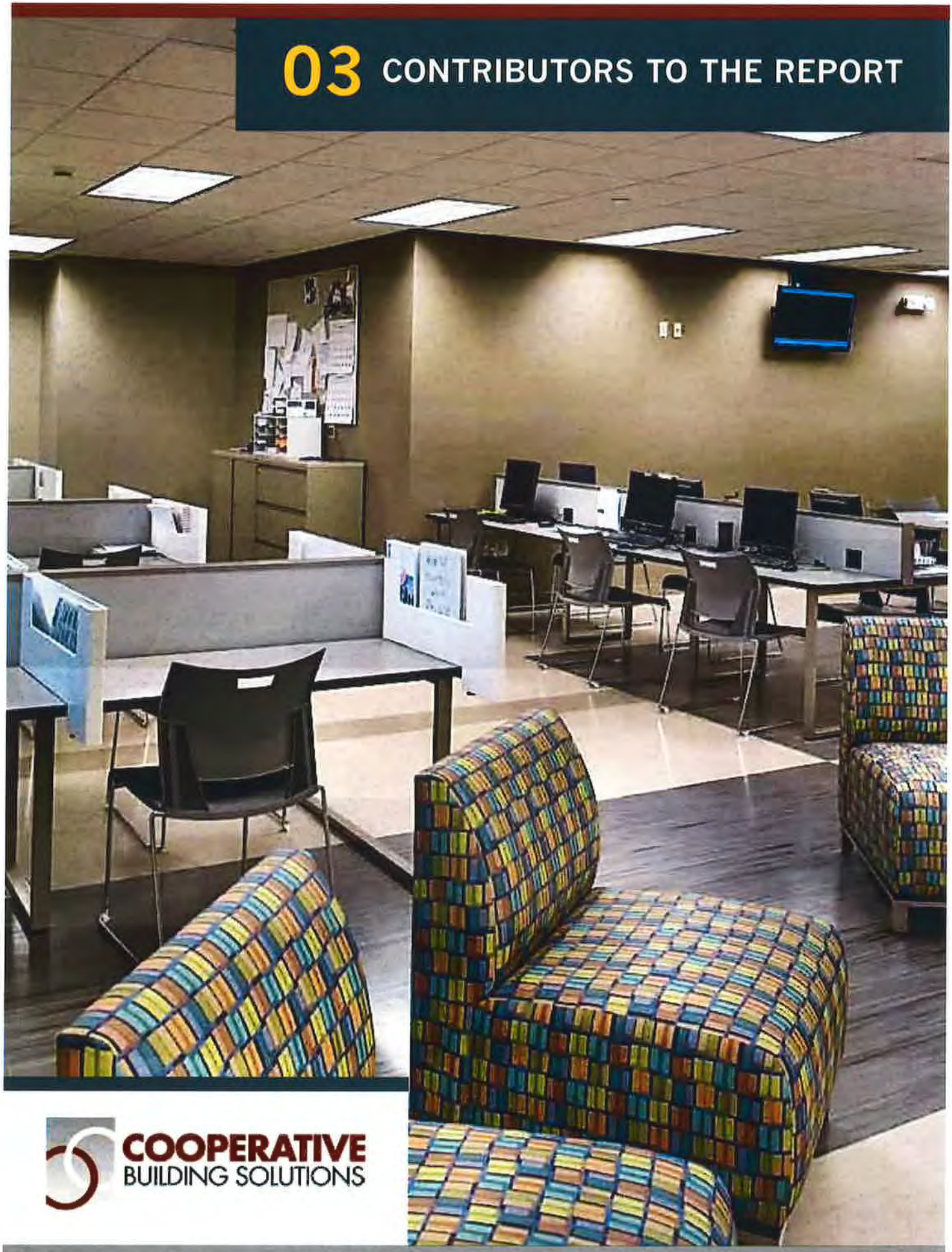
COOPERATIVE
BUILDING SOLUTIONS

02 FACILITY PLANNING GOALS

JACKSON PURCHASE ENERGY COPORATION FACILITY GOALS AND PRIORITIES

- Improve Member Experience and Convenience
- Increase Safety and Security for Employees and Members
- Enhance Operational Efficiencies
  - Replace the Current Dispatch Room with a Hardened War Room
- Structurally Sound / Low Maintenance / High Energy Efficiency Facilities
- Achieve Space Needs and Plan for Growth
  - Provide the Appropriate Space for Vehicle Storage Needs and Maximize Site Utilization
- Improve Functionality and Adjacency by Promoting a Team Culture
- Maintain and Attract Quality Employees
- Increase Meeting and Collaborative Spaces

03 CONTRIBUTORS TO THE REPORT



COOPERATIVE
BUILDING SOLUTIONS

03 CONTRIBUTORS TO THE REPORT

Jackson Purchase Energy Corporation

Without the input and material supplied by the Management Staff and Employees at Jackson Purchase Energy Corporation, this report would not have been possible. CBS met with Jackson Purchase Energy Corporation's Management, Staff, and Employees on multiple occasions. The team discussed facility needs, facility challenges and toured the property. We were made to feel welcome and were given complete attention and access to any and all facilities necessary for us to complete the study. It was a pleasure to work with such a knowledgeable group of professionals that certainly have the best interests of your organization in mind.

Cooperative Building Solutions LLC

Cooperative Building Solutions was founded by a career rural electric cooperative veteran for the specific purpose of helping rural electric cooperatives understand and solve their building and facility challenges. Gary Hobson is Cooperative Building Solutions' President. As part of his 40 year career in the rural electric program Gary served as general manager and staff member for two rural electric distribution cooperatives, regional vice-president for CFC and retired as President and CEO of National Information Solutions Cooperative. Since his retirement in 2002 Gary and his team have taken their knowledge of rural electric cooperative operations and their experience of planning, renovating and building cooperative facilities and applied this knowledge and experience to help rural electric cooperatives solve their facility needs.

Rural Electric Cooperatives' normally begin their relationship with Cooperative Building Solutions by retaining them to complete a Facility Planning and Feasibility Study. This study provides the electric cooperative with an objective tool to make prudent business decisions concerning current and future facilities. Following the study a facility master plan is developed that identifies what facilities will be renovated or replaced. A design, schedule and budget is developed and presented to the board of directors for approval.

Cooperative Building Solutions only provides services to rural electric cooperatives. They utilize a team approach to facility consulting through strategic partnerships with Paric Corporation and M&H Architects. With their strategic partners they bring the consultants, architects, engineers, designers, and construction managers together to form a team that is an extension of the rural electric cooperative management staff. The Cooperative Building Solutions' team brings the experience of working for over (70) rural electric cooperatives in Twenty-Two different states. They have renovated or built new facilities ranging in size from 8,000 square feet to 135,000 square feet totaling over 2,000,000 square feet. The total value of work put in place for these projects total over $400 million dollars.

Cooperative Building Solutions is committed to helping rural electric cooperatives study and determine their current and future facility needs and provide the solutions to meeting those needs. They provide a complete turn -key solution for rural electric cooperatives that brings value, control, quality, and owner satisfaction to every project.

COOPERATIVE BUILDING SOLUTIONS

PARIC Corporation

Paric Corporation has been a successful regional construction management company for 40 years by putting their customer's needs and interest above all else. They do so by streamlining their services and standardizing essential processes, which allows their management professionals to spend more time interacting with their clients and developing the most innovative, efficient, economical solutions to meet their needs.

Each client is partnered with a PARIC point person who ensures the client has a world-class experience from start to finish. This point person assembles a team of uncommonly high-level professionals from every facet of the organization. They are chosen for one reason alone: They are the best possible people to meet the client's specific needs.

PARIC employees are the best of the best – highly trained professionals who have the confidence and ability to make high-stakes decisions on the spot – and they work closely with the client through the design, pricing and construction stages.

The unparalleled solutions that PARIC's project management teams deliver are notable because they reduce the customer's risk. They offer cost containment procedures, efficient practices and minimal disruption to ongoing operations. The client ends up with the substantial savings in construction costs and ultimately, "Experience. Excellence."

M + H Architects

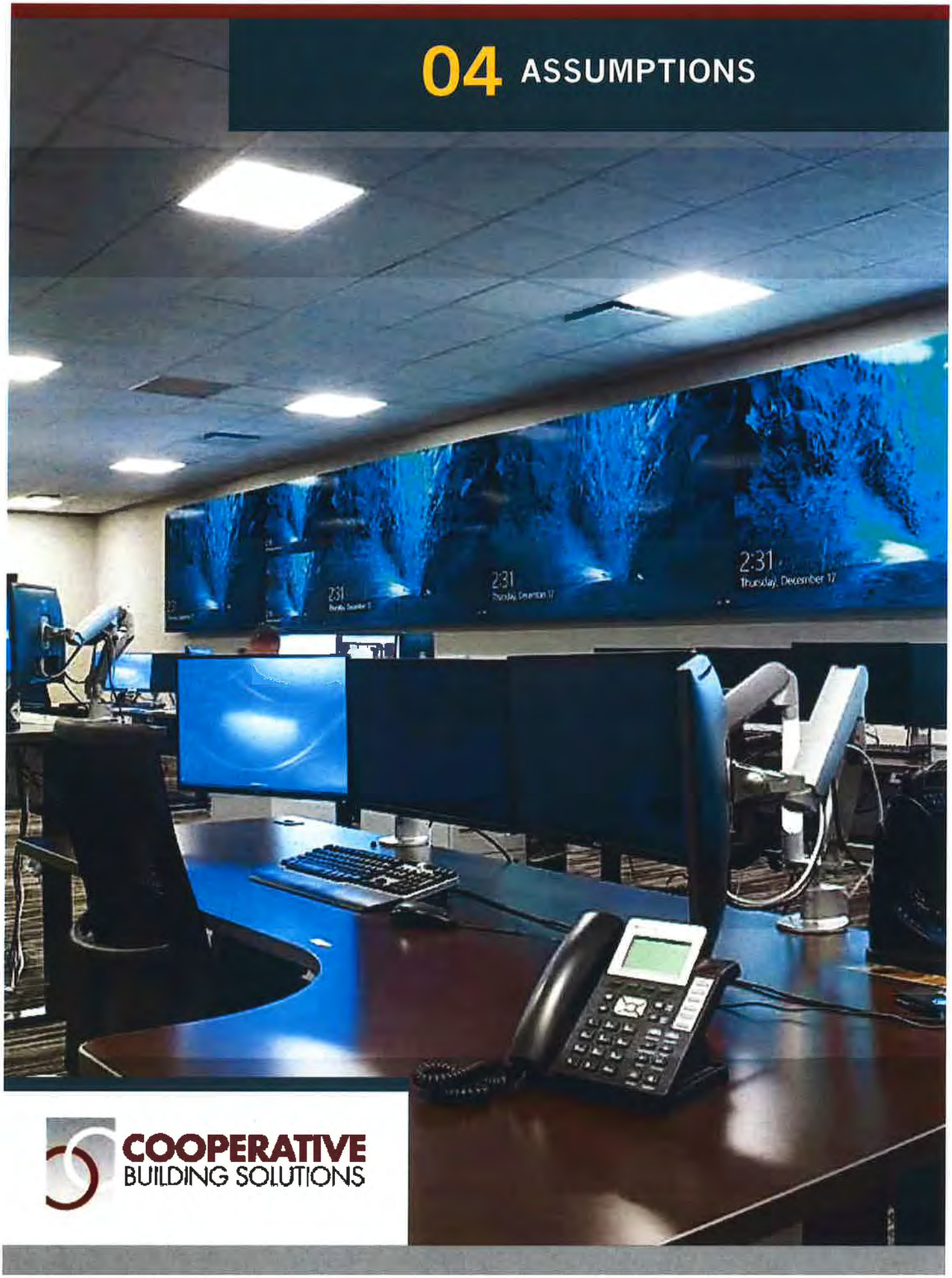
M+H Architects is a group of talented individuals who create the best solutions for every project. Enthusiasm is one of their greatest attributes. It allows them to provide personal attention at all stages of the project. As their clients attest, their approach and philosophy are unique in the industry. Both Larry Mitchell and Mark Hugeback, as hands-on owners of the company, are committed to personal service. Many of their clients have honored them with repeat opportunities, a testimony to their satisfaction.

They do whatever it takes to meet the most demanding time frames and budget restraints creatively and thoroughly. Their studio atmosphere promotes communication, debate and learning from each other. Their delivery process utilizes a state-of-the-art system of networked workstations running Autodesk Architecture 2009 (based on AutoCAD) along with other high-end software programs. Their Dual-T1 connection to the Internet, allows them to communicate and develop documents from concept through completion with incredible speed and accuracy.

As a team they share ideas and build on their collective strengths. Whether it is a design solution or the best way to detail a construction component, by collaborating they can bring out the best ideas or solutions, all for the client's benefit. They also utilize Newforma, a powerful collaboration software program for project management, to better facilitate internal and external team communication.

Clients, designers, construction document specialists, engineers and contractors all provide significant value and ideas that, when combined, can bring out the best in each other and create a successful project. The synergy and collaboration created by the design process allows them to test concepts, evaluate proposed solutions and create options, which ultimately will take the project to a higher level.

04 ASSUMPTIONS



COOPERATIVE
BUILDING SOLUTIONS

04 ASSUMPTIONS

The condition, design, size and location of Jackson Purchase Energy Corporation facility have critical impacts on their overall company goals and mission. The following facility assumptions were used in the evaluation and findings of this Facility Planning Study.

ORGANIZATION CHART

Employee space needs were determined by the Jackson Purchase Energy Corporation Organizational Chart /Employee List.

VEHICLE AND EQUIPMENT SCHEDULE

Vehicle and equipment space needs were reviewed with the staff. Vehicle and equipment information was provided to CBS by the cooperative staff.

GENERAL ASSUMPTIONS

CBS Assumes the Following:

- Assumed the Cooperative is Committed to Providing Facilities to Attract and Retain Quality Employees
- Need Hardened Areas for Employee Safety and Critical Computer & Communications Equipment
- There is a Need for Additional Space Within the Facility
- Operating Productivity & Efficiency is Critical
- Priority to Provide a Safe and Secure Environment
- There is a Need for Quality and Efficient Facilities at the Best Value

See attached Design Assumptions

FACILITY STUDY PRELIMINARY DESIGN ASSUMPTIONS

Project Description

This project consists of a Facility Study to evaluate the physical conditions, functionality, and space requirements for Jackson Purchase Energy Corporation (JPEC) in Paducah, Kentucky. The Office, Warehouse, Vehicle Storage, and Site were evaluated. The existing facility is located at 2900 Irvin Cobb Drive. The existing program and facility does not adequately meet the needs of JPEC. In order to address the deficiencies with the existing facility's physical conditions, functionality, and space needs, the design options are based on successfully meeting each of the deficiencies.

Existing Conditions

The existing facility consists of three separate building structures connected by a covered walkway, with a material yard and parking for employees and the members of JCEC on the current site. The site is rectilinear in shape, approximately 19 acres in size, and surrounded by public ways on each side of the property. The buildings were designed in 1969, based on the existing documents provided by the Owner, and assumed to be constructed at a time shortly after the design documents were completed. The Office is approximately 17,500 square feet on a single level with a mechanical mezzanine. The use is for administrative personnel and providing services to the members of the cooperative. The Warehouse is approximately 11,750 square feet and consist of an elevated slab at dock height. The use is for receiving, storage, and distribution of materials along with limited office space for the staff associated with the material handling. The Vehicle Storage and Maintenance building is approximately 11,750 square feet on a single level. The use is for storing the vehicles that construct and maintain the power system, support spaces for the Linemen, and a vehicle maintenance bay with support spaces for the Mechanic.

Design Option Descriptions

A. Existing 19 acre Site with New Construction on the existing property (existing buildings will be demolished when replaced with new construction utilizing a phased construction approach)
B. Repurpose, renovation and addition to an existing structure (not currently owned by JEPC) at a different location [redacted] sf existing building designed in [redacted] and assumed constructed in [redacted], on [redacted] acres)
C. New undeveloped site (not currently owned by JEPC) with all new construction at a different location within the service territory (location to be determined on approx. 19 acres)

Design Assumptions Intent

A. The conceptual design documents are not to be interpreted as completed construction documents. They are intended to assist in defining the potential scope and cost associated with the proposed facility improvements to address current deficiencies.

B. The Design Options are based on the assumptions that the design team has made to define the type of building materials and systems associated with the cost estimate for each option.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

FACILITY STUDY PRELIMINARY DESIGN ASSUMPTIONS – Existing Site Option

Design Option

Jackson Purchase Energy Corporation (JPEC) operates at their existing 19 acre site at 2900 Irving Cobb Drive. The developed site area for the buildings, material yard, and pavement for drive lanes and parking, utilizes approximately 10 acres of the 19 acres. Stormwater management, if required, is anticipated to require 2.5 acres on the site. The existing buildings are not contemplated for reuse due to condition issues and will be replaced in this option. A phased construction approach is required so that the new construction is in operation prior to the demolition of the existing buildings and site components so that JPEC can remain in operation during the entire duration of the project.

Site

A. Site improvements at existing facility

a. The portion of the site required to be utilized for the new construction requires the clearing of several very mature trees.
b. New landscaping is required at the new construction and shall meet municipal requirements and covenants. The impact of removing the existing mature trees on the landscaping requirements is unknown at this time.
c. The exterior fencing shall be 8' tall with powered sliding gates, intercom, and access control. The existing fence is to removed and replaced.
d. The main drive lanes and aprons are to be Heavy Duty concrete.
e. Car Parking lots, sidewalks, and drive-thru lanes to be Light Duty asphalt or concrete paving.
f. A new compacted gravel yard (6" depth with filter fabric) will be added to the site for material storage where indicated. The yard is to be lighted.
g. The site sheet drains to existing swales. The roof storm drainage is collected in gutters and downspouts and piped. Municipal stormwater requirements are not fully understood at this phase, so the current assumption is that 20 percent of the site improvements area will be added for stormwater control.
h. The existing fueling system is to remain.
i. The existing buildings will be demolished in phases and will likely require abatement for hazardous building materials.
j. Existing pole bunks are to remain. Relocate pole bunk that interferes with new building/yard layout.

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Structural Systems

A. Conventional Construction at Office
   a. The executive, administrative, and member service functions will be housed in a new 16,774 sf conventional steel framed building on concrete spread footings and a slab on grade. The steel frame will support light gauge metal roof trusses. Canopies at the entry and drive through will be constructed with a conventional steel frame and light gauge trusses as well.
   b. A hardened construction area for protection of the building occupants in a storm situation, is constructed with reinforced masonry walls with a cast-in-place concrete lid designed to act independently of the overall steel framed building and resist 250 mph wind speeds.

B. PEMB Warehouse, Vehicle Storage & Maintenance
   a. The structural system for the engineering and operations center, vehicle storage, and warehouse will be a pre-engineered metal building framing with, concrete spread footings and tie beams, and a concrete slab on grade that is sloped to the perimeter at the vehicle bays.
   b. An 8" tall concrete curb is provided at the perimeter of PEMB building.

Building Envelope

A. Conventional Construction at Office

B. Metal stud walls with exterior gyp. sheathing and fluid applied air and weather barrier with brick veneer facade.

C. Exterior stud wall framing shall be insulated full depth with no less than R-19 spray applied polyurethane foam insulation.

D. Glass and aluminum entrances with thermally broken aluminum frames shall be used.

E. Exterior glass will be tinted, 1" insulated glazing with Low-E coating. Tempered at doors, sidelites, and transoms.

F. Exterior vertical control and expansion joints in Masonry @ 25' on center with sealant.

G. Standing seam metal roof system with concealed fasteners. Sno-guards at all eaves.

H. PEMB at Warehouse, Vehicle Storage & Maintenance
   a. Ribbed metal exterior wall panels.
   b. PEMB standard interior vinyl faced-blanket insulation on exterior walls (R-15 value) and roof (R-21 Value).
   c. Motor operated insulated overhead doors with perimeter weather-stripping.
   d. Dock leveler, dock seal and bumpers shall be installed at the dock door (at Warehouse only).
   e. Standing seam metal roof with concealed fastener system with galvalume finish and sno-guards at eaves.

Interiors

A. Office

a. Exterior metal doors that are not storefront shall be galvanized and insulated hollow metal (painted).
b. Interior hollow metal doors with glass vision panels as necessary.
c. Interior wood doors at all offices and meeting rooms. Lites are ¼" clear tempered glass.
d. All partition walls and soffits shall consist of metal studs with gypsum board and sound batts.
e. Use moisture and mold resistant drywall at all wet wall locations.
f. Casework and countertops shall be plastic laminate. Lavatory and reception desk countertops shall be solid surface material.
g. Commercial grade carpet tile adhered to the concrete slab over a moisture mitigation system.
h. Ceramic tile shall be installed in thinset application.
i. The ceilings will be 2' x 4' x 3/4" acoustical tile with gypsum ceilings at vestibules and toilet rooms.
j. All interior drywall and CMU partitions shall be painted with three total coats.
k. Toilet partitions and urinal screens are floor mounted, overhead braced with a baked enamel finish.
l. ABS plastic signs with Braille shall be provided for each interior door.
m. Provide porcelain enamel marker boards and vinyl fabric faced cork tackboards with anodized aluminum frames and chalk trays in conference rooms.
n. Residential grade appliances for break room/kitchen.
o. Provide recessed, electrically operated front projection screens with automatic ceiling closure in conference rooms and board room.
p. A manually operated coiling shutter to counter height at kitchen.
q. Provide teller window, deal drawer bank equipment, and a thru-wall night drop at the drive-thru.
r. Provide roller shades with perforated fabric with 5% open at all windows.

B. Warehouse, Vehicle Storage & Maintenance

a. Exterior metal doors shall be galvanized and insulated hollow metal.
b. Gear lockers (24"x24"x72") at Vehicle Storage Bays (at Vehicle Storage only).
c. PEMB steel frames. Girts and purlins shall have factory galvalume finish.
d. Interior fencing shall be 10' tall with pairs of gates (as required).
e. High Performance coatings at Wash Bay floor and boot wash.
f. Rigid caulk for joints.
g. Carry an allowance for vehicle lifts at the Maintenance building.

Fire Protection

A. Office
   a. Fully sprinklered.
   b. Provide semi-recessed fire extinguisher cabinets and bracket mounted extinguishers.
   c. Provide a clean agent system to protect Server/Critical Equipment Room.

B. Warehouse, Vehicle Storage & Maintenance
   a. Fully sprinklered with a dry pipe system.
   b. Provide bracket mounted extinguishers.

Plumbing

A. Office
   a. Building will be served by a public water service. Tie into the existing water service for the existing buildings, or provide a new tap and meter if required by the local AHJ.
   b. The building is served by a public sewer system. Tie into the existing system as required, or provide a new connection to the public sewer system.
   c. The following plumbing fixtures are included:
      1. Water closets will be wall mounted with sensor flush valves.
      2. Urinals with sensor flush valves.
      3. Lavatories will include under counter mounted stainless steel sinks with single lever faucets.
      4. Stainless steel sinks will have deck mounted widespread faucets with single levers.
      5. Shower will be ADA compliant with a handheld shower head and seat. Shower surround and floor to be ceramic tile.
      6. A mop service basin with FRP on adjacent walls to 4' a.f.f.
      7. Water coolers.

B. Warehouse, Vehicle Storage & Maintenance
   a. The following plumbing fixtures are included
      1. Eye wash.
      2. Hose bibs.
      3. Public car wash style with heated water/soap and dual wands (at Maintenance Building).
   b. Trench drains will be located along each side of vehicle storage bay and will discharge through catch basin. Grease/oil interceptor provided outside the building.

Mechanical

A. Office
   a. The office area will be heated and cooled by VRF units. An energy recovery unit (ERV) will be used to bring outside air into the office areas.
   b. A separate, dedicated Computer Room A/C unit and associated condensing unit will provide cooling for the server room.

B. Warehouse, Vehicle Storage & Maintenance
   a. Buildings will be heated only by unit heaters mounted from the building structure.
   b. Ventilation for the Vehicle Storage Bay and Maintenance Buildings are by wall mounted exhaust fans and outside air intake louvers.

Electrical

A. Office
   a. Utilize existing utility transformer or provide new transformer through municipal electric company.
   b. New Back-up Generator sized to meet the demands of the new layout.
   c. Lighting in the office will consist of 2' x 4' LED fixtures with LED accent and can lights where required.
   d. Voice and data distribution and devices will be provided to all offices.
   e. A fire alarm system throughout the building.
   f. Security will include access control devices on all exterior man doors and video surveillance cameras.

B. Warehouse, Vehicle Storage & Maintenance
   a. Lighting will consist of high bay LED fixtures.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

FACILITY STUDY PRELIMINARY DESIGN ASSUMPTIONS – Repurposed Site Option

Design Option

There is an existing facility, available for purchase, that is in an appropriate location for the purposes of Jackson Purchase Energy Corporation (JPEC). The site is located within their service territory, on their own system, has room for future expansion, and is accessible to their members. Each of these factors are critical for serving their membership and maintaining their electrical system. The proposed site (not currently owned by JEPC) has a [redacted] sf existing building designed in [redacted] and assumed constructed in [redacted], on [redacted] acres. Stormwater management, if required, is anticipated to require 2.5 acres on the site. All major utilities are located near the property line or within the property lines and are assumed adequate for a JPEC facility.

Site

A. Site improvements at repurposed building and material yard

a. The site is accessed from a highway with a signalized intersection and has the potential to have a secondary (right-in/right-out) access point along the highway.
b. The site is within a flood plain and has a large water element on the property.
c. The existing structure is also in the flood plain.
d. There is no exiting security fencing, so a new exterior 8' tall chainlink fence with powered sliding gates, intercom, and access control must be provided. All material storage and employee parking is to be in the secure area.
e. The existing drive lanes and aprons appear to be standard duty asphalt paving and would be improved to accommodate commercial vehicle traffic at the drive lanes and aprons.
f. The existing asphalt car parking lots and concrete sidewalks will remain and be extended as required for the new configuration.
g. A new compacted gravel yard (6" depth with filter fabric) will be added to the site for material storage. The yard is to be lighted.
h. The site sheet drains to existing swales. The roof storm drainage is collected in gutters and downspouts and piped. Municipal stormwater requirements are not fully understood at this phase, so the current assumption is that 20 percent of the site improvements area will be added for stormwater control.
i. A fueling system for corporate vehicles is proposed.

B. Site improvements at new office construction

a. The site improvements will be designed so that the earthwork cuts and fills will bring the new office construction floor elevation to above the current flood plain elevation.
b. Landscaping shall meet municipal requirements and covenants.

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c. Car Parking lots, sidewalks, and drive-thru lanes to be Light Duty concrete or asphalt. Parking areas and pedestrian areas to have site lighting.
d. 35' anodized aluminum flagpole, and finial ball with internal halyard and 6'x10' American Flag.
e. The roof storm drainage is to be collected in gutters and downspouts and piped.

Structural Systems

A. Existing PEMB

a. The existing [redacted] sf structure is a pre-engineered metal building (PEMB) that will be repurposed to an engineering and operations center which will house the staff, materials, and equipment associated with the electrical system construction and maintenance. The existing structure is to be maintained with modifications to the existing structural bracing as required for new openings in the exterior walls. Diagonal bracing will be replaced with moment frames where required.
    1. A hardened construction area for protection of the building occupants and critical equipment (computer servers, radio equipment, access control equipment, etc.) in a storm situation, is constructed with reinforced masonry walls with a cast-in-place concrete lid and designed to act independently of the overall PEMB building and resist 250 mph wind speeds.
b. The existing floor slab has been cored and tested for the sub-base and concrete compressive strength. The sub-base is not consistent throughout the building and the concrete floor slab will require removal and replacement in the areas where commercial vehicles drive or are parked. Recessed floor slabs will require infill or replacement. Refer to the geotechnical report included with this facility evaluation. Floor drains will be installed and the floor sloped to the drains where appropriate at the interior vehicle drives and parking areas.
c. The existing floor slab will be removed and replaced at the wash bay to provide adequate drainage to a new floor drain.
d. The existing floor slab will be removed, sub-based excavated, and slab replaced with a sloped interior recessed slab with stem walls to create an interior recessed loading dock for semi-trailers.

B. New Construction

a. The executive, administrative, and member service functions will be housed in a new [redacted] sf conventional steel framed building on concrete spread footings and a slab on grade. The steel frame will support light gauge metal roof trusses. Canopies at the entry and drive through will be constructed with a conventional steel frame and light gauge trusses as well.
b. A hardened construction area for protection of the building occupants in a storm situation, is constructed with reinforced masonry walls with a cast-in-place concrete lid designed to act independently of the overall steel framed building and resist 250 mph wind speeds.

Building Envelope

A. Existing PEMB
   a. Ribbed metal exterior wall panels to remain.
   b. Standing seam metal roof with exposed fasteners system with galvalume finish to remain.
   c. Interior vinyl faced-blanket PEMB insulation on exterior and roof to remain.
   d. Cut in new insulated overhead door openings into the existing wall with perimeter weather-stripping and motor operators at vehicle access points to the building and at each vehicle storage bay.
   e. Exterior windows and storefront entrances to remain.

B. New Construction
   a. Metal stud walls with exterior gyp. sheathing and fluid applied air and weather barrier with brick veneer facade.
   b. Exterior stud wall framing shall be insulated full depth with no less than R-19 spray applied polyurethane foam insulation.
   c. Glass and aluminum entrances with thermally broken aluminum frames shall be used.
   d. Exterior glass will be tinted, 1" insulated glazing with Low-E coating. Tempered at doors, sidelites, and transoms.
   e. Exterior vertical control and expansion joints in Masonry @ 25' on center with sealant.
   f. Standing seam metal roof system with concealed fasteners. Sno-guards at all eaves.

Interiors

A. Existing PEMB
   a. Dock leveler and bumpers shall be installed at the new interior recessed loading dock.
   a. Exterior metal doors to remain and be painted.
   b. PEMB steel frames purlins and girts to remain with existing finish.
   c. Interior fencing at secure warehouse area shall be 10' tall with pairs of gates.
   d. High Performance coatings at Wash Bay floor and boot wash.
   e. Interior gypsum board partitions, doors, and sidelites to remain to the greatest extent possible. New partitions as required to include sound batts.
   f. Suspended acoustical ceilings to remain to the greatest extent possible.
   g. Utilize the existing casework to the greatest extent possible.
   h. Replace the carpet in the office areas and paint all existing walls. The existing concrete floor finish is to remain in support spaces.

i. Removal of all existing athletic flooring and equipment is required.

B. New Construction

a. Exterior metal doors that are not storefront shall be galvanized and insulated hollow metal (painted).
b. Interior hollow metal doors with glass vision panels as necessary.
c. Interior wood doors at all offices and meeting rooms. Lites are ¼" clear tempered glass.
d. All partition walls and soffits shall consist of metal studs with gypsum board and sound batts.
e. Use moisture and mold resistant drywall at all wet wall locations.
f. Casework and countertops shall be plastic laminate. Lavatory and reception desk countertops shall be solid surface material.
g. Commercial grade carpet tile adhered to the concrete slab over a moisture mitigation system.
h. Ceramic tile shall be installed in thinset application.
i. The ceilings will be 2' x 4' x 3/4" acoustical tile with gypsum ceilings at vestibules and toilet rooms.
j. All interior drywall and CMU partitions shall be painted with three total coats.
k. Toilet partitions and urinal screens are floor mounted, overhead braced with a baked enamel finish.
l. ABS plastic signs with Braille shall be provided for each interior door.
m. Provide porcelain enamel marker boards and vinyl fabric faced cork tackboards with anodized aluminum frames and chalk trays in conference rooms.
n. Residential grade appliances for break room/kitchen.
o. Provide recessed, electrically operated front projection screens with automatic ceiling closure in conference rooms and board room.
p. A manually operated coiling shutter to counter height at kitchen.
q. Provide teller window, deal drawer bank equipment, and a thru-wall night drop at the drive-thru.
r. Provide roller shades with perforated fabric with 5% open at all windows.

Fire Protection

A. Existing PEMB

a. Fully sprinklered building system to remain. Rework lines heads as required for new use.
b. Provide bracket mounted extinguishers as required for new use.
c. Provide a clean agent system to protect Server/Critical Equipment Room.

B. New Construction

d. Fully sprinklered.
e. Provide semi-recessed fire extinguisher cabinets and bracket mounted extinguishers.

Plumbing

A. Existing PEMB

a. The following plumbing fixtures are included
   1. Eye wash.
   2. Hose bibs.
   3. Public car wash style with heated water/soap and dual wands.

b. Trench drains will be located where integrated into areas of floor slab replacement at the vehicle storage bay and wash bay. Discharge the system through an oil/grease interceptor installed outside of the building meeting the local AHJ requirements.

B. New Construction

a. Building will be served by a public water service. Tie into the existing water service for the existing PEMB or provide a new tap and meter if required by the local AHJ.

b. The building is served by an on-site septic system. Modify the existing system as required by the new reconfiguration, or provide a new sewer system to a public sewer system, if available.

c. The following plumbing fixtures are included:
   1. Water closets will be wall mounted with sensor flush valves.
   2. Urinals with sensor flush valves.
   3. Lavatories will include under counter mounted stainless steel sinks with single lever faucets.
   4. Stainless steel sinks will have deck mounted widespread faucets with single levers.
   5. Shower will be ADA compliant with a handheld shower head and seat. Shower surround and floor to be ceramic tile.
   6. A mop service basin with FRP on adjacent walls to 4' a.f.f.
   7. Water coolers.

Mechanical

A. Existing PEMB

a. Existing HVAC systems are to remain and be reconfigured and balanced as required to meet the needs of the reconfigured building. It is anticipated that the capacity of the existing system exceeds the capacity of the proposed reconfiguration.

b. Ventilation for the Vehicle Storage Bay area with wall mounted exhaust fans and outside air intake louvers integrated with carbon-monoxide monitoring shall be provided.

c. A separate, dedicated Computer Room A/C unit and associated condensing unit will provide cooling for the Server/Critical Equipment Room.

B. New Construction

d. The office area will be heated and cooled by VRF units. An energy recovery unit (ERV) will be used to bring outside air into the office areas.

Electrical

A. Existing PEMB

a. Utility transformer to remain.

b. New Back-up Generator sized to meet the demands of the reconfigured layout.

c. Existing lighting in the office (2' x 4' lay-in fluorescent fixtures) and high-bay fixtures in the open areas to remain to the greatest extent possible.

d. Voice and data distribution and devices will be provided to all offices.

e. Fire alarm system to remain. Modify as required for reconfiguration.

f. Security will include access control devices on all exterior man doors and video surveillance cameras.

B. New Construction

a. Utility transformer to be added for new office construction by JPEC.

b. New Back-up Generator sized to meet the demands of the office.

c. Lighting in the office is 2' x 4' LED fixtures with LED accent and can lights where required.

d. Voice and data distribution and devices will be provided to all offices.

e. Fire alarm system throughout the building.

f. Security will include access control devices on all exterior man doors and video surveillance cameras.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

FACILITY STUDY PRELIMINARY DESIGN ASSUMPTIONS – Greenfield Site Option

Design Option

The approach of relocating Jackson Purchase Energy Corporation (JPEC) to a new undeveloped site requires the purchase of new property. The anticipated developed site area for the buildings, material yard, and pavement for drive lanes and parking, utilizes approximately 12 acres of the 19 acres. Stormwater management, if required, is anticipated to require 2.5 acres on the site. It is assumed that municipal utilities will be available at the property line.

Site

A. Site Improvements

a. The site will be designed so that the cuts and fills will balance to the greatest extent possible to bring the site to required subgrades.
b. Landscaping design and installation shall meet municipal requirements and covenants.
c. The exterior fencing shall be 8' tall with powered sliding gates, intercom, and access control.
d. The truck drive lanes and aprons are to be Heavy Duty concrete.
e. Car Parking lots, sidewalks, and drive-thru lanes to be Light Duty asphalt or concrete.
f. The compacted gravel yard (6" depth with filter fabric) will be developed for material storage where indicated. The yard is to be lighted.
g. 35' anodized aluminum flagpole, and finial ball with internal halyard and 6'x10' American Flag.
h. The site is anticipated to sheet drain to swales. The roof storm drainage shall be collected in gutters and downspouts and piped. Municipal stormwater requirements are not fully understood at this phase, so the current assumption is that 20 percent of the site improvements area will be added for stormwater control.
i. Concrete pole bunks.
j. Fueling system with canopy and above ground double wall tanks.

Structural Systems

A. Conventional Construction at Office

a. The executive, administrative, and member service functions will be housed in a new 16,774 sf conventional steel framed building on concrete spread footings and a slab on grade. The steel frame will support light gauge metal roof trusses. Canopies at the entry and drive through will be constructed with a conventional steel frame and light gauge trusses as well.
b. A hardened construction area for protection of the building occupants in a storm situation, is constructed with reinforced masonry walls with a

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cast-in-place concrete lid designed to act independently of the overall steel framed building and resist 250 mph wind speeds.

B. PEMB Warehouse, Vehicle Storage & Maintenance
   a. The structural system for the engineering and operations center, vehicle storage, and warehouse will be a pre-engineered metal building framing with, concrete spread footings and tie beams, and a concrete slab on grade that is sloped to the perimeter at the vehicle bays.
   b. An 8" tall concrete curb is provided at the perimeter of PEMB building.

Building Envelope

A. Conventional Construction at Office
   B. Metal stud walls with exterior gyp. sheathing and fluid applied air and weather barrier with brick veneer facade.
   C. Exterior stud wall framing shall be insulated full depth with no less than R-19 spray applied polyurethane foam insulation.
   D. Glass and aluminum entrances with thermally broken aluminum frames shall be used.
   E. Exterior glass will be tinted, 1" insulated glazing with Low-E coating. Tempered at doors, sidelites, and transoms.
   F. Exterior vertical control and expansion joints in Masonry @ 25' on center with sealant.
   G. Standing seam metal roof system with concealed fasteners. Sno-guards at all eaves.

H. PEMB at Warehouse, Vehicle Storage & Maintenance
   a. Ribbed metal exterior wall panels.
   b. PEMB standard interior vinyl faced-blanket insulation on exterior walls (R-15 value) and roof (R-21 Value).
   c. Motor operated insulated overhead doors with perimeter weather-stripping.
   d. Dock leveler, dock seal and bumpers shall be installed at the dock door (at Warehouse only).
   e. Standing seam metal roof with concealed fastener system with galvalume finish and sno-guards at eaves.

Interiors

A. Office
   a. Exterior metal doors that are not storefront shall be galvanized and insulated hollow metal (painted).
   b. Interior hollow metal doors with glass vision panels as necessary.
   c. Interior wood doors at all offices and meeting rooms. Lites are ¼" clear tempered glass.
   d. All partition walls and soffits shall consist of metal studs with gypsum board and sound batts.
   e. Use moisture and mold resistant drywall at all wet wall locations.
   f. Casework and countertops shall be plastic laminate. Lavatory and reception desk countertops shall be solid surface material.

g. Commercial grade carpet tile adhered to the concrete slab over a moisture mitigation system.
h. Ceramic tile shall be installed in thinset application.
i. The ceilings will be 2' x 4' x 3/4" acoustical tile with gypsum ceilings at vestibules and toilet rooms.
j. All interior drywall and CMU partitions shall be painted with three total coats.
k. Toilet partitions and urinal screens are floor mounted, overhead braced with a baked enamel finish.
l. ABS plastic signs with Braille shall be provided for each interior door.
m. Provide porcelain enamel marker boards and vinyl fabric faced cork tackboards with anodized aluminum frames and chalk trays in conference rooms.
n. Residential grade appliances for break room/kitchen.
o. Provide recessed, electrically operated front projection screens with automatic ceiling closure in conference rooms and board room.
p. A manually operated coiling shutter to counter height at kitchen.
q. Provide teller window, deal drawer bank equipment, and a thru-wall night drop at the drive-thru.
r. Provide roller shades with perforated fabric with 5% open at all windows.

B. Warehouse, Vehicle Storage & Maintenance
a. Exterior metal doors shall be galvanized and insulated hollow metal.
b. Gear lockers (24"x24"x72") at Vehicle Storage Bays (at Vehicle Storage only).
c. PEMB steel frames. Girts and purlins shall have factory galvalume finish.
d. Interior fencing shall be 10' tall with pairs of gates (as required).
e. High Performance coatings at Wash Bay floor and boot wash.
f. Rigid caulk for joints.
g. Carry an allowance for vehicle lifts at the Maintenance building.

Fire Protection

A. Office
a. Fully sprinklered.
b. Provide semi-recessed fire extinguisher cabinets and bracket mounted extinguishers.
c. Provide a clean agent system to protect Server/Critical Equipment Room.

B. Warehouse, Vehicle Storage & Maintenance
a. Fully sprinklered with a dry pipe system.
b. Provide bracket mounted extinguishers.

Plumbing

A. Office
a. The building will be served by a public water service.
b. The building will be served by a public sewer system.

c. The following plumbing fixtures are included:
   1. Water closets will be wall mounted with sensor flush valves.
   2. Urinals with sensor flush valves.
   3. Lavatories will include under counter mounted stainless steel sinks with single lever faucets.
   4. Stainless steel sinks will have deck mounted widespread faucets with single levers.
   5. Shower will be ADA compliant with a handheld shower head and seat. Shower surround and floor to be ceramic tile.
   6. A mop service basin with FRP on adjacent walls to 4' a.f.f.
   7. Water coolers.

B. Warehouse, Vehicle Storage & Maintenance
   a. The following plumbing fixtures are included
      1. Eye wash.
      2. Hose bibs.
      3. Public car wash style with heated water/soap and dual wands (at Maintenance Building).
   b. Trench drains will be located along each side of vehicle storage bay and will discharge through catch basin. Grease/oil interceptor provided outside the building.

Mechanical

A. Office
   a. The office area will be heated and cooled by VRF units. An energy recovery unit (ERV) will be used to bring outside air into the office areas.
   b. A separate, dedicated Computer Room A/C unit and associated condensing unit will provide cooling for the server room.

B. Warehouse, Vehicle Storage & Maintenance
   a. Buildings will be heated only by unit heaters mounted from the building structure.
   b. Ventilation for the Vehicle Storage Bay and Maintenance Buildings are by wall mounted exhaust fans and outside air intake louvers.

Electrical

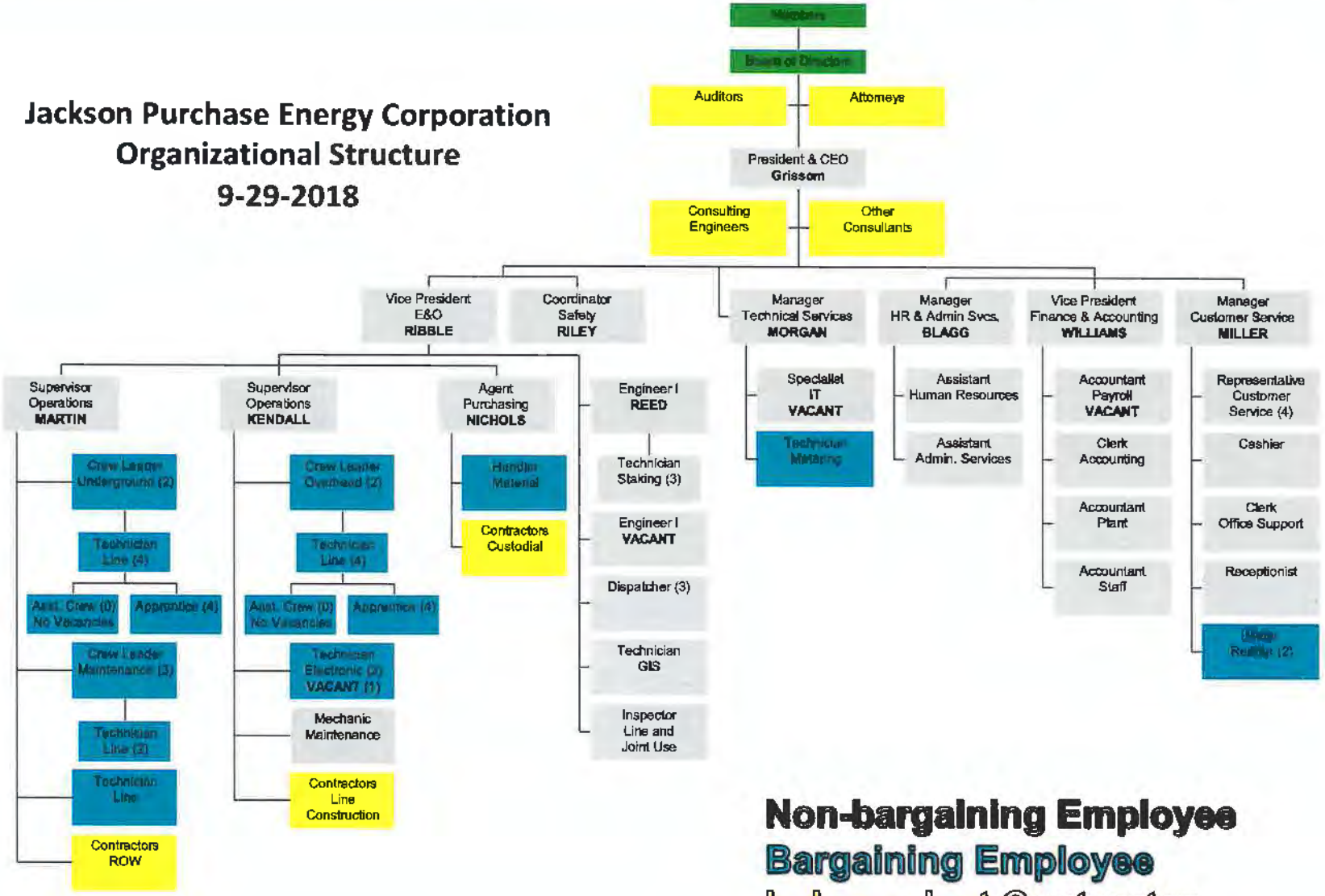
A. Office
   a. A pad-mounted utility transformer by JPEC.
   b. New Back-up Generator sized to meet the demands of the new layout.
   c. Lighting in the office will consist of 2' x 4' LED fixtures with LED accent and can lights where required.
   d. Voice and data distribution and devices will be provided to all offices.
   e. A fire alarm system throughout the building.
   f. Security will include access control devices on all exterior man doors and video surveillance cameras.

B. Warehouse, Vehicle Storage & Maintenance
   a. Lighting will consist of high bay LED fixtures.

04 ASSUMPTIONS

COOPERATIVE BUILDING SOLUTIONS

Jackson Purchase Energy Corporation
Organizational Structure
9-29-2018



Non-bargaining Employee

Bargaining Employee

Independent Contractor

COOPERATIVE BUILDING SOLUTIONS

Vehicle Assignments

5/25/2018 by AH

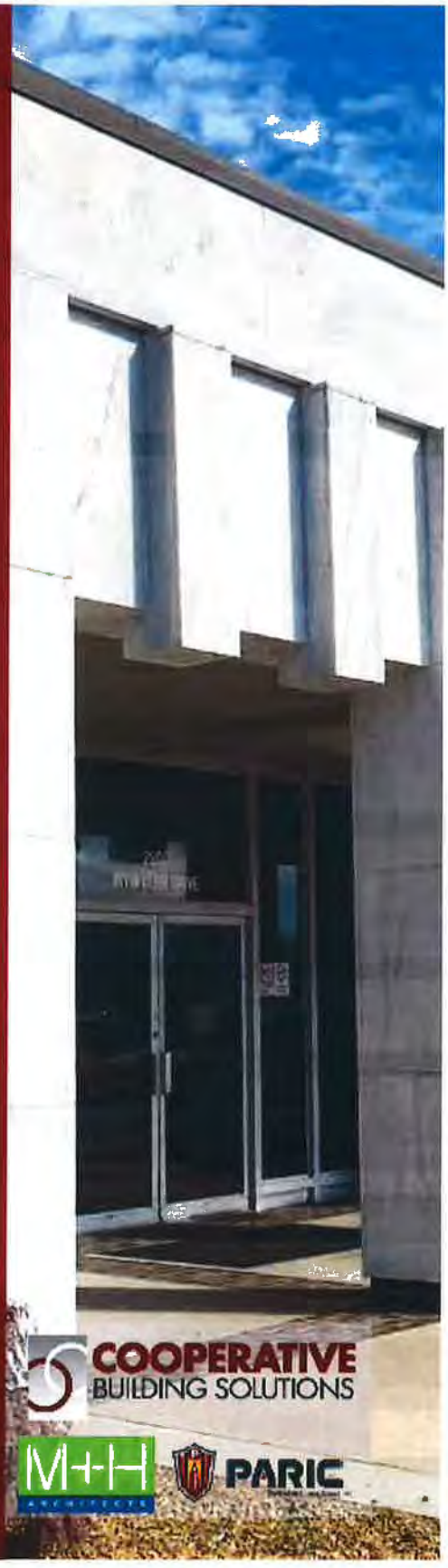
Unit #	Type
3	Bucket Truck
4	Bucket Truck
6	Digger Truck
7	4 WD Pickup
8	4 WD Pickup
9	Bucket Truck
10	Digger Truck
11	4 WD Pickup
12	4 WD Pickup
13	4 WD Pickup
14	4 WD Pickup
15	4 WD Pickup
16	Bucket Truck
17	Bucket Truck
18	4 WD Pickup
19	Explorer
20	4 WD Pickup
21	4 WD Pickup
22	Bucket Truck
23	Knuckle Boom
24	4 WD Pickup
25	Digger Truck
26	4WD Pickup
27	Knuckle Boom
28	Bucket Truck
29	4 WD Pickup
30	Bucket Truck
31	4x4 Digger Truck
32	4 WD Pickup
33	2 WD Pickup
34	Knuckle Boom
35	Bucket Truck
36	4 WD Pickup
37	4WD Pick Up
38	4x4 Pickup
39	4WD Pickup
40	2009 Kawasaki Mule
41	2009 Digger Track Rig
42	4 WD Pickup
631	International Digger
43	

05 PROPERTY CONDITION ASSESSMENTS (PCA)

COOPERATIVE
BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

PADUCAH, KENTUCKY
FEBRUARY 22, 2019



COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

February 22, 2019

Jackson Purchase Energy Corporation

2900 Irvin Cobb Drive
PO Box 4030
Paducah, KY 42002

Mr. Greg Grissom,

Cooperative Building Solutions has completed the property visual assessment. Our Services were performed in general accordance with our proposal and our on-site visit dated November 7, 2018 and again on December 4, 2018.

The property observations and additional information regarding those findings are contained in this report. Cooperative Building Solutions appreciates the opportunity to provide you with our consulting services at your place of business. Should you have any questions concerning this project or any other areas please feel free to contact us at your convenience.

Sincerely,
Cooperative Building Solutions

M+H PARIC

05 PROPERTY CONDITION ASSESSMENTS (PCA)

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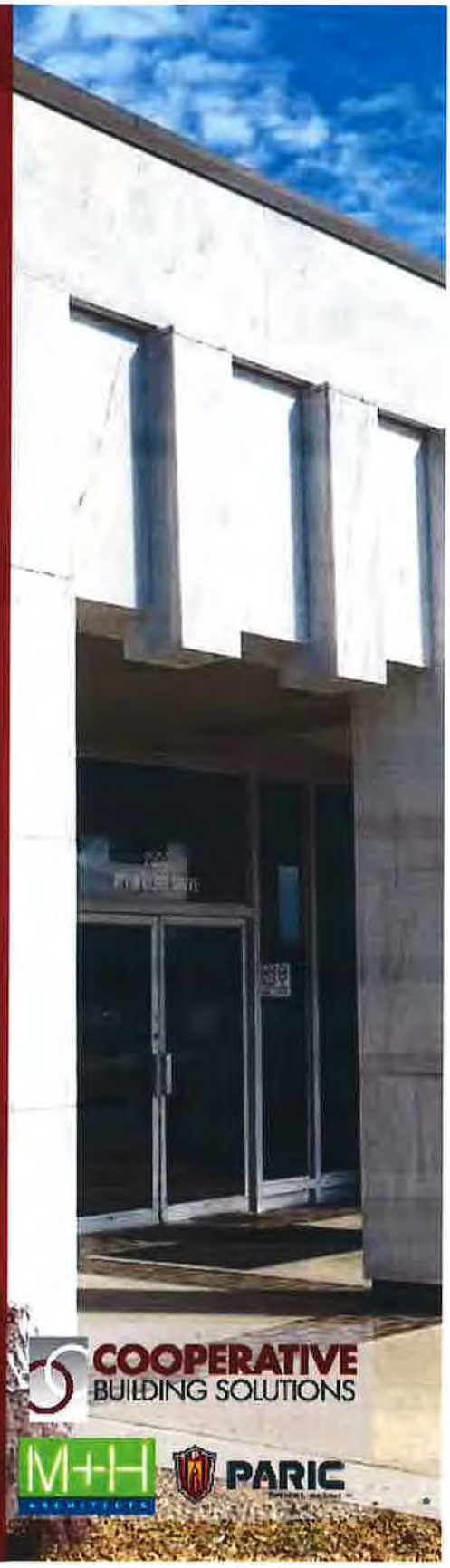

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

INTRODUCTION

The existing facility consists of three separate building structures connected by a covered walkway, with a material yard and parking for employees and the members of JPEC on the current site. The site is rectilinear in shape, approximately 19 acres in size. The buildings were designed in 1969 and construction began shortly thereafter.

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COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

SITE

- The Office building fronts Hwy 60 (Irvin Cobb Dr.) and there are roads bounding each side of the property. Bethel St. to the east, Powell St. to the north and Tully St. to the west.
- Overall, the existing site is flat with not much more than a few feet of change in elevation across the entire area. Approximately 30% of the site is not currently being utilized.
- It was stated by the Staff that JPEC does not provide power to their existing site.
- It was also stated by the Staff that the property was previously a landfill. Further investigation is required to confirm this.
- The yard is secured around the perimeter with an approximately 6' tall ornamental fence with 2 access points. The primary access point is a secure entrance off of Bethel St. and has a bi-parting, chain link motorized gate. The other access point is a manual bi-parting ornamental gate off of Powell St. that appears to be unused as it is chained and locked.

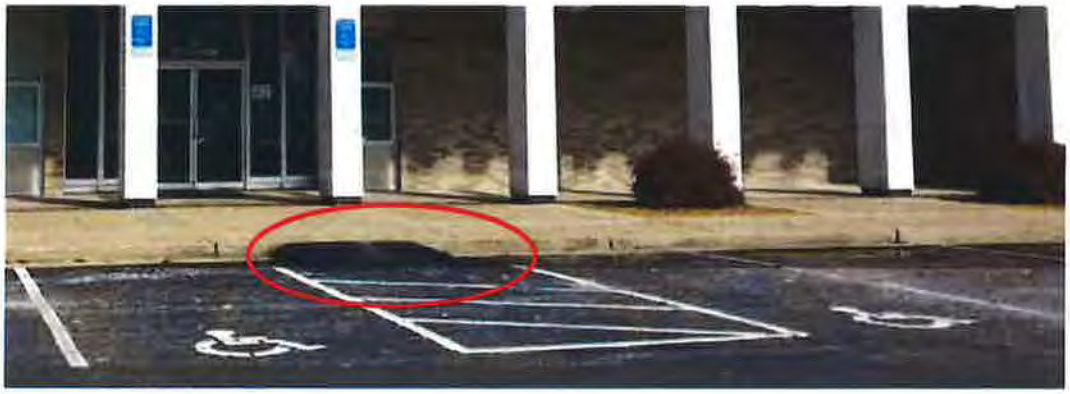
- Above is a photo of the motorized gate. This gate provides a secure access point to the yard and is the primary entrance for JPEC large equipment and creates a way in and out of the yard for these vehicles without having to mingle with employee passenger or member vehicles.
- Secondary manual (locked) gate below.

M+H ARCHITECTS PARIC

- Although the yard is secure, the employees all park in an unsecured parking lot that is accessible from either Hwy 60 or a side entrance from Bethel St..

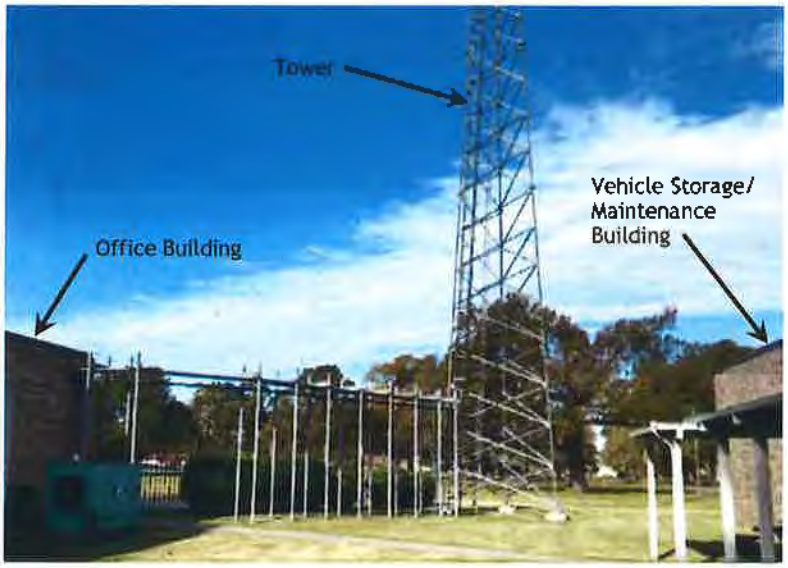
- The member parking is in front of the Office building. There are two curb cuts from Hwy 60. The public also has access to the employee lot.

- There are two accessible parking spaces marked by the required signage on the building and in the space in the member parking lot with an access aisle in between. There is a built-up ramp from the parking lot to the member sidewalk/plaza. Access aisles are required to be nearly level in all directions to provide a surface for wheelchair transfer to and from vehicles. Built-up curb ramps are not permitted to project into access aisles and parking spaces because they would create slopes greater than 1:48. This built-up ramp condition does not meet current ADA requirements.



- Members requiring the use of this space have to go around their vehicle (depending on which side they exit the vehicle), potentially requiring them to leave the safety of the accessible space. Where possible, it is preferable that the accessible route not pass behind parked vehicles.
- There is a drive-thru at the Office building. It is only served by means of a Pneumatic Tube system. There is no direct teller contact. The secondary lane was blocked off with a pylon at the time of observation.
- The Night Drop is also located in this area. Employees must leave the security of the building to pick up the contents of the Night Drop which poses a risk to employees.

- There is a communications tower on site. Both the Office and Vehicle Storage/Maintenance buildings as well as the covered walkways between the two are within the fall zone of the tower creating a safety hazard.



- There is a fuel island on site. The fuel tanks are located underground approximately 40' away.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- Several wire reels are currently stored outside and uncovered. It was noted that some reels are showing signs of rot due to exposure to the elements.

- Transformers are stored on pallets in a curbed, gravel area. It was noted that some reels are showing signs of rot due to exposure to the elements.

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COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- There is also a wood framed pole barn structure with a ribbed metal panel roof that provides additional space for covered vehicles on site. The wood framing appears weathered. Cleaning and sealing the structural members will extend the life of the structure.

- The JPEC current site is technically in the flood plain. It is listed on the FEMA Hazard Area map as "protected by levee" or "0.2 percent annual chance of flood".

M+H ARCHITECTS PARIC

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

OFFICE BUILDING

STRUCTURE

- Based on drawings supplied by the owner, the original 1969 Office Building structure is composed of a combination of CMU structural walls with brick veneer or marble veneered pre-cast concrete panels.
- The roof structure is composed of a 2 1/2" concrete deck over metal bar joists.
- We were able to verify the building structure in the mechanical mezzanine located at the north side of the building.
- As will be noted in the remainder of the report, the building appears to be moving/settling which has caused multiple cracks both at the exterior veneer and interior partitions.
- The building structure (interior and exterior) and veneer requires thorough review by a structural engineer for recommendations regarding corrective measures.

M+H ARCHITECTS PARIC

EXTERIOR ENVELOPE

- The marble veneered pre-cast concrete panels are found predominantly on the front of the building and the drive-thru area. The panels are in relatively good condition based on the age of the building with minor cracks that at the corners or lower portion of the panel.

- There are more notable issues at the drive-thru area with the marble veneer.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- The brick veneer at the Office building shows several signs of cracking indicating building movement or lack of control joints or both. Corrective measures are required.

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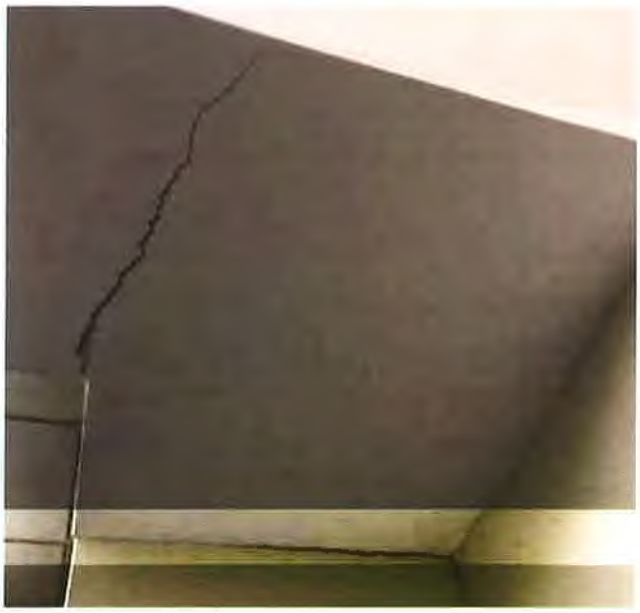
- There are cracks all over the interior of the Office building indicating significant movement/settling.
- In the images below, you can see that the floor has dropped at least 1" from where it was when the vinyl base was installed. The top photo was taken at the southwest corner of the building and the bottom photo was taken near the southeast corner indicating this movement is not confined to only one area or region of the building.

- A crack at the drywall soffit near the front entrance. There is also cracking at the inside corner at the top of the wall.

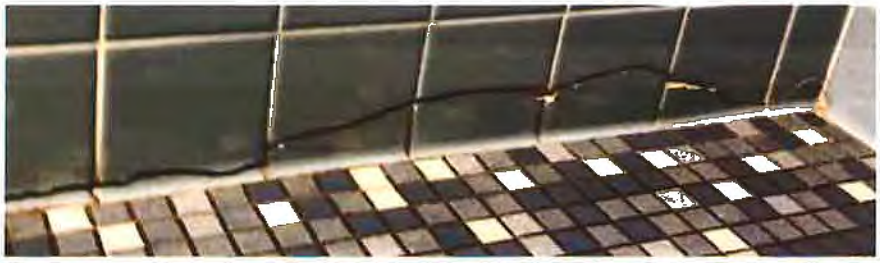


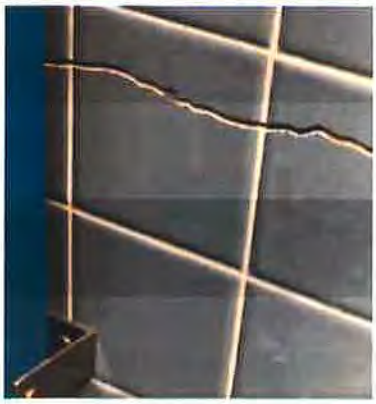
- The drywall mud has broken off of the metal corner bead at the head of the window and you can see the vertical crack in the drywall.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

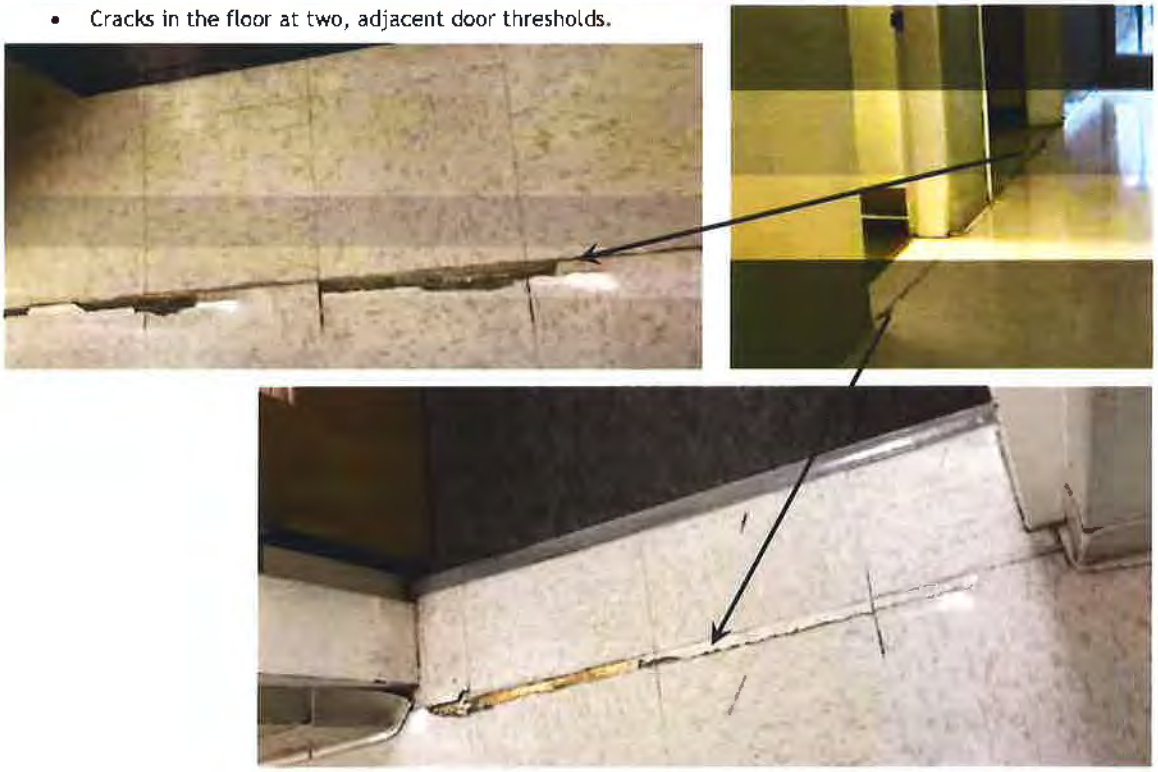
- Cracks in wall tile in a restroom.





- A horizontal crack in an interior electrical closet

- Cracks in the floor at two, adjacent door thresholds.



- CMU cracking at an interior storage room.

- Several interior doors are not straight in their door frame any longer due to the movement of the building.

- The north interior vestibule door was removed completely because it kept getting bound up. This defeats the purpose of the vestibule and allows hot or cold air direct entry into the building.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

EXTERIOR ENVELOPE

- No insulation in the exterior walls were visible during observation. The original drawings show 1" of rigid insulation over the CMU. Even if additional insulation had been added when the building was renovated, the Office building would still not meet current energy code requirements.
- The soffits in the main entry area, drive-thru and other employee entries all consists of lay-in ceiling tiles. These tiles are predominantly in poor condition due to age and exposure to heat/cold and humidity.
- These areas all represent a compromise in the security of the building as well. It was stated by the staff that there is no barrier between the exterior soffits and the inside of the building other than the removeable ceiling tiles themselves.
- This is also an energy issue as the hot or cold outside air has an easier path to the plenum of the building and makes the mechanical systems work harder.

M+H ARCHITECTS PARIC

- Several areas around the building were noted to have dark and discolored mortar. More investigation is required to determine if there is an issue.

COOPERATIVE BUILDING SOLUTIONS

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- The windows in the Office building are a floor to ceiling window system similar to a storefront system.
- Each system typically has 3 panels. One with glass (that is sometimes divided into 2 parts, one operable and one non-operable) and two with what are referred to as 'facing panels' that are opaque. The glazing is drawn in the details as a 1" unit with 2 panes of glass. Given the age of the building these systems are far less efficient than their modern day equivalent.
- Over the years moisture has been able to enter the system and get between the panes of glass creating hazy areas that aren't able to be cleaned.
- If the operable windows still work, there is no screen installed, so any window that is opened would allow direct access to insects.
- The finish on the facing panels has degraded over time and requires replacement.

M+H ARCHITECTS PARIC

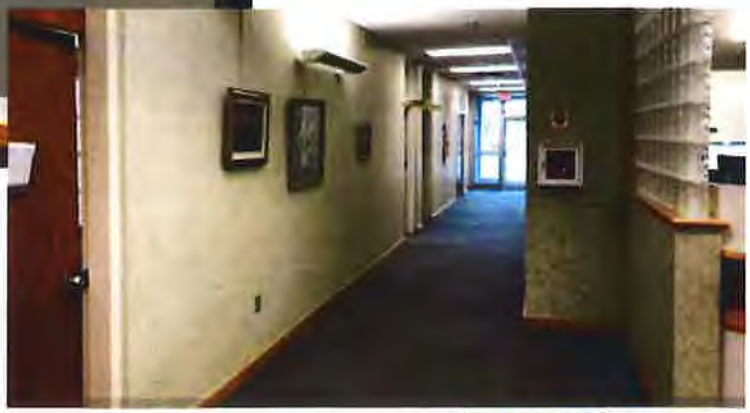
- The original drawings call out a low-slope built-up roof membrane on top of the roof structure. This roofing system was very common at the time of construction. The Office building roof was replaced in 2010 with a modified bitumen membrane roof that came with a 20 year warranty, so there is approximately 12 years left on the Office building roof warranty.
- Stained ceiling tiles were noted at the interior of the building near the mechanical mezzanine ladder. It is unknown whether this was a roof leak issue or mechanical equipment issue. Either way, the source of the stain should be investigated and the stained tiles should be replaced.
- The Office building roof was not directly observed as part of our site observations.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

INTERIOR

- The original interior consists of a plaster coating over the CMU with a fabric coating. There was an interior renovation done to the original Office building assumed to be sometime in the 1980's and most of the walls were furred out with wood or metal studs and painted drywall was added.
- Given the age of the building, there is potential for hazardous building materials to be present. (Asbestos, lead paint, etc.) If a building survey hasn't already been commissioned to determine the locations and types of hazardous material, it is recommended.
- The Office building does has access control on two sides of the reception desk (at the east corridor and the north corridors), however, the Reception and Cashiers, along with several Member Services offices are outside of the secure area. Almost the entire front part of the Office building is accessible to anyone that enters the building.
- No accessible counters were noted for members requiring such. The member could be taken to a private office to be accommodated which does meet ADA requirements.
- All observed doors still had door knobs instead of levers. This does not meet ADA requirements.

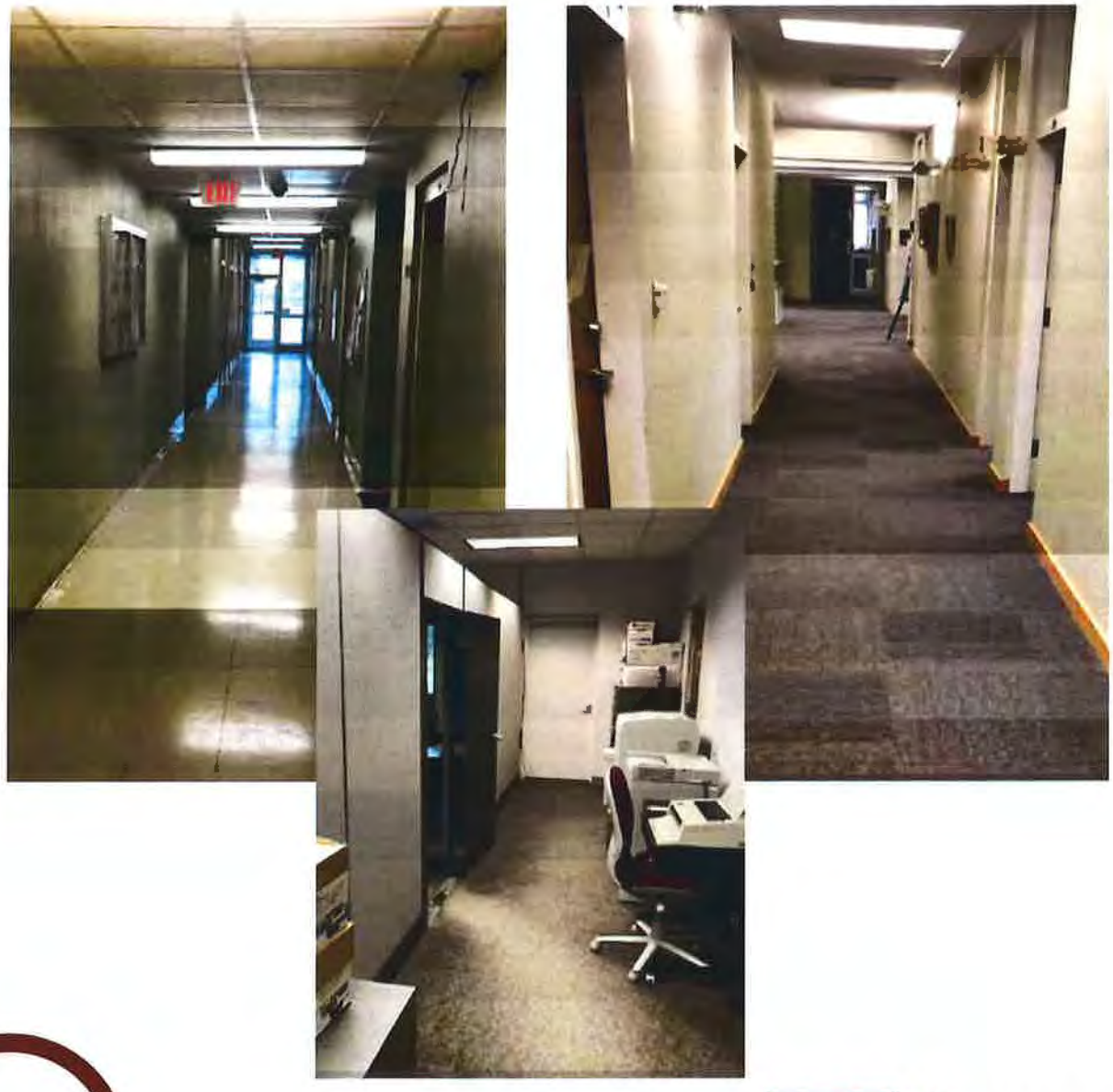


M+H ARCHITECTS PARIC

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- The Office interior consists of multiple corridors and closed offices that does not promote collaboration.
- It was stated that JPEC staff are scattered throughout the building and don't have appropriate adjacencies.
- The interior finishes, even the newer renovated areas, are worn and dated.



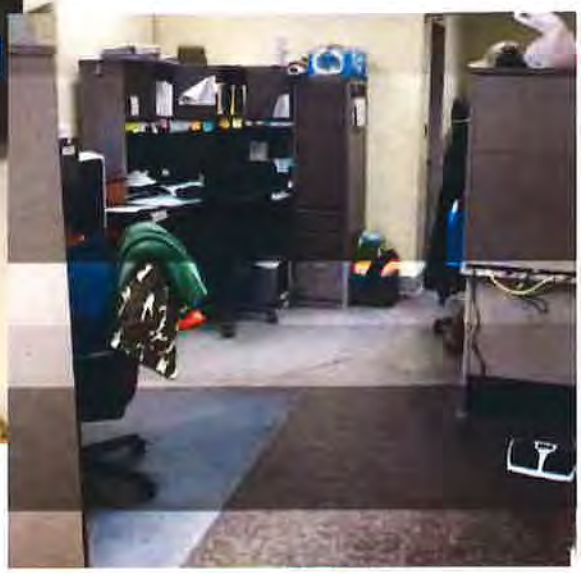
M+H ARCHITECTS PARIC

- It was stated by the Staff that the Board Room is too small for current needs.

- The employee Break Room is also too small for current needs with most staff spilling over to eat lunch in the adjacent Auditorium.
- The finishes are worn and dated.
- A cooktop was noted in the Break Room. If this is utilized, it does not have the code required ventilation/fire suppression. A cooktop must be vented to the outside and have appropriate fire suppression in a commercial facility.

- Grab bars were noted at the toilet stalls that were observed.

- Most spaces/offices are cramped and being utilized at full capacity and using any means necessary to use required equipment. These file cabinets are a monitor stand, charging station and key storage.



- Clear signs of moisture in the wall that require corrective measures.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

MECHANICAL, ELECTRICAL & PLUMBING SYSTEMS

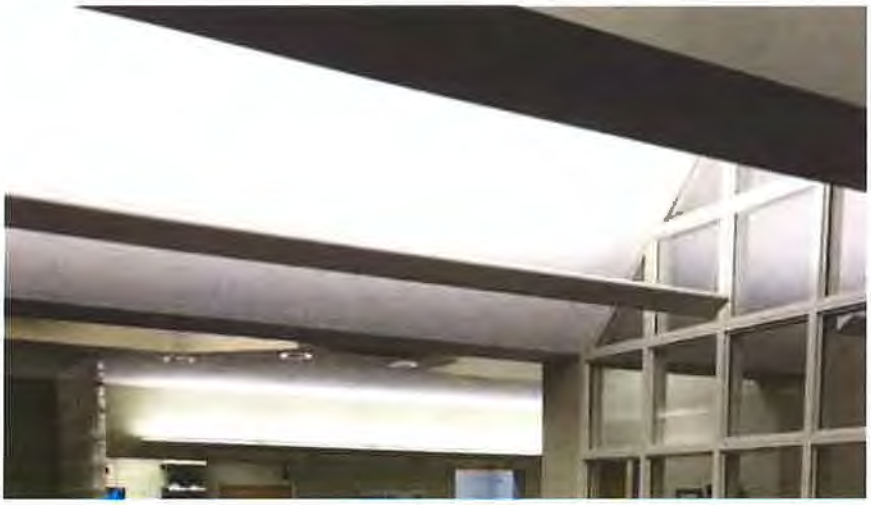
- The mechanical needs of the Office building is served by an exterior chiller along with heating/air handling mechanical units on the interior mechanical mezzanine. The access to the mezzanine is via a motorized drop down stair that is located near the north employee entrance. When the stair is lowered it reduces the corridor width, but it was observed that everyone could get around it.

M+H ARCHITECTS PARIC

- Outwardly, the units appear old and worn. The mechanical systems will need to be evaluated by a Mechanical Engineer to determine if any corrective measures are required.

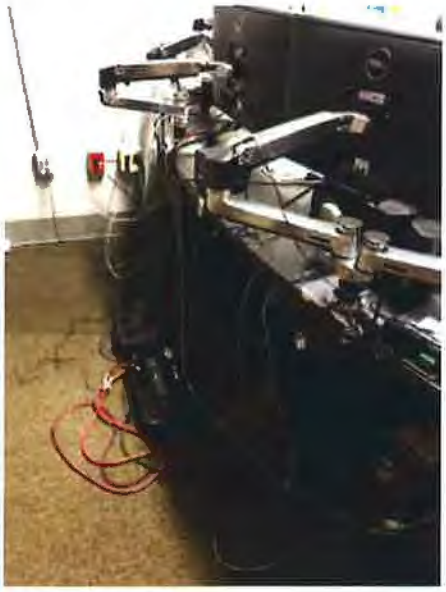
- An exposed electrical box was noted in the area. Corrective measures are required.

- In the Lobby area and adjacent corridors, the space is lit mostly by indirect uplighting with a few can lights directly over the writing service at the member desk. They appear to be in acceptable condition.

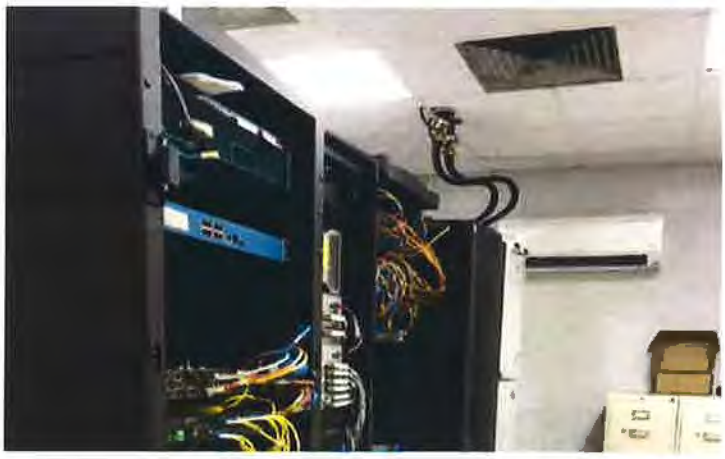


- The remainder of the building is composed of surface mounted and lay-in fluorescent fixtures that also appear to be in acceptable condition. The light fixtures could be replaced and/or retrofitted with LED equivalents in order to save on lighting/energy costs.

- Several data cables were not installed in conduit or trays and that the buildings (or the furniture) were not designed with flexible provisions for new technology systems due to the age of the facility. Much of the wiring and equipment is exposed and surface mounted where necessary.



- The server room appears to have a dedicated cooling system, however a portable fan was noted. More investigation is required to determine if the dedicated cooling is providing enough air movement in the room.



- A raised access floor is installed in the server room. There is a ramp and handrail to access the area, however, the file cabinets at the top of the landing reduces the width of the aisle which does not meet ADA requirements.
- The servers and critical equipment are not housed in any hardened structural area.

- There is a generator that serves the Office building. The age of the generator is unknown. More investigation is required to determine if it is still a viable piece of equipment.

- No building on site has a fire suppression system installed. Fire protection systems may need to be included in any new construction or renovation to meet current building codes.

WAREHOUSE BUILDING STRUCTURE

- Based on drawings supplied by the owner, the original 1969 Warehouse Building structure is composed of a combination of CMU structural walls with some steel columns and beams at the interior with brick veneer.
- The roof structure is composed of a 2 1/2" concrete deck over metal bar joists.
- The South Exterior wall is bordering on being structurally unsound and will require significant structural repairs to prevent further structural damage or potentially a structural failure. The building structure (interior and exterior) and veneer requires thorough review by a structural engineer for recommendations regarding corrective measures.

- The south brick veneer has dropped and is leaning to the south. The metal coping at the top of the wall no longer completely covers the brick as it was designed. A similar issue is occurring at the northeast corner of the building.

- Roof structure image from interior.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- The brick veneer at the Warehouse building shows several signs of cracking indicating building movement or lack of control joints or both. Corrective measures are required. The building issues are not limited to the south wall.

- The dock area, both the covered dock and the uncovered dock have spalling, cracking and missing brick veneer. Corrective measures are required.

M+H ARCHITECTS PARIC

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- There are several locations at interior partitions where large cracks have formed. The cracks expand and contract over the course of the year. As with the other structural issues, investigation and extensive corrective measures are required.

- There are several locations at interior partitions where large cracks have formed. The cracks expand and contract over the course of the year. As with the other structural issues, investigation and extensive corrective measures are required.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

EXTERIOR ENVELOPE

- No insulation in the exterior walls were visible during observation. This building, as constructed, would not meet current energy code requirements.
- The original drawings call out a low-slope built-up roof membrane on top of the roof structure. This roofing system was very common at the time of construction. JPEC stated that no significant work had been done on this roof since the original installation.
- The Warehouse building roof was not directly observed as part of our site observations.

M+H ARCHITECTS PARIC ENGINEERING

- The steel that is exposed to the elements is showing significant rust. Maintenance is required to stop the rust from further spreading and a new coating is required.

- The paint coating is coming off of all of the steel railings. Maintenance is required in all locations.

- The overhead door at the north dock wasn't closed for observation of the outside face, but the inside face seemed to be in acceptable condition. The sheet metal clad jamb has been damaged and the wood blocking is showing signs of weathering. Repair or replacement of the sheet metal is recommended to prevent further damage to the wood blocking.

- The window system is failing and not as energy efficient as a new aluminum storefront system would be.

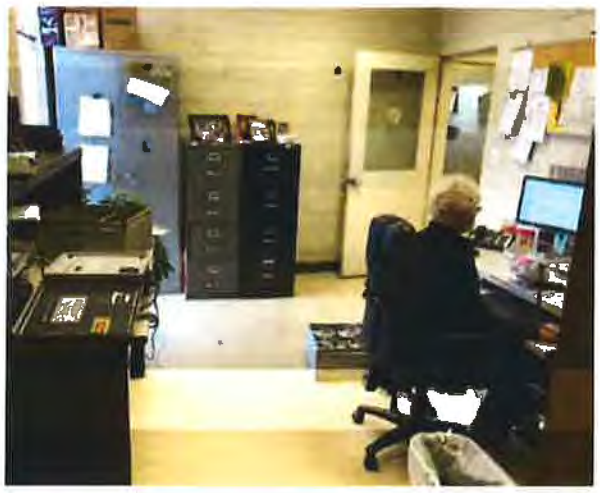
COOPERATIVE BUILDING SOLUTIONS

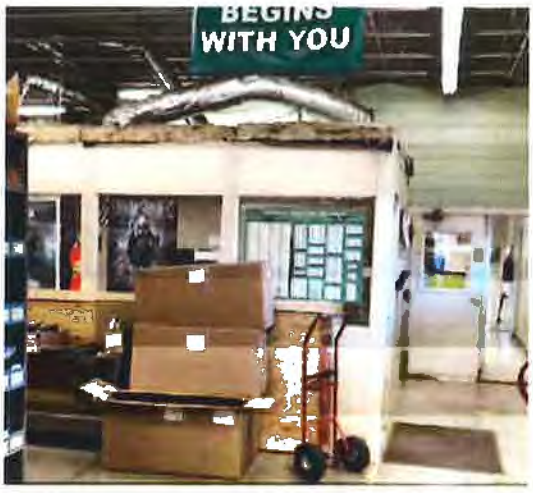
JACKSON PURCHASE ENERGY CORPORATION

INTERIOR

- Given the age of the building, there is potential for hazardous building materials to be present. (Asbestos, lead paint, etc.) If a building survey hasn't already been commissioned to determine the locations and types of hazardous material, it is recommended.
- The interior concrete floors appear to be in acceptable condition for the age of the building.

- There is some office space at the south end of the Warehouse as well as a small office inside the Warehouse space. In general, all spaces appear to be full/cramped. It appears more space is needed.
- The office spaces are heated and cooled, while the Warehouse is heated and ventilated only.
- All observed doors still had door knobs instead of levers. This does not meet ADA requirements.





M+H PARIC

MECHANICAL, ELECTRICAL & PLUMBING SYSTEMS

- HVAC unit hung from the structure above to provide cooling for the offices. There were louvers at the north and south of the building that provide intake and exhaust air.
- The Warehouse is heated by small, electric unit heaters throughout the space like the one circled below.

- The ductwork routed to the Warehouse office is insulated to prevent condensation and loss of air temperature. The lid for that office is also insulated. It's preferred to have the insulation covered instead of being left exposed.

- Warehouse lighting consists of fluorescent strip fixtures hung from the ceiling. They appear to be in acceptable condition. Using LED equivalents can save energy costs over time.

- There is a generator that serves the Warehouse building. The age of the generator is unknown. More investigation is required to determine if it is still a viable piece of equipment.

- Bathrooms were noted in the office space of the Warehouse building. It appears there is sufficient clear space in the room, however, there are no grab bars at the toilet which is an ADA requirement.

- The Warehouse building does not have a fire suppression system installed.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

VEHICLE STORAGE AND MAINTENANCE BUILDING

STRUCTURE

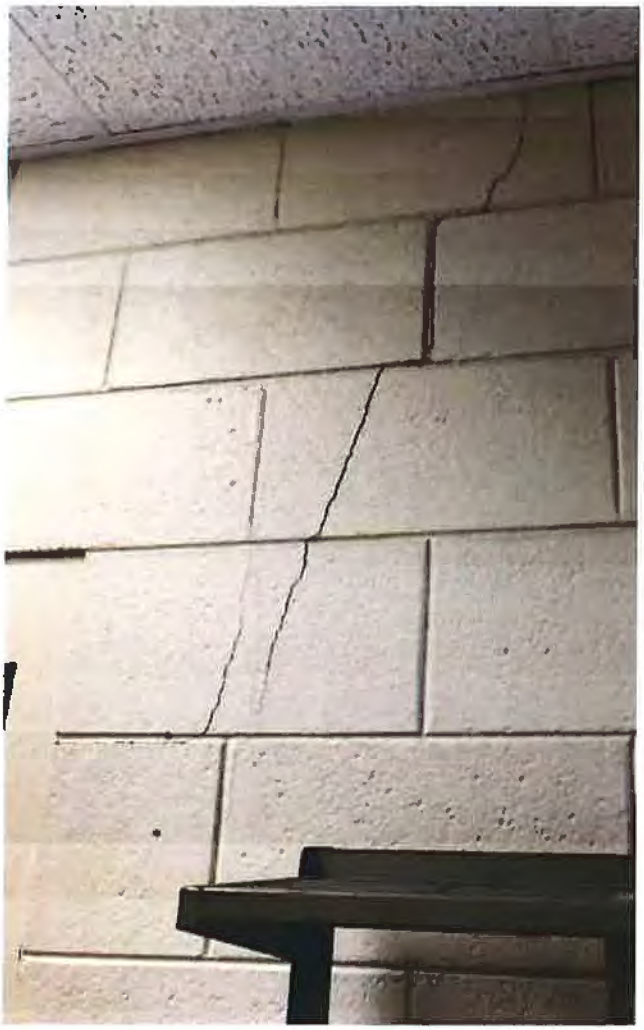
- Based on drawings supplied by the owner, the original 1969 Maintenance Building structure is composed of a combination of CMU structural walls with some steel columns and beams at the interior with brick veneer.
- The roof structure is composed of a 2 1/2" concrete deck over metal bar joists.
- In general, the brick veneer at this building doesn't appear to exhibit the large, visible cracks that are noticeable in the other two buildings. However, interior CMU cracking indicates it has similar issues to the Office and Warehouse. The building structure (interior and exterior) and veneer requires thorough review by a structural engineer for recommendations regarding corrective measures.

M+H ARCHITECTS PARIC ENGINEERING

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- There are locations at interior partitions where cracks have formed. As with the other structural issues, investigation and corrective measures are required.



COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- The north dock area of this building is showing significant cracking and efflorescence with the brick veneer. Corrective measures required.

M+H ARCHITECTS PARIC

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

EXTERIOR ENVELOPE

- No insulation in the exterior walls were visible during observation. This building, as constructed, would not meet current energy code requirements.
- The overhead doors in this building appear worn with several of them exhibiting damage assumed from being struck by vehicles or equipment.
- At least 2 doors have been replaced and are mismatched from the rest of the facility (color and vision lites).

M+H ARCHITECTS PARIC

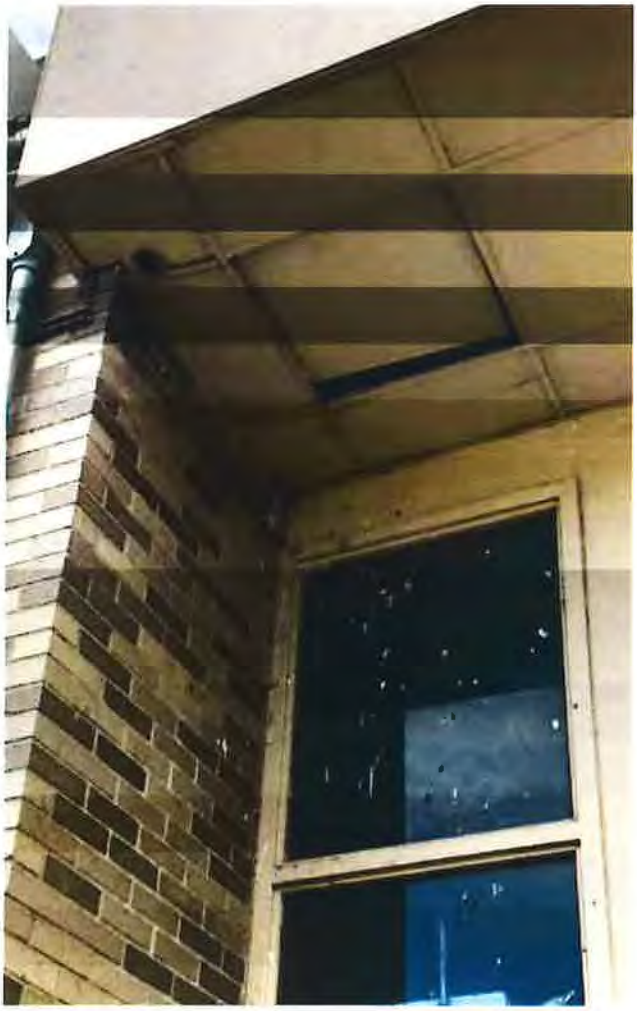
- More images of door damage/wear requiring replacement.
- The doors contain wire glass which does not meet current building codes.

- The original drawings call out a low-slope built-up roof membrane on top of the roof structure. This roofing system was very common at the time of construction. JPEC stated that no significant work had been done on this roof since the original installation.
- The Vehicle Storage/Maintenance building roof was not directly observed as part of our site observations.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- A panel in the lay-in soffit has been left open. It appears birds are nesting or roosting in that area and the droppings are staining the wall. There is also an insect nest at the top of the window that needs to be removed.
- A similar issue is happening at the north end of the building.



- The finish on the wood jamb at the northeast overhead door (on the north elevation) is badly worn. It should be replaced.
- Plants have been allowed to grow between the slab and the brick veneer and should be removed.

- The finish on the wood jamb at the man door on the north elevation is badly worn. It should be replaced.
- There are cracks in the concrete slab at the threshold that require maintenance/repair.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

INTERIOR

- The interior of this building appears worn and in need of maintenance.
- The majority of the finish coating has flaked off of the underside of the metal deck. Given the age of the building, there is potential for hazardous building materials to be present. (Asbestos, lead paint, etc.) If a building survey hasn't already been commissioned to determine the locations and types of hazardous material, it is recommended.

M+H ARCHITECTS PARIC

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- The building does not provide the appropriate amount of space for the JPEC expensive vehicles and equipment. Vehicles are stored very close together and very close to the overhead doors. Having everything in such close proximity puts the risk of vehicle and facility damage very high.

M+H ARCHITECTS PARIC

- The concrete floor appears to be in adequate condition for the age of the facility.

- The CMU 'wing' walls are assumed to provide lateral stability for the building, however they further cramp the space making the area trucks can park even tighter. These walls are not required at newer facilities.

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

- The lineman facilities in this building are dated and worn and in some areas, not well maintained.
- Moisture has infiltrated the windows and the tile.
- Lockers are inside the show-up room. There is a lack of privacy and sound separation for the two areas.
- All observed doors still had door knobs instead of levers. This does not meet ADA requirements.

M+H ARCHITECTS PARIC

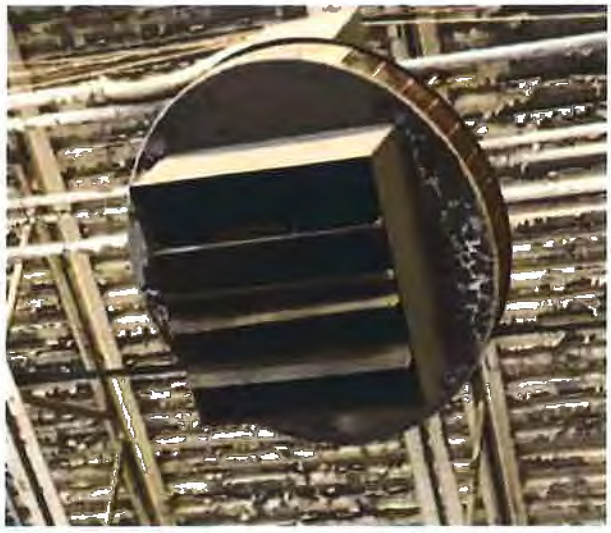
COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

MECHANICAL, ELECTRICAL & PLUMBING SYSTEMS

- The Lineman/Office areas are heated and cooled by a similar piece of equipment as is in the Warehouse building, but it was not observed. It is assumed to be above the ceiling in that area.
- Vents are dirty and exhibiting rust which indicates the filters and ductwork need to be cleaned. Rusted vents should be replaced.

- The Vehicle Storage and Maintenance area are heated by small, electric unit heaters mounted from the structure above.



M+H ARCHITECTS PARIC

- There is a water heater in close proximity to the electrical panels.

- The Vehicle Bay and Maintenance lighting consists of fluorescent strip fixtures hung from the ceiling. They appear to be in acceptable condition. Using LED equivalents can save energy costs over time. The windows in the overhead doors help bring natural light into the space.

- Toilet stalls are rusting and need to be replaced.
- A required ADA toilet stall was not noted and the shower is non-compliant.
- The bathroom facilities do not meet ADA requirements.

- Oil storage tank has no means of containment and it appears to be dripping onto the floor.

- The Vehicle Storage/Maintenance building does not have a fire suppression system installed. Renovation of this building will trigger a fire protection system to be included to meet current building codes due to the size of the building.

06 EXISTING FUNCTIONALITY ASSESSMENTS

COOPERATIVE
BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

FUNCTIONALITY SCORE

Candidate for Renovation/Reuse	JPEC Functionality Scores			Standard Ratings
	Good	Marginal	Poor	
Site		10		11-9
Office Building			4	12 and Below
Vehicle Storage Building			6	12 and Below
Warehouse / Storage Building			3	12 and Below
Total			**23**	**47 - 0**

COOPERATIVE BUILDING SOLUTIONS

SITE FUNCTIONALITY ASSESSMENT

JACKSON PURCHASE ENERGY CORPORATION	
Date:	11/06/18
Site Location:	2900 Irvin Cobb Drive
Site Area:	19 acres

		POTENTIAL	ACTUAL
A.	Site Adequacy - Size of site compared to ...		
	■ 80% to 100% of current needs (or additional land available)	4	
	■ 65% to 80% of current needs	2	
	■ Less than 65%	0	4
B.	Location		
	■ Near the center of the members served	2	
	■ Important focus of an older neighborhood, 50% or more members live in the area	1	
	■ Not centrally located, most members would not drive to the facility regularly	0	1
C.	Sewer and Water Systems		
	■ Municipal or county sewer and water and own G&T power supply	2	
	■ On-site sewer, adequate for needs, county water or good well with pressure tank and adequate power supply	1	
	■ Inadequate on-site sewer system or well or power	0	1
D.	Parking and Traffic Control		
	■ Paved drives with auto and truck traffic separated, adequate parking	2	
	■ Some paved drives or minor traffic conflicts, not enough parking	1	
	■ Truck or autos use same drive and parking area, limited parking	0	1
E.	Material Storage Yard		
	■ Ample, well developed storage yard area, gently sloping	4	
	■ Limited storage yard area, well developed	2	
	■ Very small storage yard area or located across the street from the facility or near a busy street or on a steeply sloping site	0	0
F.	Drainage		
	■ Good site drainage, no problems	2	
	■ Some minor drainage problems, can be corrected economically	1	
	■ Drainage problems, standing water on site, would be costly to correct, or in a flood plain	0	1
G.	Environmental Problems		
	■ No environmental problems observed	2	
	■ Minor problems or possibility of minor leaks	1	
	■ Leaking fuel tank or contaminated well or problems with sewer system discharge or standing water under building or other major problem	0	2

COOPERATIVE BUILDING SOLUTIONS

	SITE FUNCTIONALITY ASSESSMENT
Total Score (A through G) for Site	18 10

Total Score Possible is 18.

A total score of 12 through 18 indicates good site feasibility.
A total score of 11 through 9 is marginal and the feasibility for reuse will be determined by other factors.
A total score of 8 or less indicates poor site feasibility.
If building feasibility score is 18 or more and site feasibility score is 12 or more, replacement of these buildings would not normally be considered.
If building feasibility score is 12 or less and/or site feasibility score is 8 or less, replacement of the buildings and site should be considered.

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

BUILDING FUNCTIONALITY ASSESSMENT

JACKSON PURCHASE ENERGY CORPORATION

Date:		11/07/18
Building Address:		2900 Irvin Cobb Drive
Building Use:		Office
Year(s) Constructed:		1969
Building Area(s) SF:		17,500 SF
No. of Full Time Employees:	including O&E	66

		POTENTIAL	ACTUAL
A.	Adequacy - Typical size of offices and other functional spaces compared to facility needs.		
	■ 85% to 100% of current needs	6	
	■ 75% to 85% of current needs	3	
	■ Less than 75% of current needs	0	0
B.	Age of Building and major building systems and balance of remaining useful life.		
	■ Building is 15 years old or newer, and all systems are within their normal lifespan.	2	
	■ Building is between 15 and 40 years old, and all systems are within their normal lifespan.	1	
	■ Building is over 40 years old and majority of the systems have exceeded their normal lifespan.	0	0
C.	Safety and Code Compliance		
	■ Generally meets building code requirements (IBC 2012 or 2015)	4	
	■ Needs <u>some</u> modifications in order to meet current building code requirements	2	
	■ Needs <u>substantial</u> modifications to meet current building code requirements	0	2
D.	Relationship to Other Buildings on Site (including proposed additions)		
	■ Single building or buildings connected with enclosed corridors	2	
	■ Well organized campus plan, buildings connected with covered walks, interior corridors	1	
	■ Multiple buildings, not connected, some exterior corridors	0	0

COOPERATIVE BUILDING SOLUTIONS

BUILDING FUNCTIONALITY ASSESSMENT

E.	Handicapped Accessibility		
	■ Generally meets state or ADA handicapped code requirements and is suitable for use by physically handicapped persons	2	
	■ Needs some modifications to meet handicapped code requirements and to be used satisfactorily by physically handicapped persons	1	
	■ Need substantial modifications to be used satisfactorily by physically handicapped persons (e.g. elevators, lifts, new toilet rooms, etc.)	0	1
F.	Physical Condition of Building - (structural, roof, exterior walls, windows, doors, interior partitions, ceilings, flooring)		
	■ Very good condition, only minor repairs required	4	
	■ Moderate repairs required, some replacements (e.g. new windows or roof)	2	
	■ Structural problems or extensive repairs required, replacement of several systems required (new ceilings, roof, windows, exterior wall repair, moving interior partitions, etc.)	0	0
G.	Mechanical and Electrical Systems - (plumbing, heating, air conditioning, electrical service, lighting, telecommunications, fire alarm, computer)		
	■ Good plumbing, central heating and air conditioning; safe, efficient electrical service and lighting; operable fire alarm and telecommunications, or not required for this use = 4	4	
	■ Moderate repairs and some replacements required (example: may need new air conditioning or lighting, but plumbing, heating and main electrical service in good condition) = 2	2	
	■ Extensive repairs and/or replacement of several systems required	0	0
H.	Hazardous Materials - (asbestos, lead, radon, indoor air quality)		
	■ Asbestos and other hazardous materials either not visible, not present, or stablized	2	
	■ Minor problems with hazardous materials, management program in progress	1	
	■ Asbestos and other hazardous materials present in building requiring removal	0	1
	Total Score (A through H) for Building	**26**	4

Total Score Possible is 26.

A total score of 18 or more indicates good feasibility for renovation. A score between 17 and 13 is marginal and the feasibility for renovation will be determined by other factors. A total score of 12 or less indicates poor feasibility for renovation.

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

BUILDING FUNCTIONALITY ASSESSMENT

JACKSON PURCHASE ENERGY CORPORATION

Date:		11/07/18
Building Address:		2900 Irvin Cobb Drive
Building Use:		Vehicles/Maintenance
Year(s) Constructed:		1969
Building Area(s) SF:		11,750
No. of Full Time Employees:	including O&E	66

		POTENTIAL	ACTUAL
A.	Adequacy - Typical size of offices and other functional spaces compared to facility needs.		
	■ 85% to 100% of current needs	6	
	■ 75% to 85% of current needs	3	
	■ Less than 75% of current needs	0	0
B.	Age of Building and major building systems and balance of remaining useful life.		
	■ Building is 15 years old or newer, and all systems are within their normal lifespan.	2	
	■ Building is between 15 and 40 years old, and all systems are within their normal lifespan.	1	
	■ Building is over 40 years old and majority of the systems have exceeded their normal lifespan.	0	0
C.	Safety and Code Compliance		
	■ Generally meets building code requirements (IBC 2012 or 2015)	4	
	■ Needs some modifications in order to meet current building code requirements	2	
	■ Needs substantial modifications to meet current building code requirements	0	0
D.	Relationship to Other Buildings on Site (including proposed additions)		
	■ Single building or buildings connected with enclosed corridors	2	
	■ Well organized campus plan, buildings connected with covered walks, interior corridors	1	
	■ Multiple buildings, not connected, some exterior corridors	0	0

COOPERATIVE BUILDING SOLUTIONS

BUILDING FUNCTIONALITY ASSESSMENT

E.	Handicapped Accessibility		
	■ Generally meets state or ADA handicapped code requirements and is suitable for use by physically handicapped persons	2	
	■ Needs some modifications to meet handicapped code requirements and to be used satisfactorily by physically handicapped persons	1	
	■ Need substantial modifications to be used satisfactorily by physically handicapped persons (e.g. elevators, lifts, new toilet rooms, etc.)	0	1
F.	Physical Condition of Building - (structural, roof, exterior walls, windows, doors, interior partitions, ceilings, flooring)		
	■ Very good condition, only minor repairs required	4	
	■ Moderate repairs required, some replacements (e.g. new windows or roof)	2	
	■ Structural problems or extensive repairs required, replacement of several systems required (new ceilings, roof, windows, exterior wall repair, moving interior partitions, etc.)	0	2
G.	Mechanical and Electrical Systems - (plumbing, heating, air conditioning, electrical service, lighting, telecommunications, fire alarm, computer)		
	■ Good plumbing, central heating and air conditioning; safe, efficient electrical service and lighting; operable fire alarm and telecommunications, or not required for this use = 4	4	
	■ Moderate repairs and some replacements required (example: may need new air conditioning or lighting, but plumbing, heating and main electrical service in good condition) = 2	2	
	■ Extensive repairs and/or replacement of several systems required	0	2
H.	Hazardous Materials - (asbestos, lead, radon, indoor air quality)		
	■ Asbestos and other hazardous materials either not visible, not present, or stablized	2	
	■ Minor problems with hazardous materials, management program in progress	1	
	■ Asbestos and other hazardous materials present in building requiring removal	0	1
	Total Score (A through H) for Building	**26**	**6**

Total Score Possible is 26.

A total score of 18 or more indicates good feasibility for renovation. A score between 17 and 13 is marginal and the feasibility for renovation will be determined by other factors. A total score of 12 or less indicates poor feasibility for renovation.

COOPERATIVE BUILDING SOLUTIONS

BUILDING FUNCTIONALITY ASSESSMENT

JACKSON PURCHASE ENERGY CORPORATION

Date:		11/07/18
Building Address:		2900 Irvin Cobb Drive
Building Use:		Vehicles/Maintenance
Year(s) Constructed:		1969
Building Area(s) SF:		11,750
No. of Full Time Employees:	including O&E	66

		POTENTIAL	ACTUAL
A.	Adequacy - Typical size of offices and other functional spaces compared to facility needs.		
	■ 85% to 100% of current needs	6	
	■ 75% to 85% of current needs	3	
	■ Less than 75% of current needs	0	0
B.	Age of Building and major building systems and balance of remaining useful life.		
	■ Building is 15 years old or newer, and all systems are within their normal lifespan.	2	
	■ Building is between 15 and 40 years old, and all systems are within their normal lifespan.	1	
	■ Building is over 40 years old and majority of the systems have exceeded their normal lifespan.	0	0
C.	Safety and Code Compliance		
	■ Generally meets building code requirements (IBC 2012 or 2015)	4	
	■ Needs some modifications in order to meet current building code requirements	2	
	■ Needs substantial modifications to meet current building code requirements	0	0
D.	Relationship to Other Buildings on Site (including proposed additions)		
	■ Single building or buildings connected with enclosed corridors	2	
	■ Well organized campus plan, buildings connected with covered walks, interior corridors	1	
	■ Multiple buildings, not connected, some exterior corridors	0	0

COOPERATIVE BUILDING SOLUTIONS

BUILDING FUNCTIONALITY ASSESSMENT

E. Handicapped Accessibility

■ Generally meets state or ADA handicapped code requirements and is suitable for use by physically handicapped persons	2	
■ Needs some modifications to meet handicapped code requirements and to be used satisfactorily by physically handicapped persons	1	
■ Need substantial modifications to be used satisfactorily by physically handicapped persons (e.g. elevators, lifts, new toilet rooms, etc.)	0	1

F. Physical Condition of Building - (structural, roof, exterior walls, windows, doors, interior partitions, ceilings, flooring)

■ Very good condition, only minor repairs required	4	
■ Moderate repairs required, some replacements (e.g. new windows or roof)	2	
■ Structural problems or extensive repairs required, replacement of several systems required (new ceilings, roof, windows, exterior wall repair, moving interior partitions, etc.)	0	2

G. Mechanical and Electrical Systems - (plumbing, heating, air conditioning, electrical service, lighting, telecommunications, fire alarm, computer)

■ Good plumbing, central heating and air conditioning; safe, efficient electrical service and lighting; operable fire alarm and telecommunications, or not required for this use = 4	4	
■ Moderate repairs and some replacements required (example: may need new air conditioning or lighting, but plumbing, heating and main electrical service in good condition) = 2	2	
■ Extensive repairs and/or replacement of several systems required	0	2

H. Hazardous Materials - (asbestos, lead, radon, indoor air quality)

■ Asbestos and other hazardous materials either not visible, not present, or stablized	2	
■ Minor problems with hazardous materials, management program in progress	1	
■ Asbestos and other hazardous materials present in building requiring removal	0	1
Total Score (A through H) for Building	**26**	**6**

Total Score Possible is 26.

A total score of 18 or more indicates good feasibility for renovation. A score between 17 and 13 is marginal and the feasibility for renovation will be determined by other factors. A total score of 12 or less indicates poor feasibility for renovation.

COOPERATIVE BUILDING SOLUTIONS

BUILDING FUNCTIONALITY ASSESSMENT

JACKSON PURCHASE ENERGY CORPORATION

Date:		11/07/18
Building Address:		2900 Irvin Cobb Drive
Building Use:		Warehouse
Year(s) Constructed:		1969
Building Area(s) SF:		11,750
No. of Full Time Employees:	including O&E	66

		POTENTIAL	ACTUAL
A.	Adequacy - Typical size of offices and other functional spaces compared to facility needs.		
	■ 85% to 100% of current needs	6	
	■ 75% to 85% of current needs	3	
	■ Less than 75% of current needs	0	0
B.	Age of Building and major building systems and balance of remaining useful life.		
	■ Building is 15 years old or newer, and all systems are within their normal lifespan.	2	
	■ Building is between 15 and 40 years old, and all systems are within their normal lifespan.	1	
	■ Building is over 40 years old and majority of the systems have exceeded their normal lifespan.	0	0
C.	Safety and Code Compliance		
	■ Generally meets building code requirements (IBC 2012 or 2015)	4	
	■ Needs some modifications in order to meet current building code requirements	2	
	■ Needs substantial modifications to meet current building code requirements	0	0
D.	Relationship to Other Buildings on Site (including proposed additions)		
	■ Single building or buildings connected with enclosed corridors	2	
	■ Well organized campus plan, buildings connected with covered walks, interior corridors	1	
	■ Multiple buildings, not connected, some exterior corridors	0	0

COOPERATIVE BUILDING SOLUTIONS

BUILDING FUNCTIONALITY ASSESSMENT

E.	Handicapped Accessibility		
	■ Generally meets state or ADA handicapped code requirements and is suitable for use by physically handicapped persons	2	
	■ Needs some modifications to meet handicapped code requirements and to be used satisfactorily by physically handicapped persons	1	
	■ Need substantial modifications to be used satisfactorily by physically handicapped persons (e.g. elevators, lifts, new toilet rooms, etc.)	0	0
F.	Physical Condition of Building - (structural, roof, exterior walls, windows, doors, interior partitions, ceilings, flooring)		
	■ Very good condition, only minor repairs required	4	
	■ Moderate repairs required, some replacements (e.g. new windows or roof)	2	
	■ Structural problems or extensive repairs required, replacement of several systems required (new ceilings, roof, windows, exterior wall repair, moving interior partitions, etc.)	0	0
G.	Mechanical and Electrical Systems - (plumbing, heating, air conditioning, electrical service, lighting, telecommunications, fire alarm, computer)		
	■ Good plumbing, central heating and air conditioning; safe, efficient electrical service and lighting; operable fire alarm and telecommunications, or not required for this use = 4	4	
	■ Moderate repairs and some replacements required (example: may need new air conditioning or lighting, but plumbing, heating and main electrical service in good condition) = 2	2	
	■ Extensive repairs and/or replacement of several systems required	0	2
H.	Hazardous Materials - (asbestos, lead, radon, indoor air quality)		
	■ Asbestos and other hazardous materials either not visible, not present, or stablized	2	
	■ Minor problems with hazardous materials, management program in progress	1	
	■ Asbestos and other hazardous materials present in building requiring removal	0	1
	Total Score (A through H) for Building	**26**	**3**

Total Score Possible is 26.

A total score of 18 or more indicates good feasibility for renovation. A score between 17 and 13 is marginal and the feasibility for renovation will be determined by other factors. A total score of 12 or less indicates poor feasibility for renovation.

07 NEEDS ASSESSMENT

COOPERATIVE
BUILDING SOLUTIONS

07 NEEDS ASSESSMENT

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

SQUARE FOOT SUMMARY

JACKSON PURCHASE ENERGY CORPORATION								
SQUARE FOOTAGE	Proposed Office SF				Proposed E/O SF			Notes
SF BREAKDOWN BY FUNCTION	Qty.	Size/SF	Subtotal		Qty.	Size/SF	Subtotal	
President & CEO - Greg Grissom	1	350	350					
Closet	1	100	100					
Toilet	1	64	64					
Executive Assistant	1	120	120					
Mgr HR & Admin Svcs. - Blagg	1	180	180					
Assisstant - HR	1	120	120					
Assisstant - Admin Services	1	120	120					
Storage - HR closet	1	100	100					
Medium Conference	1	240	240					8-10 people (auditor)
Board Rm/Large Conf	1	900	900					15-20 people
VP Finance & Accounting - Williams	1	180	180					
Payroll Accountant - Vacant	1	120	120					
Accounting Clerk	1	120	120					
Staff Accountant	1	120	120					
Plant Accountant	1	120	120					
Mgr Customer Service - Miller	1	180	180					
CSR	4	120	480					includes drive thru station
Cashier	1	120	120					
Clerk Office Support	1	120	120					
Receptionist	1	120	120					
Storage - MS closet	1	100	100					
Small Conference	1	150	150					4-6 people

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

SQUARE FOOT SUMMARY

Lobby	1	200	200		1	100	100	BR at Office Building
Waiting Area	1	100	100		1	100	100	2-4 chairs
Display Area	1	100	100					
Public Toilet	2	80	160		2	80	160	
Public Conference Room	1	200	200		1	150	150	4-6 people
Mail Room/Night Drop/Money	1	120	120					
Record Storage	1	200	200					fire rated, hardened
Vault	1	200	200					fire rated
File Room	1	200	200					fire rated
Workroom/Copy/Print	1	150	150					
Supply Closet	1	100	100					
Mgr Technical Services - Morgan					1	180	180	
IT Specialist - Vacant					2	120	240	
Metering Technician					1	120	120	
Server Room					1	350	350	hardened construction
IT work room					1	200	200	hardened construction
IT storage					1	200	200	hardened construction
IT collaboration space					1	180	180	hardened construction
Meter Reader					2	120	240	
Future Office Employees	3	120	360					
Employee Break/Kitchen (Work Café)	1	1000	1000		1	1000	1000	
Employee Toilets	2	200	400		2	400	800	
General Storage Room	1	200	200		1	200	200	
Multi-purpose room	1	1600	1600		1	2400	2400	80-100 people
Multi-purpose room toilets	2	200	400					
Multi-purpose Catering Kitchen	1	150	150					
Multi-purpose Chair and Table storage	1	200	200		1	200	200	
Wellness Center					1	1200	1200	
Coat Closet	1	50	50		1	50	50	
Custodial Storage	1	150	150		1	150	150	

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

SQUARE FOOT SUMMARY

Safety Coordinator - Riley					1	180	180	
Vice President E & O - Ribble					1	180	180	
Future Manager and one super instesd of 2 supervisors								
Operations Supervisor - Kendall					1	180	180	
Crew Leader - Overhead					2	80	160	located in linemen room
Line Technician					4	0	0	located in linemen room
Apprentice					4	0	0	located in linemen room
Asst. Crew - No Vacancies					0	0	0	located in linemen room
Electronic Technician					4	120	480	(2) vacant (shared room)
Maintenance Mechanic					1	0	0	located in Vehicle Maintenance
Line Construction Contractors						0	0	
Operations Supervisor - Martin					1	180	180	
Crew Leader - Underground					2	80	160	
Line Technician					4	0	0	
Apprentice					4	0	0	
Asst. Crew - No Vacancies					0	0	0	
Crew Leader Maintenance					3	80	240	
Line Technician					3	0	0	
Inspector - ROW						120	120	
ROW Contractors						0	0	
Purchasing Agent - Nichols					1	180	180	
Material Handler					1	0	0	located in Warehouse
Custodial Contractors						0	0	
Future Operations Employees						0	0	
War Room					1	350	350	hardened construction
Employee Toilet/Shower/Locker Rooms					1	400	400	15x18x72 lockers
Linemen Room/Kitchenette/Vending					1	1200	1200	Use 35sf per seated Lineman
File Room					1	200	200	
Workroom/Copy/Print					1	150	150	
Supply Closet					1	100	100	
Medium Conference					0	240	0	8-10 people - use war room
General Storage Room					1	200	200	

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

SQUARE FOOT SUMMARY

Engineer I - Reed					1	180	180	
Engineer I - Vacant					1	180	180	
Staking Tech					4	120	480	workstation
Dispatcher control room					1	400	400	multiple shifts?
GIS Technician					1	120	120	workstation
Inspector - Line and Joint Use					2	120	240	workstation
Outside Crew workstations						50	0	located in linemen room?
Future Engineering Employees						0	0	
							0	
OFFICE NET S.F.			10,464				14,480	
Walls/Circulation			3,136				4,344	0.3 x net SF
OFFICE GROSS S.F.			13,600				18,824	13600+18824-21500=10924
EXISTING GROSS S.F.							21,500	
NET DIFFERENCE S.F.							10,924	
WAREHOUSE								
Warehouse					1	22,500	22500	all material in one warehouse
Warehouse Future Expansion						0	0	
Warehouse Office						180	0	inc in warehouse
Workbenches & Equip (w/ eye wash)						100	0	inc in warehouse
Workbenches & Equip (w/ eye wash)						100	0	inc in warehouse
Meter Room (Test, Repair & Storage)						300	0	inc in warehouse
Hot Stick Room (Test, Repair & Storage)						200	0	inc in warehouse
Loading Dock Area (leveler and ramp)						1,200	0	inc in warehouse
Recessed Scale						25	0	inc in warehouse
Secure Tool Storage						200	0	inc in warehouse
Transformer PCB area						400	0	inc in warehouse
WAREHOUSE NET S.F.							22,500	
Walls/Circulation							0	
WAREHOUSE GROSS S.F.							22,500	
EXISTING GROSS S.F.							12,000	
NET DIFFERENCE S.F.							10,500	

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

SQUARE FOOT SUMMARY

ENCLOSED VEHICLE STORAGE								
Vehicle Bays					16	900	14400	
Future Vehicle Bays					1	1,800	1800	
Support Bay					1	1,800	1800	
Battery Operated Tool Charging						100	0	included in Support Bay
Boot Wash, Ice Station, Water						200	0	included in Support Bay
Gear & Boot Drying						150	0	included in Support Bay
Gear Lockers						250	0	included in Support Bay
Toilet						250	0	included in Support Bay
ENCLOSED VEHICLE STORAGE NET S.F.							18,000	
Walls/Circulation							0.00	
ENCLOSED VEHICLE STORAGE GROSS S.F.							18,000	
EXISTING GROSS S.F.							5,750	
NET DIFFERENCE S.F.							12,250	
COVERED VEHICLE STORAGE								
Bays (12' x 30')					0	360	0	
Future Bays						360	0	
COVERED VEHICLE STORAGE NET S.F.							0	
Walls/Circulation							0	
COVERED VEHICLE STORAGE GROSS S.F.							0	
EXISTING GROSS S.F.							4,000	
NET DIFFERENCE S.F.							-4,000	

07 NEEDS ASSESSMENT

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

SQUARE FOOT SUMMARY

VEHICLE MAINTENANCE								
Maintenance Mechanic Office					1	120	120	
Storage					1	100	100	
Toilet/Shower					1	160	160	
Lift Bay					1	800	800	
Wash Bay					1	800	800	
Lift bay					1	1,600	1600	
Equipment and Trailers					1	3200	3200	
Work Area					1	500	500	
Secure Tool Storage					1	200	200	
VEHICLE MAINTENANCE NET S.F.							7,480	
Walls/Circulation							520	
VEHICLE MAINTENANCE GROSS S.F.							8,000	
EXISTING GROSS S.F.							1,750	
NET DIFFERENCE S.F.							6,250	
BUILDING SF SUMMARY		Existing						
Office		21,500					**13,600**	
E&O							**18,824**	Admin Office + E&O = 32,424sf
Warehouse		12,000					22,500	
Enclosed Vehicle Storage		5,750					**18,000**	
Covered Vehicle Storage		4,000					0	
Vehicle Maintenance		1,750					**8,000**	
BUILDING SUMMARY GROSS S.F.		45,000					**80,924**	Existing to New Delta = 35,924sf

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

SQUARE FOOT SUMMARY

Site: Existing location								19 acres
Public Parking								15 vehicles
Employee Parking								70 vehicles
Fleet Parking on site								21 vehicles
Fence								8' tall
Yard Material Storage								
Delivery Parking Space								
Emergency Generator								
Trucks and Equipment								
	#	**Enclosed**	**Covered**				**On Site**	
Bucket Truck	3	X						
Bucket Truck	4	X						
Digger Truck	6	X						
4 WD Pickup	7						X	
4 WD Pickup	8						X	
Bucket Truck	9	X						
Digger Truck	10	X						
4 WD Pickup	11						X	
4 WD Pickup	12						X	
4 WD Pickup	13						X	
4 WD Pickup	14						X	
4 WD Pickup	15						X	
Bucket Truck	16	X						
Bucket Truck	17	X						
4 WD Pickup	18						X	
Explorer	19						X	
4 WD Pickup	20						X	
4 WD Pickup	21						X	

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

SQUARE FOOT SUMMARY

Bucket Truck	22	X						
Knuckle Boom	23	X						
4 WD Pickup	24						X	
Digger Truck	25	X						
4WD Pickup	26						X	
Knuckle Boom	27	X						
Bucket Truck	28	X						
4 WD Pickup	29						X	
Bucket Truck	30	X						
4x4 Digger Truck	31	X						
4 WD Pickup	32						X	
2 WD Pickup	33						X	
Knuckle Boom	34	X						
Bucket Truck	35	X						
4 WD Pickup	36						X	
4WD Pick Up	37						X	
4x4 Pickup	38						X	
4WD Pickup	39						X	
2009 Kawasaki Mule	40		X					
2009 Digger Track Rig	41		X					
4 WD Pickup	42						X	
JPEC Enclosed Trailer			X					
URD Puller			X					
Backhoe			X					
Trencher			X					
Trailers			X					

08 FACILITY DESIGN OPTIONS

COOPERATIVE
BUILDING SOLUTIONS

08 FACILITY DESIGN OPTIONS

CONCEPTUAL DESIGN

See Conceptual Design Plans following this page

PRELIMINARY COST ESTIMATE

See Preliminary Cost Estimate Sheets following this page

NEW FACILITY – 50 YEAR LIFE CYCLE
RENOVATION – 25 YEAR LIFE CYCLE

FACILITY	ESTIMATE LOW	ESTIMATE HIGH
Option A – Existing Site	**$ 21,415,000**	**$ 23,192,000**
Option B – Repurpose Existing Building	**$** [redacted]	**$** [redacted]
Option C – Greenfield Site	**$21,413,000**	**$23,157,000**

* Does not include financing

08 FACILITY DESIGN OPTIONS

COOPERATIVE BUILDING SOLUTIONS

FACILITY PLANNING STUDY COST ESTIMATE – OPTION A (EXISTING SITE)

Construction Costs	Estimate Low	Estimate High
Sitework (Grading, utilities, site concrete, gravel yard, fencing, etc.) – 19 Acres	$ 3,630,000	$ 3,930,000
Office Building w/ Furniture – 13,600 SF	$ 3,735,000	$ 4,045,000
Engineering & Operations – 22,000 SF	$ 5,260,000	$ 5,700,000
Enclosed Vehicle Storage – 24,000 SF	$ 2,060,000	$ 2,230,000
Warehouse – 25,000 SF	$ 2,300,000	$ 2,490,000
Maintenance Building – 8,000 SF	$ 1,090,000	$ 1,180,000
Sub-Total Cost of Work (Includes Project Staffing, Permits, Insurance, Etc.)	$ 18,075,000	$ 19,575,000
Consultant / Design & Engineering / Construction Management Fee (13.5%)	$ 2,440,000	$ 2,642,000
Project Contingency (5.0%)	$ 900,000	$ 975,000
NEW FACILITY COST ESTIMATE	$ 21,415,000	$ 23,192,000
LAND PURCHASE – Not Applicable	$	$
TOTAL PROGRAM COST ESTIMATE	$ 21,415,000	$ 23,192,000

08 FACILITY DESIGN OPTIONS

COOPERATIVE BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY PADUCAH , KENTUCKY

EXISTING SITE RENOVATION OPTION / 01.04.2019

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08 FACILITY DESIGN OPTIONS

FACILITY PLANNING STUDY ESTIMATE – OPTION B (REPURPOSE BUILDING)

Construction Costs	Estimate Low	Estimate High
Sitework (Grading, utilities, site concrete, gravel yard, fencing, etc.) –	$	$
Office Building w/ Furniture – SF	$	$
Engineering & Operations – SF	$	$
Enclosed Vehicle Storage – SF	$	$
Warehouse – SF	$	$
Maintenance Building – SF	$	$
Sub-Total Cost of Work (Includes Project Staffing, Permits, Insurance, Etc.)	$	$
Consultant / Design & Engineering / Construction Management Fee (13.5%)	$	$
Project Contingency (5.0%)	$	$
NEW FACILITY COST ESTIMATE	$	
RESALE OF EXISTING BUILDING		
I AND & BUILDING PURCHASE Acres)		
TOTAL PROGRAM COST ESTIMATE		

THIS PAGE OF SECTION 08 OF TEM-1 IS BEING FILED UNDER SEAL PURSUANT TO A MOTION FOR CONFIDENTIAL TREATMENT

THIS PAGE OF SECTION 08 OF TEM-1 IS BEING FILED UNDER SEAL PURSUANT TO A MOTION FOR CONFIDENTIAL TREATMENT

08 FACILITY DESIGN OPTIONS

COOPERATIVE BUILDING SOLUTIONS

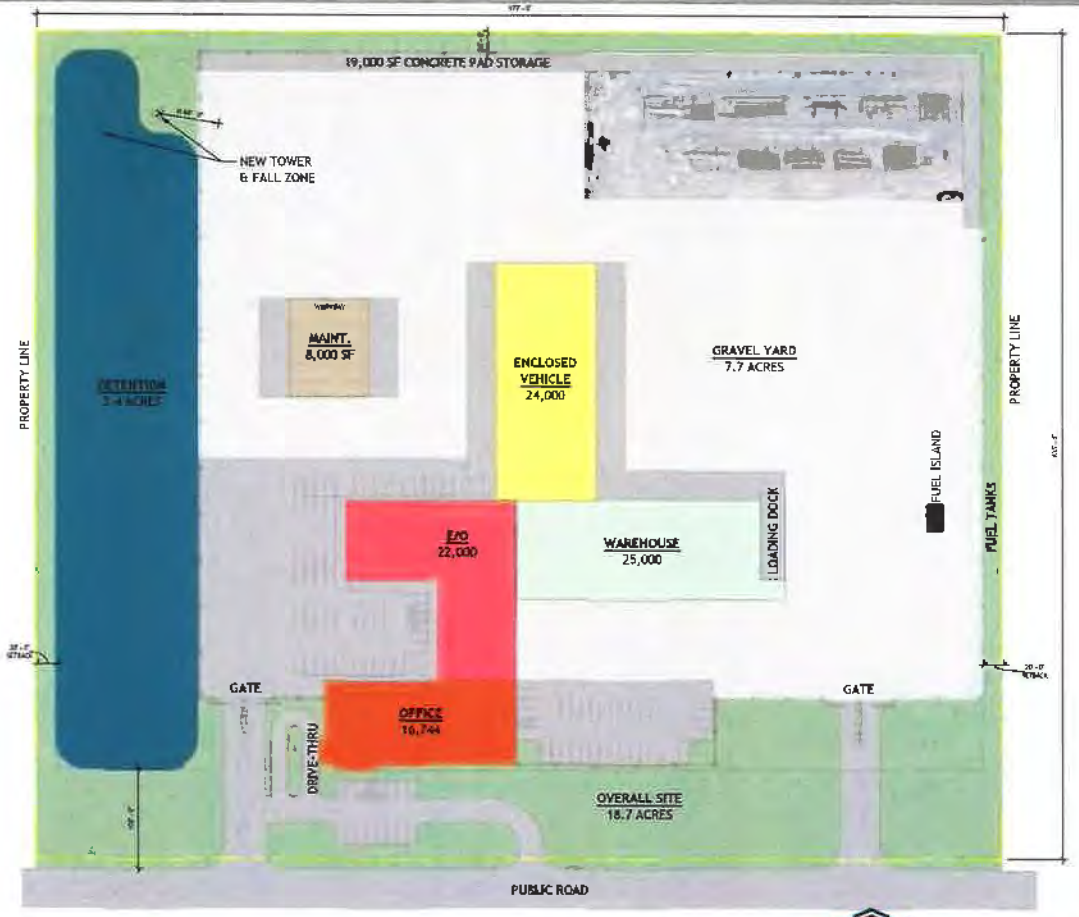
FACILITY PLANNING STUDY ESTIMATE – OPTION C (Greenfield Site)

Construction Costs	Estimate Low	Estimate High
Sitework (Grading, utilities, site concrete, gravel yard, fencing, etc.) – 19 Acres	$ 3,450,000	$ 3,750,000
Office Building w/ Furniture – 13,600 SF	$ 3,600,000	$ 3,900,000
Engineering & Operations – 22,000 SF	$ 5,085,000	$ 5,510,000
Enclosed Vehicle Storage – 24,000 SF	$ 1,990,000	$ 2,160,000
Warehouse – 25,000 SF	$ 2,220,000	$ 2,410,000
Maintenance Building – 8,000 SF	$ 1,050,000	$ 1,140,000
Sub-Total Cost of Work (Includes Project Staffing, Permits, Insurance, Etc.)	$ 17,395,000	$ 18,870,000
Consultant / Design & Engineering / Construction Management Fee (13.5%)	$ 2,348,000	$ 2,547,000
Project Contingency (5.0%)	$ 870,000	$ 940,000
NEW FACILITY COST ESTIMATE	$ 20,613,000	$ 22,357,000
RESALE OF EXISTING BUILDING	$ (600,000)	$ (600,000)
LAND PURCHASE (20 Acres)	$ 800,000	$ 800,000
TOTAL PROGRAM COST ESTIMATE	$ 20,813,000	$ 22,557,000

08 FACILITY DESIGN OPTIONS

COOPERATIVE BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY PADUCAH , KENTUCKY



GREENFIELD OPTION SITE PLAN / 02.24.2020

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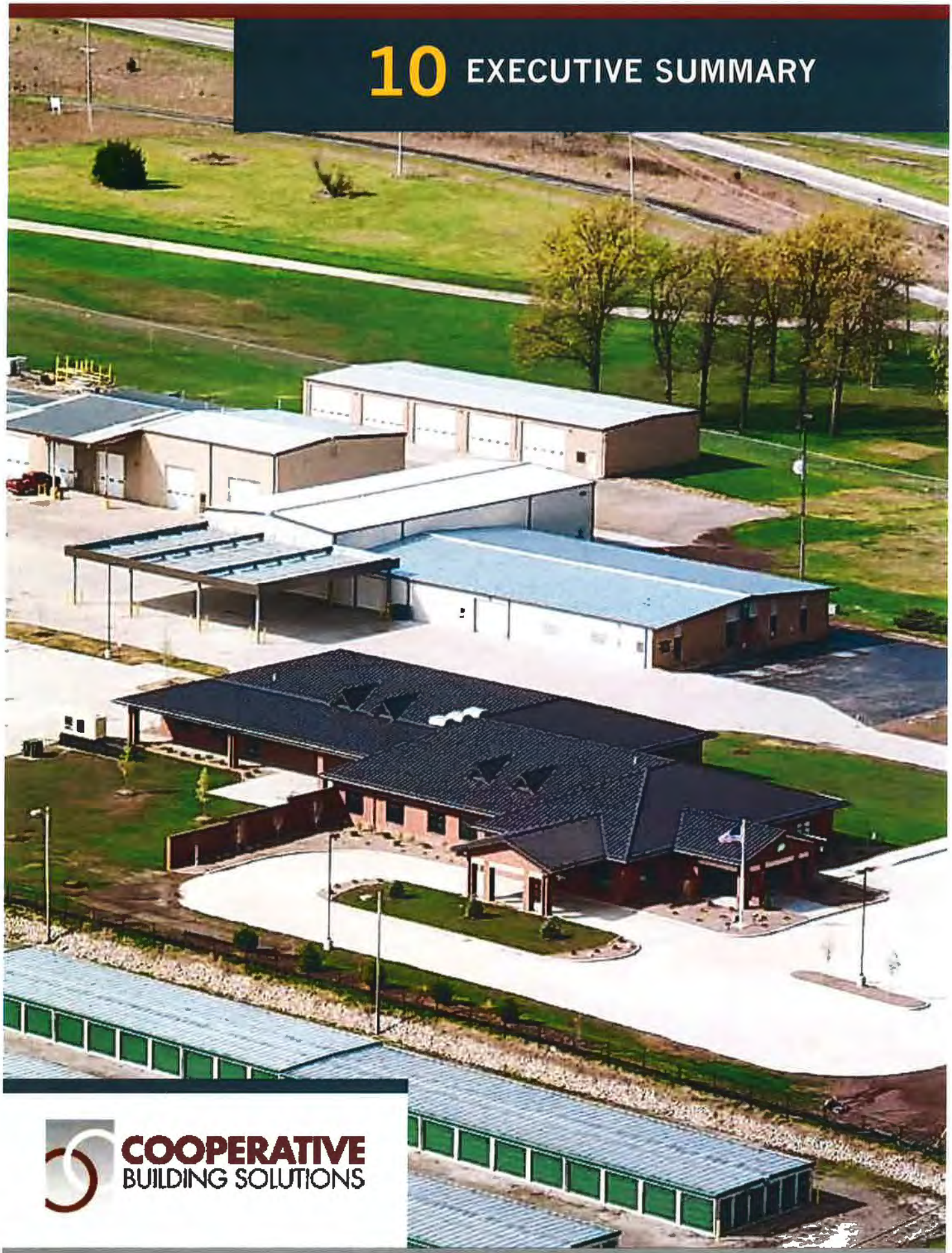
MOTION FOR CONFIDENTIAL
TREATMENT

10 EXECUTIVE SUMMARY



COOPERATIVE
BUILDING SOLUTIONS

10 EXECUTIVE SUMMARY

Without proper facilities, an organization can't perform to the fullest of its potential. Cooperative Building Solutions was retained by Jackson Purchase Energy Corporation to provide a facility study in which the organization could use to make prudent business decisions concerning facility planning. This Facility Planning Study used three components to evaluate, assess and identify current and future facility needs for Jackson Purchase Energy Corporation. These three industry standard components were:
1) Property Condition Assessment; 2) Functionality Assessment; and 3) Needs Assessment.

FINDINGS

Property Condition Assessment

The existing buildings have been maintained, but are in poor condition due to structural settling and age. The building and site space restrictions prohibit the efficient use of facilities without major building and site modifications. There is also a possibility of hazardous building materials currently existing in the structures.

Property Condition Issues Found

- Buildings Are Not Energy Efficient
- Buildings Do Not Have An Efficient Layout
- Security & Safety Concerns
- Technology & Electrical issues
- Aging Facilities
- ADA and Current Code Compliance
- Overall Functionality
- Space Shortage

Functionality Assessment

The interior consists of multiple corridors and closed offices that do not promote collaboration between employees. Staff and material are also scattered throughout the building and property making appropriate adjacencies inadequate.

Functionality Issues Found

- Office, Warehouse and Vehicle Storage are not connected
- Operations Office layout and office sizes are not functional
- Parking and Truck Traffic Flow Challenges
- Age of Building
- Physical Conditions
- Major Building Systems Beyond Useful Life
- Lack of adequate material storage and lay down areas
- No hardened area

The following table represents a third party objective scoring review. The functionality analysis provides the cooperative with an industry standard review to help determine the best solution for your situation. The standard analysis will assess whether a facility is a good, marginal, or poor candidate for renovation or repurpose. The results for your facility are as follows:

Candidate for Renovation/Reuse	JPEC Functionality Scores			Standard Ratings
	Good	Marginal	Poor	
Site		10		
Office Building			4	12 and Below
Vehicle Storage Building			6	12 and Below
Warehouse / Storage Building			3	12 and Below
Total			23	47 - 0

SPACE NEEDS ASSESSMENT

Overall the current square footage space needs are not met at all existing facilities. The space need assessment revealed the following:

BUILDING	EXISTING (SF)	CURRENT NEEDS (SF)
OFFICE	21,500	32,424
WAREHOUSE/METER ROOM	12,000	22,500
ENCLOSED VEHICLES/EQUIPMENT	5,750	18,000
COVERED VEHICLES/EQUIPMENT	4,000	0
VEHICLE MAINTENANCE	1,750	8,000
	45,000	80,924
NET DIFFERENCE		35,924

10 EXECUTIVE SUMMARY

The needs assessment indicates that Jackson Purchase Energy Corporation's facility only meets approximately 50% of their overall office square footage needs.

OPTION ESTIMATE SUMMARY

	OPTION A (Low Range) Existing Site	OPTION A (High Range) Existing Site	OPTION B (Low Range) Repurpose	OPTION B (High Range) Repurpose	OPTION C (Low Range) Greenfield	OPTION C (High Range) Greenfield
Project Cost	**$21,415,000**	**$23,192,000**	$ [redacted]	[redacted]	**$20,613,000**	**$22,357,000**
Construction Duration	21 Months (Assumes 2 Phases)	21 Months (Assumes 2 Phases)	12 Months	14 Months	14 Months	16 Months
Acres Required	**19 Existing Site**	**19 Existing Site**	[redacted]	[redacted]	**20 Acres New Site Location**	**20 Acres New Site Location**
Resale of Existing Building	N / A	N / A	[redacted]	[redacted]	($600,000)	($600,000)
Land Cost	**N/A**	**N/A**	$ [redacted]	[redacted]	**$ 800,000**	**$ 800,000**
Asbestos Abatement Allowance	$50,000	$100,000	N/A	N/A	N/A	N/A
New Radio Tower	**N/A**	**N/A**	$ [redacted]	$ [redacted]	**$ 100,000**	**$ 150,000**
Total Amount	$ 21,465,000	$ 23,292,000	$ [redacted]	$ [redacted]	$20,913,000	$ 22,707,000

CONCLUSION

Let me say in conclusion that with all my years of experience working with rural electric cooperatives I understand very well how hard facility decisions are to make. Facilities are very capital intensive and we tend to put off making some tough facility decisions because of this. However, I have learned through the years that facilities are actually the foundation for three factors in an electric cooperative supplying quality, reliable electric service to its members. Those three key factors are your employees, equipment, and supplies. Without proper facilities a cooperative cannot provide for the needs of its employees, equipment and supplies.

It has truly been a pleasure to work with the Jackson Purchase Energy Corporation Staff on this Facility Planning Study. You can be proud of what you have accomplished serving the Members of Jackson Purchase Energy Corporation. Cooperative Building Solutions was formed just to help cooperatives like yours and we will always be there to help you anyway we can.

Thank You,
Gary Hobson & The Cooperative Building Solutions Team

JACKSON PURCHASE ENERGY CORPORATION

SCHEMATIC DESIGN PACKAGE
OUTLINE SPECIFICATIONS

August 9, 2019

COOPERATIVE BUILDING SOLUTIONS

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ENGINEERING & TESTING, INC.

MARCUM ENGINEERING, LLC

Index

Division 1: General Requirements

Project Description

A. Jackson Purchase Energy Corporation (JPEC) has an option to purchase a property in their service territory that could potentially become their headquarters. The building is an existing [redacted]sf Pre-Engineered Metal Building (PEMB) that is currently being utilized as a [redacted]. The intent is to convert the facility to the new JPEC Headquarters which includes office, warehouse, operations & vehicle storage functions. Also proposed is a new, 2-sided, [redacted]sf PEMB covered storage building that will be used for trailer storage. The building use will change to a Non-Separated, Mixed Use (S-2, B).

Building designs are based upon the Schematic Design drawings dated 8/9/19, as drawn by BFW (Civil), M+H Architects (Architectural) & BFW/Marcum Engineering (Structural and MEP-FP).

B. Building Systems Overview

1. Overall Building: The intent is to create a new, masonry façade at a portion of the south and east faces of the building using concrete trench footings and stem wall with a brick ledge 8" below finish floor at the exterior. The masonry wall will consist of a brick veneer on a structural backup, as determined by the structural engineer, and may cantilever from the foundation or be braced to the existing PEMB structure (stiffened as required). **Note: PEMB buildings are designed for more lateral drift than other structures. The drift limit can be as low as H/60 or as high as H/400. This would allow for lateral movements of the walls at the eaves of between 0.8" and 5".** Where no new brick veneer is shown, the remainder of the building is to be painted. New exterior storefront will be installed at the Office area perimeter. New insulated overhead doors will be installed at the Warehouse/Vehicle Storage areas.
2. Roof: The existing roof on the PEMB appears to be an exposed fastened system. An alternate should be priced to remove the existing roof and replace it with a new PEMB roof system with concealed fasteners. Another alternate should be provided to roof over the existing PEMB roof with the VP Retro Roof system.
3. Office area: The existing interior office will be demolished to expose a bare concrete floor and PEMB girts and insulation. It is to be assumed that new PEMB batt insulation will be installed at the walls to achieve a combined value of R-19 with the existing insulation. It is assumed the existing insulation has a vinyl face that will be utilized as the building vapor barrier. At the interior, 6" metal studs will be run vertically on the inside of the PEMB girts to support the gypsum board interior finish and new insulation. The new roof insulation will be installed with PEMB insulation netting to achieve a combined value of R-30 with the existing insulation. The interior perimeter of the office will be PEMB framing with new structure as required with horizontal girts and PEMB insulation. The interior face of this wall will be finished gypsum board. The side that faces the Vehicle Storage and Warehouse will be metal liner panel running from floor to structure above. **Note: Watch out for column lateral flange braces. Most of them appear to be at the second wall girt line so they may be high enough to be out of the way.**
4. Hardened Area inside Office: The existing concrete slab will be removed and replaced to accommodate the new footings and utility rough-ins. A concrete perimeter trench and spread column footings, 8" CMU walls, fully grouted cells with rebar will support an integrated, cast in place concrete lid on steel framing and metal roof deck. Hardened area structure will not carry an official FEMA Safe Room

rating, but is designed to withstand 250 mph wind speeds. Openings to meet same wind speed and loading guidelines. Assembly to provide a 2 hour fire rating.

5. Vehicle Storage area: Portions of the existing PEMB will be required to be removed and replaced with framed openings with finished edges and 20' wide x 16' high overhead doors. PEMB Wall liner panels are to be installed from bottom girt to 8' AFF. Existing PEMB insulation is assumed to be acceptable in this area since it is not fully conditioned. An alternate should be priced to add insulation to the roof of the entire building outside of the office area to achieve a combined value of R-30 with the existing insulation. Where the existing PEMB diagonal bracing is removed for new openings, a new lateral bracing system will be installed.
6. Warehouse area: PEMB Wall liner panels are to be installed from bottom girt to 8' AFF. Existing PEMB insulation is assumed to be acceptable in this area since it is not fully conditioned. An alternate should be priced to add insulation to the roof of the entire building outside of the office area to achieve a combined value of R-30 with the existing insulation. A new PEMB loading dock addition will be added to the north side of the building with a recessed loading dock & ramp with leveler, dock lock, bumpers & dock seal.
7. New Standalone Covered Storage area: Concrete perimeter trench and spread column footings, with an 8" concrete stem wall at the two short sides of the building that extends up to 8" AFF, concrete slab on grade that crowns in the center and slopes 1/8" per foot to each side of the building. Utilize pre-engineered metal building frames and purlins, PEMB exterior metal wall panels from 16' AFF to eave at the long sides of the building and full height at the short sides, PEMB prefinished metal roofing.

C. Floor Slab Replacement: The existing concrete floor slabs in the Warehouse, Vehicle Maintenance and Vehicle Storage areas are to be removed. These slabs will be replaced with thicker slabs capable of supporting warehouse materials, forklift traffic and cooperative construction and maintenance vehicles. The area at the wash bay will be sloped to a new, large Coop standard wash bay trench drain. The Vehicle Storage will be sloped to a Coop standard trench drain with intermediate cleanout basins as required (at least one). In-slab heat will be provided at the Vehicle Maintenance and Vehicle Storage areas.

Division 3: Concrete

Foundations

A. Concrete foundations will be designed and installed to support the loads imposed by the structure.

B. Concrete foundations will obtain a minimum compressive strength of 4,000 psi in 28 days.

C. Reinforcing steel shall have a minimum yield strength or 60,000 psi per ASTM.

D. Exterior footings will be founded per local code. Frost depth is 24 inches per KBC supplement section 1809.4.

E. Continuous trench footings will be required around the perimeter of each building between footings.

F. Interior CMU walls will require a continuous trench footing (2 ft wide by 1 ft deep), except at hardened areas, where they are to be designed to resist the wind speed requirements.

G. Interior columns (if required) will receive isolated spread footings

H. Subgrade material should be treated below all foundations in accordance with geotechnical recommendations.

Cast in Place Concrete

A. Concrete floor slabs shall of the thickness required (assume 7") to support the vehicle, forklift, and storage racks at the warehouse, 5" thick at IT and storage areas, reinforced with WWM (welded wire mesh). Place slab on a 15 mil vapor barrier over a minimum of 4" of properly compacted engineered fill in the Office areas and 6" of compacted fill in IT Rooms and Storage Rooms. All sub base material shall be compacted according to Geotechnical report. Compressive strength will be 4,000 psi in 28 days. Control joints shall be provided in accordance with American Concrete Institute Standards.

B. All exposed interior concrete slabs shall be sealed with Ashford formula sealer, or approved equal.

C. Floor design shall be in accordance with the recommendations of the geotechnical subsurface investigation including below slab drainage system.

D. Provide 4" concrete housekeeping pads at all lockers, electric transformers, mechanical units, water heaters, etc..

Division 4: Masonry

Unit Masonry

A. Concrete masonry units shall conform to ASTM Specifications. Minimum compressive strength of masonry to be 2500 psi.

B. Masonry walls shall be braced or reinforced as necessary in accordance with the governing building codes.

C. Face brick veneer shall conform to ASTM C216 or C652, Grade SW, Type FBS or HBS, modular size units rated "not effloresced".

Lateral comments: Seismic forces are expected to control over Wind with an expected Seismic Design Category of D.

D. Exterior concrete masonry units shall be sealed with silane water repellant. Use Baracade Silane 40 IPA by Euclid Chemical Company, or approved equal.

Division 5: Metals

Structural Steel

A. The Hardened areas' structural system will consist of conventional steel framing integrated into load bearing CMU partitions. Engineering responsibility for the structure shall include structural analysis data signed and sealed by the qualified Professional Engineer responsible for their preparation.

Miscellaneous Metals

A. All handrail and safety railing will be provided in order to conform to Building Code and ADA.

A. Galvanized loose steel lintels shall be provided at masonry openings.

B. Drop-down stairs shall be provided for access to the mechanical platform.

Division 6: Wood & Plastics

Rough Carpentry

A. Provide interior wood furring and blocking as required for attachment of other construction.

B. For items of dimension lumber size, provide Mixed Southern Pine, Construction or No. 2 grade lumber with 19% maximum moisture content.

Finish Carpentry

A. Casework and misc. trim shall be fabricated and installed in accordance with AWI Quality Standards "Premium Grade".

A. Casework and countertops shall be plastic laminate unless noted otherwise.

B. Lavatory counters and reception desk transaction counter shall be solid surface.

C. Window stools shall be bullnosed solid surface.

Bullet Resistant Composite Material

A. Fiberglass Composite Wall panels, consisting of resin impregnated fiberglass sheets, to provide bullet resistant protective barrier. Base of design TSS Total Armor Ballistic Resistant Fiberglass Panel. Level 3 protection.

Division 7: Thermal & Moisture Protection

Insulation

A. Existing building envelope (PEMB insulation) will receive an additional layer of non-faced insulation to meet the required R-values. Provide system as required to support insulation.

B. Interior stud partitions shall receive 3" sound attenuation blankets in stud space extending full height of wall.

C. Perimeter stud walls will be insulated to meet a R-19 value when combined with the existing building envelope insulation.

Sealants

A. Exterior vertical control and expansion joints in Masonry, storefronts, windows, frames of doors, etc. equal to Tremco 240.

A. Exterior horizontal traffic joints such as paving and sidewalk expansion joints equal to Tremco Vulkem 245.

B. Exterior joints under thresholds and saddles equal to Tremco Butyl Sealant.

C. Interior traffic joints in vehicle bays and warehouse VersaFlex SL/75

D. Interior joints equal to Tremco Temflex 834.

E. Interior joints at plumbing fixtures equal to Tremsil 600 White.

F. Acoustic joint sealants at sound partitions equal to Pecora AC-20.

G. Fire rated sealant assemblies as required at rated construction.

Division 8: Doors & Windows

Metal Doors & Frames

A. Exterior metal doors shall be galvanized steel, insulated hollow metal.

B. Interior metal doors shall be steel honeycomb core hollow metal. 1/4 " tempered lites where required for vision panels.

C. Exterior doors and pairs of interior doors shall have 14 gauge galvanized metal frames. Single interior doors shall have 16 gauge metal frames. Frames and doors shall be fire-rated as necessary.

Wood Doors

A. Interior wood doors shall be 5-ply, premium factory finish, solid core, Grade A book matched hardwood veneer. Door edges shall match face veneer. Veneer species to be selected by Owner. Doors shall be fire rated as necessary.

Entrance Doors and Storefronts

A. Glass and aluminum entrances are included at Office areas as shown. Thermally broken aluminum frames shall be used. Use Kawneer Tri-Fab 451T, or approved equal.

A. Entrance doors shall be medium stile, 1 ¾" overall thickness, 0.125" minimum extruded aluminum tubular rail and stile members.

B. Aluminum finish shall be Class I color anodic coating complying with AAMA 611 (Dark Bronze).

Glass and Glazing

A. Interior glass shall be annealed float glass, Class 1 clear, Quality Q3.

B. Exterior glass will be annealed and fully tempered, tinted, 1" insulated glazing with Low-E coating. Minimum thickness of each lite shall be ¼" with ½" air space.

Bullet Resistant Glass System

A. Baffle system consisting of prefabricated bullet resistant panels with secure air passage through the baffle window transaction point as required for voice transmission. Base of design TSS Baffle Bandit Barrier.
   1. Glazing: Bullet Resistant Level 3; 1 1/4" LP 1250 Laminated
   2. Deal tray: Recessed Brushed Stainless Steel, minimum 18 gauge stainless steel 304, with a No. 4 finish.

Division 9: Finishes

Gypsum Drywall

A. All partition walls and soffits, unless shown as demountable or masonry, shall consist of minimum 3 5/8" metal studs (6" where required) and runners with 5/8" gypsum drywall Drywall shall be screw-attached to steel framing and furring, with Level 4 joint treatment where exposed to view. All components of interior walls shall extend from finish floor to bottom chord of metal deck.

B. Use moisture and mold resistant drywall at all toilet/shower rooms, janitor closets, and walls with plumbing fixtures such as sinks and electric water coolers.

C. Offices and Conference rooms may utilize aluminum frame & ¼" tempered glass infill demountable partitions with sliding door for their corridor partition in lieu of standard metal stud/gypsum board construction. See plans for reference.

Flooring

A. Carpet tile shall be commercial grade material, secured with a tab-lock system.

B. Resilient base shall be installed at all finished spaces unless ceramic tile is indicated.

C. Ceramic tile shall be installed in thinset application. Floor tile shall be installed on liquid applied crack suppression membrane. Grout shall be TEC Accucolor XT or approved equal.

Acoustical Tile Ceiling

A. The ceilings in office spaces will be 2' x 4' x 3/4" acoustical tile in a white heavy duty 15/16" metal suspension system. Use Armstrong Mesa, Second Look, or approved equal.

A. Ceiling suspension systems shall be seismically braced for Seismic Design Category D.

Painting

A. All interior drywall partitions shall be painted with one (1) coat of latex primer and two (2) coats of latex finish.

B. Exterior hollow metal doors and frames, exposed steel lintels, and other miscellaneous exposed steel shall receive one (1) coat of DTM primer and two (2) coats of industrial urethane alkyd finish paint.

C. The interior face of CMU walls will be painted, with one (1) heavy coat of block filler and two (2) coats latex finish.

D. Drywall partition walls in toilet rooms and janitor closets shall be painted with one (1) coat of primer and two (2) coats of water-based epoxy finish paint.

E. Interior metal doors and frames, steel railings, access doors, etc., to receive one (1) coat of DTM primer and two (2) coats of alkyd finish paint.

Division 10: Specialties

Toilet Accessories

A. Typical restroom accessories shall include:
   1. Stainless steel paper holder per toilet stall
   2. Stainless steel grab bars for each handicap stall
   3. Mirror above each lavatory
   4. Paper towel dispenser/waste receptacle.
   5. Sanitary napkin dispenser & disposals in Women's toilet rooms.

Toilet Partitions

A. Toilet compartments in Mens and Womens rooms shall be floor anchored/overhead braced, with a baked enamel finish.

B. Urinal screens in Mens rooms shall be wall mounted with a baked enamel finish.

C. Partitions used at shower enclosures shall be solid phenolic core, floor anchored/overhead braced.

Visual Display Surfaces

A. Provide porcelain enamel marker boards and vinyl fabric faced cork tackboards in all meeting rooms. Marker and Tack boards shall have clear anodized aluminum frames and chalktrays.

Signage

A. ABS plastic signs with Braille shall be provided for code required interior doors.

Fire Protection Specialties

A. Provide semi-recessed fire extinguisher cabinets with extinguishers at the following locations:
   1. At corridors inside each exit door, 75' radius spacing per NFPA 10.
   2. In each lunch room or kitchenette.

B. Provide bracket mounted fire extinguishers at the following locations:
   1. In each mechanical equipment room.
   2. In all electrical rooms or closets containing an electrical panel.

Flagpole

A. Provide one 35' anodized aluminum flagpoles and finial ball with internal halyard and 4'x6' American Flag (verify with owner).

Division 11: Equipment

Bank Equipment

A. Provide equipment for transactions at the Drive-up window
   1. Bullet Resistant window - 3' high x 5' wide by Hamilton Safe or approved equal
   2. Transaction Drawer: Hamilton Safe model 400 DD or equal
      a. Accessories to include: forced air heater, audio system, wireless alert system
   3. Teller Pedestal – Korden KS-101
      a. Accessories include lockable cash drawer.
   4. Provide thru-wall night drop

Division 12: Furnishings

A. Provide manually operated, light filtering fabric, with 3% open weave, roller shades at all windows equal to Springs Window Fashions. All perimeter windows to have 3% open weave. Conference, and Multi-Purpose Room windows shall have 1% open weave.

Division 13: Special Construction

Pre-Engineered Metal Building Systems (Stand-alone two-sided covered building)

A. Provide pre-engineered metal building frame, metal roof panels, accessories and miscellaneous materials for a complete enclosure including supports for building components specified in other sections.
   1. Design structural systems according to professionally recognized methods and standards and adopted building codes under supervision of professional engineer licensed in the jurisdiction of the Project.

   2. Bracing is acceptable at exterior bays provided that the bracing does not interfere with any wall openings. Provide code required bracing for wind load as required for uplift and dead loads.

Division 21: Fire Suppression

A. Codes:
   1. NFPA 13 Installation of Sprinkler Systems -2013
   2. Kentucky Building Code - 2018

B. Demolition:
   1. All existing interior piping, hangers, supports, etc. shall be removed in their entirety back to the main at the point it comes thru the floor slab.

C. Site:
   1. The Contractor shall pressure test the existing fire main from the building slab out to the point of connection with the utility company and provide written report. If underground main is suitable it shall be reused.

D. Interior Building:
   1. The Contractor shall provide delegated design documents for sprinkler piping within the building. All calculations shall be based on the contractor's flow test data. The system shall be an automatic wet pipe with black steel piping per NFPA. There shall be a minimum of two (2) fire protection risers so each riser does not cover an area larger than 52,000 sq-ft. All sprinklers located in acoustical lay-in ceilings shall use flexible sprinkler drops for seismic protection of the ceiling.
   2. The Server Room will not be protected by a dry-chemical suppression system or a pre-action system. This area shall be served by the wet-pipe sprinkler system.

Division 22: Plumbing

A. Code:
   1. Kentucky Plumbing Code 2017
   2. International Energy Conservation Code – 2012

B. Demolition:
   1. The Contractor shall remove all existing overhead piping, hangers, supports, etc. in their entirety. Piping below the floor slab may be abandoned in place where it does not conflict with new installations. Where piping is abandoned below slab, it shall be completely filled with flowable fill. Flowable fill shall have compressive strength of 4,000psi at 28 days.

C. Domestic Water Systems:
   1. The Contractor shall furnish and install new 3" water main from the utility company main to the Water riser room on the east side of the building. A double check backflow preventer shall be installed on the incoming service in the Water room. Water piping shall be Type L copper with press-joint fittings. Non-building service piping below slab shall be PEX tubing. Water piping systems shall be sized based on the Kentucky Plumbing Code.

D. Sanitary Sewer Systems:
   1. The Contractor shall furnish and install sanitary sewer piping and specialties per the Kentucky Plumbing Code. Piping shall be Schedule 40 PVC, DWV with solvent welded joints and fittings.

2. Trench drain systems shall be installed in the Vehicle Storage Bays and Wash Bays. Trench drains shall be connected to Sand Traps and routed out through a Oil/Water Separator prior to discharge into the municipal system.

E. Storm Drain Systems:
   1. The project will not have internal storm drains or piping.

F. Domestic Water Heating Systems:
   1. The building will utilize electric, storage type water heaters. Water heaters shall be piped in parallel for redundancy and shall be located in a central location. The domestic water heater shall be set to a minimum of 140°F, and water temperature shall be reduced to 110°F with a thermostatic mixing valve prior to being distributed throughout the building. The system shall have hot water recirculation to allow hot water to be readily accessible at all required fixtures in the building. The hot water recirculation system shall be integrated into the HVAC Controls Building Management System.

G. Plumbing Fixtures:
   1. Water closets and urinals shall be vitreous china, wall hung, with low consumption, manual flush valves and wall carriers.
   2. Lavatories in large restrooms shall be vitreous china, drop-in type with manual single handle faucets with low flow aerators. Lavatories in single occupant restrooms shall be vitreous china, wall hung type with wall carrier and manual single handle faucet with low flow aerators.
   3. Sinks shall be 18-gauge stainless-steel drop-in type with 8" gooseneck faucets and 4" wrist blade handles with low flow aerators. Where possible sinks shall be at minimum of 6-1/2" deep.
   4. Electric water coolers shall be stainless steel, wall hung with automatic bottle filler. All drinking fountains shall be high/low arrangement to comply with ADA requirements. Water coolers shall have compressor for chilled water and replaceable water filters.
   5. Individual showers shall be gel-coat inserts without tops. Shower faucets shall be manual type with both fixed shower head and hand shower head on slide bar with diverter valve, thermostatic mixing valve, grab bars, and folding seat.
   6. Mop sinks shall be molded stone with stainless steel strainer, stainless steel bumper guards, stainless steel wall guards, mop hanger, hose and hose bracket, with service sink faucet with wall hook, wall brace, check valves, hose thread connection, and quarter turn handles.
   7. Emergency eye wash station shall be wall mounted type with stainless steel bowl, plastic hinged covers, stay-open ball valve control, and thermostatic mixing valve.
   8. Boot wash shall be deep set terrazzo basin with stainless steel grate, sediment bucket, and service sink faucet with wall hook, wall brace, check valves, hose thread connection, and quarter turn handles.
   9. Trench drains shall be heavy duty type suitable for Class 'E' loading. Trench drain system shall be interlocking HDPE channel sections with ductile iron slotted grates.

H. Natural Gas System:
   1. The site does not have natural gas available.

I. Plumbing Insulation:
   1. Insulation of plumbing piping shall be as follows:
      a. Domestic Cold Water: 0.5-inch thick, flexible elastomeric.

b. Domestic Hot Water and Hot Water Recirculation Piping, NPS 1 and smaller: 1.0-inch thick, mineral fiber, preformed pipe insulation with All Service Jacket.

c. Domestic Hot Water and Hot Water Recirculation Piping, NPS 1-1/2 and larger: 1.5-inch thick, mineral fiber, preformed pipe insulation with All Service Jacket.

Division 23: HVAC

A. Codes:
   1. International Mechanical Code 2015
   2. International Energy Conservation Code – 2012
   3. ASHRAE Standard 62.1 – 2013 Ventilation for Acceptable Indoor Air Quality

B. Demolition:
   1. The Contractor shall remove all existing ductwork, piping, units, supports, concrete pads, insulation, HVLS fans, controls, etc. in their entirety.

C. Warehouse, Vehicle Bays, Maintenance Bays
   1. These spaces will be ventilated with sidewall louvers and sidewall fans to pull air through the space. In addition High Volume, Low Speed (HVLS) fans will be installed above the vehicle bays and maintenance bays. Heat shall be provided with radiant in-floor heating system throughout these spaces. Radiant heat shall be supplied from electric boilers located adjacent to the domestic water heating system. In-line pumps shall circulate heating water thru the system. Zones for enclosed warehouse, vehicle bays, and maintenance bays will be established for maintaining comfort.

D. Office Spaces
   1. The Office spaces will be served by Variable Refrigerant Volume/Flow (VRV/VRF) systems. The condensing units will be located on the exterior of the building and will be air-cooled. The indoor units (evaporators) are connected to the outdoor unit via refrigerant piping network. Units shall provide simultaneous heating or cooling based on occupant needs for comfort. Indoor units will primarily consist of above ceiling mounted, ducted units that will serve two to three offices each. A single thermostat shall control a single indoor unit. In utility spaces, a mixture of ceiling cassettes and wall mounted units may be used. A dedicated VRV system will be installed for the hardened area. The outdoor unit and piping shall be protected from damage and will be installed in a hardened structure with the generator that will serve the hardened area.
   2. A dedicated outside air unit will be installed on the concrete platform that makes up the roof of the hardened area. This unit will draw in fresh outdoor air with a sidewall louver above the low roof, and after tempering and dehumidifying will distribute this air to the indoor units and building occupants. This unit will also house an energy recovery unit that will aid in pre-treating the incoming outdoor air. The exhaust that is used for energy recovery will be discharged out of the building thru a louver.

E. Server Room
   1. The Server Room shall be provided with a dedicated Computer Room Air-Conditioning Unit (CRAC) equal to Liebert. Unit shall have an air-cooled

condensing unit located in the hardened structure adjacent to the condensing unit serving the remainder of the hardened area. The CRAC unit shall be capable of maintaining temperature and humidity within the space.

F. HVAC Controls System
   1. The Contractor shall furnish and install an HVAC Controls system for the building. This system will be a Building Management System (BMS) and will control the HVAC systems, domestic hot water systems, and will integrate with the lighting control system.
   2. The BMS will be a web based system that will allow the Owner's key personnel to log-in locally or remotely to monitor the building or to modify settings as needed. The system will allow scheduling of occupied and unoccupied periods for energy saving, thermostat ranges, and will provide alarms for issues within the system.

G. HVAC Insulation:
   1. Insulation of HVAC Piping shall be as follows:
      a. Condensate Piping: 0.5-inch thick, flexible elastomeric for the first ten lineal feet (10') of the pipe run from the unit connection.
      b. Heating Hot Water Piping (Above Slab), NPS 1 and smaller: 1.0-inch thick, mineral fiber, preformed pipe insulation with All Service Jacket.
      c. Heating Hot Water Piping (Above Slab), NPS 1-1/2 and larger: 1.5-inch thick, mineral fiber, preformed pipe insulation with All Service Jacket.
      d. Refrigerant Piping (Interior): 0.75-inch thick, flexible elastomeric
      e. Refrigerant Piping (Exterior: 1.0-inch thick, flexible elastomeric with UV-resistant PVC jacket and fittings.
   2. Insulation of HVAC Ductwork shall be as follows:
      a. Supply and Ventilation Air Ductwork: 2.2-inch thick, mineral fiber duct wrap with FSK jacket.
      b. Exhaust Air Ductwork: 2.2-inch thick, mineral fiber duct wrap with FSK jacket for last ten lineal feet (10') of duct prior to building envelope termination.
      c. Return Air Grille Plenums: 0.5-inch thick, duct liner

Division 26: Electrical

A. Codes:
   1. National Electrical Code – 2017, NFPA 70
   2. International Energy Conservation Code – 2012
   3. All work shall be installed in accordance with the National Electrical Code and by all other local, state, and national codes which apply as interpreted by the Authority Having Jurisdiction (AHJ). All work shall be installed by an Electrical Contractor licensed by the Commonwealth of Kentucky.

A. Demolition:
   1. The Contractor shall remove all existing wiring, conduit, panels, transformers, devices etc. in their entirety.

B. Site:
   1. The Contractor shall coordinate the routing and installation of the conduits and transformer pad for the primary transformer with the Utility Company. The Contractor shall be responsible for installation of the conduits with pull string from the east end of the property to the north west corner of the existing building. The

Utility Company will install the primary conductors, transformer and make all connections. The Contractor shall install all secondary electrical conduits and conductors from the transformer to the main switch gear located in the northwest corner of the existing building.

2. The Contractor shall furnish and install high mast lighting to provide illumination to the yard areas north and west of the building. The poles shall be fifty feet (50') in height with cross arms with at minimum four (4) fixtures each. High mast lighting shall be LED. Lighting shall be controlled with a photo cell. A total of four (4) high mast pole lights shall be installed.
3. Parking lot lighting consisting of thirty foot (30') dual head fixtures shall be installed to the east of the building for employee areas to provide an average minimum of two foot candles (2fc) across the parking lot. Fixture shall be LED.
4. Drive areas shall be bordered with decorative pole lighting. Theses areas include the drive from the entrance off of US 60, the drive south of the building, and the cul-de-sac area at the south east corner of the property. Fixtures shall be LED.
5. The building perimeter shall have wall mounted fixtures installed. Wall packs shall be LED with high output, and shall be shielded to prevent glare.
6. An emergency generator shall be installed for the project to provide power to the entire facility. The generator shall be located adjacent to the truck dock and utility service area. A second emergency generator dedicated to the hardened area shall be installed on the south side of the building. This second generator will be installed in a hardened structure to provide redundant support for all lighting, power, and communications for the hardened area. Generators shall utilize diesel fuel.

C. Interior Building Vehicle Bays and Warehouse:
   1. The interior lighting shall be high output, LED high bay lights. Lights shall be on time clock control with manual override switches. Lighting shall be located to provide thirty foot candles (30 fc) on average across the vehicle bay area and drive aisle. The warehouse areas shall be designed for an average of twenty foot candles (20fc) in between the shelving areas.
   2. Emergency lighting in these spaces shall be accomplished with fixtures connected to the life safety branch of the emergency generator.
   3. General power receptacles shall be installed at each column on the exterior of the building and every other column on the interior of the building. In addition areas where work benches and tool storage shall occur receptacles shall be installed on two foot (2'-0") centers. All receptacles shall be installed at a minimum of forty-eight inches (48") above the finished floor.

D. Interior Building Maintenance Bays:
   1. The interior lighting shall be high output LED high bay lights. Lights shall be on time clock control with manual override switches. Lighting shall be located to provide fifty foot candles (50 fc) on average. In addition task lighting at work benches shall be provided by wall mounted fixtures. Task lighting shall be controlled by manual switches and shall be LED>
   2. Emergency lighting in these spaces shall be accomplished with fixtures connected to the life safety branch of the emergency generator.
   3. General power receptacles shall be installed on twenty foot (20') centers. Areas containing work benches and tool storage shall have receptacles installed on two foot (2'-0") centers. All receptacles shall be installed at a minimum of forty-eight inches (48") above the finished floor. All receptacles shall be GCFI type or served by a GCFI protected breaker. Overhead cord reels for power tools shall be provided. At total of four (4) shall be installed. Electrical outlets for air compressor and welder

shall be provided at Owner indicated locations. Power for specialty equipment shall be provided based on Owner furnished equipment.

E. Interior Building Wash Bays:
   1. The interior lighting shall be high output LED high bay lights. Lights shall be controlled by occupancy sensors within the space. Lighting shall be located to provide fifty foot candles (50 fc) on average.
   2. Emergency lighting in these spaces shall be accomplished with fixtures connected to the life safety branch of the emergency generator.
   3. General power receptacles shall be installed on adjacent to the overhead door and man doors. All receptacles shall be GCFI type or served by a GCFI protected breaker. Power for specialty equipment shall be provided based on Owner furnished equipment.

F. Interior Building Offices, Cubicles, Breakrooms, and Similar Spaces:
   1. The interior lighting in offices and cubicles shall be installed to provide fifty foot candles (50fc) at the desk height. These area shall be controlled by vacancy sensor switches that require manual on, automatic off functions. Light fixtures generally will be 2'x4' lay-in, LED, troffer light fixtures. Restrooms, corridors, storage rooms, etc. shall have lighting levels at a maximum of twenty foot candles (20fc). These areas shall be mostly controlled with occupancy sensors that are automatic on, automatic off function. Fixtures generally will be 2'x4' lay-in, LED, troffer light fixtures. Meeting Rooms, Board Room, and Multipurpose Rooms shall be capable of a maximum of seventy-five foot candles (75fc). These spaces shall be controlled with vacancy controls with dimming and multi-level light control. Fixture types shall vary based on use, but shall consist of pendants, linear, cans, and some troffers. All lighting shall be LED.
   2. Receptacles shall be installed on each wall of the office spaces. Quad outlets shall be installed on walls at the typical desk location. In cubicles receptacles shall be installed along the perimeter, fixed walls. General receptacles shall be provided in storage areas, corridors, and restrooms for cleaning equipment. In meeting rooms, board room, and multipurpose receptacles shall be installed every ten foot (10') along the perimeter of the room. In addition floor outlets shall be installed in floor boxes for power and communications at meeting table locations and allow for computer training and emergency set up without the use of extension cords from walls. General outlets and power shall be provided for break rooms to include cooking range, vending machines, etc. as needed for the Owner's operations.

G. Electrical Distribution:
   1. The main electrical switch board shall be installed in the northwest corner of the building. The switch board will feed power to major HVAC equipment and branch panels located throughout the facility. The primary voltage for the building shall be 480V/3ph. Dry Type transformers will be utilized to reduce the voltage for 120/208V panel boards located throughout the facility to reduce branch circuit length and voltage drop.

H. Lighting Controls System:
   1. All lighting controls shall be connected to a central, digital lighting control front end. The control front end shall be networked, software based system equal to nLight by Acuity Brands. System shall have the capability of connecting to the HVAC Building Management System.

Division 27: Communications

A. Demolition:
   1. The Contractor shall remove all existing wiring, conduit, racks, devices etc. in their entirety.

B. Site:
   1. The Contractor shall coordinate the routing and installation of the conduits for Communications with the Utility Companies. The Contractor shall be responsible for installation of the conduits with pull string from the east end of the property to the server room where the demarcation board is located. The Utility Company will install the communications fiber, CATV, copper phone as necessary for Owner needs. The Contractor shall install at a minimum of four, four-inch conduits (4-4"C) for communications.

C. Interior Building Vehicle Bays and Warehouse:
   1. Provisions for wireless access points shall be provided on fifty foot (50') centers along the length of the warehouse and vehicle bays. This shall include CAT 6 cable to a biscuit box termination to allow for an Owner Furnished Owner Installed device.

D. Interior Building Offices, Cubicles, Breakrooms, and Similar Spaces:
   1. Provisions for wireless access points shall be provided on fifty foot (50') centers around the office areas. This shall include CAT 6 cable to a biscuit box termination to allow for an Owner Furnished Owner Installed device.
   2. Each office shall receive a total of four (4) wired drops. Two (2) drops at each possible desk location within the office. Each cubicle shall receive two (2) wired drops. Meeting rooms, board rooms, and multipurpose rooms shall receive two (2) wired drops adjacent to each receptacle.
   3. All Local Area Network (LAN) horizontal cabling shall be CAT 6. Racks shall be interconnected with fiber optic cables as required for Owner's needs.
   4. Cable drops will be provided as required for informational monitors in locations such as the lobby and break room.
   5. In Meeting Rooms, Board Room, and Multi-Purpose use of HDMI cabling for interconnection of presentation stations with wall mounted monitors shall be utilized.
   6. Voice amplifications systems will not be included in the design.

E. Server Room:
   1. The contractor shall furnish and install four-post, open frame racks and necessary patch panels. The Contractor shall test all horizontal cabling upon project completion and provide written report. All servers, switches, equipment, UPS, etc. shall be furnished and installed by the Owner.

F. Dispatch and Warroom:
   1. Each dispatch station shall be interconnected with wall mounted monitors and cabling furnished and installed for said interconnection. The system requirements for the SCADA system shall be provided by the Owner. Each station shall receive a minimum of four (4) hardwired data drops. CATV shall be connected to wall mounted monitors for weather update information.

Division 28: Electronic Safety and Security

A. Demolition:
   1. The Contractor shall remove all existing wiring, conduit, cameras, Fire Alarm Control Panel, devices etc. in their entirety.

B. Site:
   1. The Contractor shall furnish and install digital IP based cameras along the perimeter of the building to provide full coverage of the parking lots, drive ways, and yard. In addition, cameras shall be installed on high-mast pole lighting and parking lot lighting as required to cover the fuel island, lay-down yards, parking lots, and contractor yard.

C. Interior of Building:
   1. Digital IP based cameras will be located throughout the facility. Primarily these will be in corridors, at entry/exit locations, outside of sensitive areas (server room, vault, etc.), warehouse and vehicle bays. All cameras shall be connected to a Network Video Recorder (NVR). The Contractor shall furnish the Owner with management software and training on the system.
   2. The building shall have a digital, addressable fire-alarm system. Pull stations shall be located at each egress door; audio/visual devices shall be in corridors, meeting spaces, and throughout the building as required by Code. Smoke detector shall be utilized in storage spaces. The fire alarm system shall monitor the Fire Suppression Sprinkler System and shall initiate an alarm upon water flow.

EXHIBIT TEM-4

COOPERATIVE
BUILDING SOLUTIONS

JACKSON PURCHASE ENERGY CORPORATION

SCHEMATIC DESIGN COST ESTIMATE

AUGUST 16, 2019

SCHEMATIC DESIGN COST ESTIMATE – REPURPOSE BUILDING (No New Office Building)

Construction Costs	Cost Estimate
Sitework (Grading, utilities, site concrete, gravel yard, fencing, etc.) – [redacted] Acres	$ [redacted]
Office, Engineering & Operations w/ Furniture – [redacted] SF	$ [redacted]
Enclosed Vehicle Storage – [redacted] SF	$ [redacted]
Warehouse – [redacted] SF	$ [redacted]
Maintenance and Wash Bays – [redacted] SF	$ [redacted]
Covered Vehicle Storage Building – [redacted] SF	$ [redacted]
Sub-Total Cost of Work (Includes Project Staffing, Permits, Insurance, Etc.)	$ [redacted]
Consultant / Design & Engineering / Construction Management Fee (13.5%)	$ [redacted]
Project Contingency (5.0%)	$ [redacted]
NEW FACILITY COST ESTIMATE	$ [redacted]
RESALE OF EXISTING BUILDING	
LAND & BUILDING PURCHASE (Acres)	$ [redacted]
TOTAL PROGRAM COST ESTIMATE	$ [redacted]

ESTIMATE SUMMARY CLARIFICATION

- Cost Does Not Include Construction Financing
- Assumes Summer 2019 Construction Start
- Off Site Utilities are Not Included
- No Removal of Hazardous Material Included
- Removal of [redacted] by Others

Scope of Work Changes (Included in Cost Estimate)

Description

1. Radiant Floor Heat at Vehicle Storage Area
2. Remove and Replace Concrete Floor with Heavy Duty Concrete at Vehicle Maintenance, Wash Bay, Vehicle Storage Area and Drive Aisles
3. Provide trench drain at vehicle storage area in middle of floor.
4. Provide building extension for loading dock (ramp, railing, pump, etc.)
5. Vehicle Maintenance Walls and Vehicle Lifts
6. Roof Insulation Over Office Areas
7. Paint Existing Exterior Metal Panels
8. All New Mechanical and Fire Sprinkler Systems
9. Exterior Hardened Enclosure for Generator
10. Ornamental Fencing and Brick Columns
11. Additional Exterior Windows
12. Digital Signage at Entry Monument
13. Bullet Resistant Glass at Front Counter
14. Add a 2nd Generator

Project Alternates (Included in Cost Estimate)

Description
1. Add Covered Vehicle Storage Building
2. Retrofit Roof at Low Roof Area (over office area) – 25 year warranty
3. Add Masonry to South Elevation (West of new Overhead Door)
4. Remove and Replace Slab on Grade at Warehouse Areas

Project Alternates (NOT Included in Cost Estimate)

Description
1. Retrofit Roof at High Roof Area – 25 year warranty
2. Increase Roof Insulation at High Roof Area
3. Provide Electric Unit Heaters ILO Radiant Floor Heat at Vehicle Storage
4. Provide Black Vinyl Chain Link Fence ILO Ornamental Fence (No Brick Pilasters)
5. Overlay Existing Entry Road to Meet McCracken County Standards ILO of Removing and Replacing with Heavy Duty Asphalt

Estimated Timeframe

Select Facility Option / Site Due Diligence / Prepare Basic Schematic of Building

2 - 4 Months

Submit and Receive Public Service Commission Approval

6 Months

Facility Design

4 Months

Subcontractor Bidding 1 Month

1 Month

Facility Construction

10 Months

23 - 25 Months

DISCUSS NEXT STEPS ON PROJECT

- ❑Complete Site Due Diligence & Design Coordination
- ❑Finalize Permits & Approvals
- ❑Complete 100% Design Drawings
- ❑Finalize Furniture, Audio Visual and Security Design
- ❑Competitively Bid Project to Subcontractors
- ❑Begin Construction

JACKSON PURCHASE ENERGY CORPORATION

PROJECT ALTERNATES

Questions or Discussion?

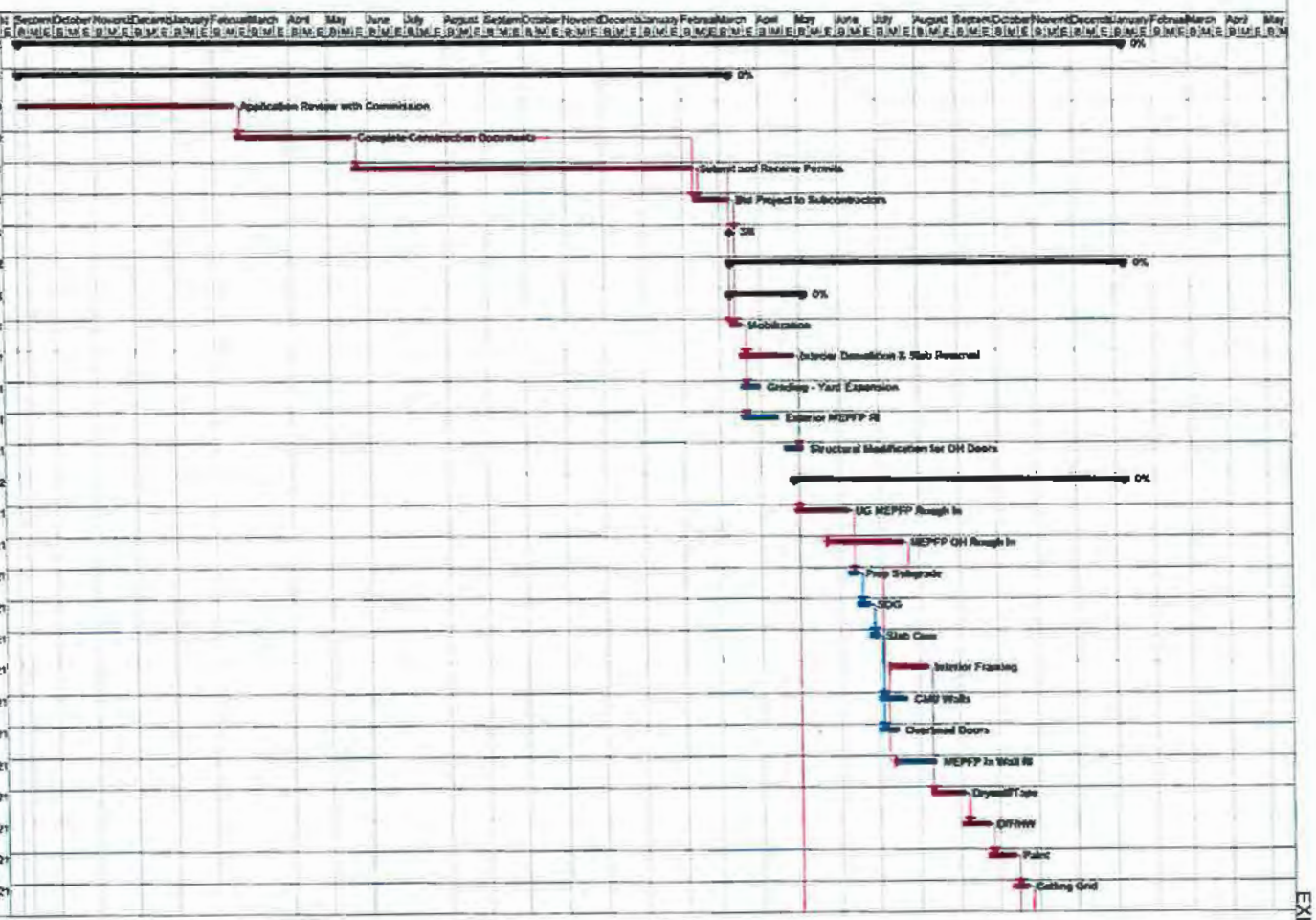
COOPERATIVE
BUILDING SOLUTIONS

COOPERATIVE BUILDING SOLUTIONS

JPEC - [redacted] Site
Project Schedule

PARIC

ID	Task Name	Dur	Start	Finish
1	Jackson Purchase Electric Cooperative	614 days	Tue 9/3/19	Fri 1/7/22
2	Preconstruction	365 days	Tue 9/3/19	Mon 3/8/21
3	Application Review with Commission	120 days	Tue 9/3/19	Mon 2/17/20
4	Complete Construction Documents	13 wks	Tue 2/18/20	Mon 5/18/20
5	Submit and Receive Permits	190 days	Tue 5/19/20	Mon 2/8/21
6	Bid Project to Subcontractors	20 days	Tue 2/9/21	Mon 3/8/21
7	Finalize Contract	0 days	Mon 3/8/21	Mon 3/8/21
8	Construction	219 days	Tue 3/9/21	Fri 1/7/22
9	Demolition & Site Prep	40 days	Tue 3/9/21	Mon 5/3/21
10	Mobilization	7 days	Tue 3/9/21	Wed 3/17/21
11	Interior Demolition & Slab Removal	30 days	Tue 3/16/21	Mon 4/26/21
12	Grading - Yard Expansion	10 days	Thu 3/18/21	Wed 3/31/21
14	Exterior MEPFP RI	20 days	Thu 3/18/21	Wed 4/14/21
13	Structural Modification for OH Doors	10 days	Tue 4/20/21	Mon 5/3/21
15	Building Interior Construction	184 days	Tue 4/27/21	Fri 1/7/22
16	UG MEPFP Rough In	30 days	Tue 4/27/21	Mon 6/7/21
20	MEPFP OH Rough In	40 days	Tue 5/25/21	Mon 7/19/21
17	Prep Subgrade	5 days	Tue 6/8/21	Mon 6/14/21
18	SOG	7 days	Tue 6/15/21	Wed 6/23/21
19	Slab Cure	5 days	Thu 6/24/21	Wed 6/30/21
21	Interior Framing	20 days	Mon 7/12/21	Fri 8/6/21
22	CMU Walls	15 days	Thu 7/1/21	Wed 7/21/21
24	Overhead Doors	10 days	Thu 7/1/21	Wed 7/14/21
23	MEPFP In Wall RI	20 days	Fri 7/16/21	Thu 8/12/21
25	Drywall/Tape	30 days	Mon 8/9/21	Fri 9/3/21
26	DF/HW	15 days	Thu 9/2/21	Wed 9/22/21
27	Paint	15 days	Wed 9/22/21	Tue 10/12/21
28	Ceiling Grid	10 days	Mon 10/11/21	Fri 10/22/21



Updated
Mon 9/9/19 9:32 AM

Project 19052
Page 1 of 2

EXHIBIT TEM-4

COOPERATIVE BUILDING SOLUTIONS

JPEC - [redacted] Site
Project Schedule

PARIC

ID	Task Name	Dur	Start	Finish
28	MEPFP Trim	15 days	Wed 10/13/21	Tue 11/2/21
30	MEPFP Ceiling Trim	20 days	Mon 10/25/21	Fri 11/19/21
31	Final Clean	15 days	Mon 11/22/21	Fri 12/10/21
32	Inspections	10 days	Mon 12/13/21	Fri 12/24/21
33	Punchlist & Commissioning	20 days	Mon 12/13/21	Fri 1/7/22
34	Owner Move-In	0 days	Fri 1/7/22	Fri 1/7/22
35	Building Exterior Construction	60 days	Tue 4/27/21	Mon 7/19/21
36	Foundations for Office & Drive Up Work	10 days	Tue 4/27/21	Mon 5/10/21
42	Site Utils	20 days	Tue 4/27/21	Mon 5/24/21
37	Framing for Exterior Façade Improvements	10 days	Tue 5/11/21	Mon 5/24/21
40	Loading Dock Concrete	10 days	Tue 5/11/21	Mon 5/24/21
38	Sheeting & AW Barrier	7 days	Tue 5/25/21	Wed 6/2/21
41	Apron Concrete	10 days	Tue 5/25/21	Mon 6/7/21
43	Concrete Curb	10 days	Tue 5/25/21	Mon 6/7/21
39	Masonry	15 days	Thu 6/3/21	Wed 6/23/21
44	Asphalt Parking Lot	10 days	Tue 6/8/21	Mon 6/21/21
45	Fencing	10 days	Tue 6/22/21	Mon 7/5/21
46	Landscaping	10 days	Tue 7/6/21	Mon 7/19/21
47	Vehicle Storage Building	30 days	Tue 5/25/21	Mon 7/5/21

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)))))	**CASE NO. 2019-00326**

DIRECT TESTIMONY OF
RONALD S. BACON
PARTNER, BACON FARMER WORKMAN ENGINEERING AND TESTING, INC.
ON BEHALF OF JACKSON PURCHASE ENERGY CORPORATION

Filed: September 13, 2019

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN ELECTRONIC APPLICATION OF JACKSON PURCHASE ENERGY CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW HEADQUARTERS FACILITY	)	Case No. 2019-00326

VERIFICATION OF RONALD S. BACON

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF McCracken)

Ronald S. Bacon, Partner, Bacon Farmer Workman Engineering and Testing, Inc., on behalf of Jackson Purchase Energy Corporation, being duly sworn, states that he has supervised the preparation of his Direct Testimony in the above-referenced case and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Ronald S. Bacon

The foregoing Verification was signed, acknowledged and sworn to before me this 3rd day of September, 2019, by Ronald S. Bacon.

Commission expiration: 10/29/2020

TAMRA MYERS NOTARY PUBLIC STATE AT LARGE, KENTUCKY

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Ronald S. Bacon. I am a partner with Bacon Farmer Workman Engineering and Testing, Inc. (BFW). My business address is 500 South 17th Street, Paducah, Kentucky, 42002-0120.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Jackson Purchase Energy Corporation ("Jackson Purchase").

Q. PLEASE STATE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. I have a B.S.C.E. from the University of Kentucky. I hold civil, structural, and surveying licenses in multiple states. I have been licensed as a civil engineer in Kentucky since 1981 and have one of the first Kentucky structural engineer certificates issued in 1983. I also have a structural engineering license in Illinois.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR DUTIES AT BFW.

A. I perform structural and civil design and assessments and supervise structural and civil design of other engineers and designers.

Q. PLEASE BRIEFLY DESCRIBE BFW AND THE TYPES OF ACTIVITIES IT ROUTINELY PERFORMS FOR UTILITIES LIKE JACKSON PURCHASE AND OTHER NON-UTILITY COMPANIES HAVING NEEDS SIMILAR TO THOSE OF JACKSON PURCHASE IN THIS CASE.

A. I am regularly involved in assessing the structural condition of existing buildings for the purposes of purchase, remodeling, expansion, or repurposing.

Q. PLEASE BRIEFLY DESCRIBE WHETHER BFW IS FAMILIAR WITH JACKSON PURCHASE'S FACILITIES AND OPERATIONS AND PROVIDE A FEW EXAMPLES OF WORK PREVIOUSLY PERFORMED FOR JACKSON PURCHASE.

A. I (as BFW) am familiar with Jackson Purchase's facilities in Paducah as a 40+ year resident of Paducah and a residential customer. We have not previously performed work for Jackson Purchase.

Q. DID JACKSON PURCHASE ENGAGE BFW TO SERVE AS ENGINEER FOR THE ASSESSMENT OF THE EXISTING HEADQUARTERS?

A. Yes. BFW was retained as Engineer for the assessment of the Existing Headquarters on June 3, 2019.

Q. PLEASE DESCRIBE THE NATURE OF BFW'S ENGAGEMENT BY JACKSON PURCHASE AND WHAT SERVICES BFW PROVIDED TO JACKSON PURCHASE.

A. BFW conducted a visual assessment of the three main buildings and took photographs of noted concerns/damage. Jackson Purchase was able to provide a copy of design plans (circa 1969) which BFW was able to use and compare with the buildings on site. Structural aspects were the main focus of this report; however, other noteworthy issues were also commented on.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to describe the process employed to assess the condition of Jackson Purchase's current Headquarters campus consisting of the

office, garage, and warehouse at 2900 Irvin Cobb Drive in Paducah, KY. These buildings house Jackson Purchase's employees, data systems, dispatch, main repair stores and rolling fleet including several large service trucks.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I am sponsoring BFW's Structural Assessment Report dated June 10, 2019, which is attached as Exhibit RSB-1.

Q. PLEASE GENERALLY DESCRIBE THE EXISTING OFFICE BUILDING.

A. The main office is a generally square, one-story building approximately 130 feet by 150 feet. It has a drive-under canopy at the west end of the building. This building is a post and beam framed structure with a bar joist and concrete deck roof. The perimeter walls are minimally reinforced masonry curtain walls not intended to provide structural benefit.

Q. PLEASE DESCRIBE THE CURRENT CONDITION OF THE OFFICE BUILIDNG AND DISCUSS ANY IMPORTANT ISSUES OF CONCERN.

A. The discussion of BFW's findings relative to the office building can be found at RSB-1, Pages 2 through 5. Among issues of concern are: (1) steel frame appears to bc designed with ordinary pinned connections (no moment frames); (2) all columns are small and would not be able to function as elements of moment frame joints; (3) lateral bracing of the building is with minimal reinforced concrete masonry unit ("cmu"); (4) the typical wall to footing detail does not indicate any connection of the cmu to the footing other than a mortar bed making the value of the cmu walls as bracing very limited; (5) the building frame changes with temperature causing issues with the roof and doors; (6) multiple cracks in the

interior masonry and plaster, most noticeably at the roof/ceiling joints and at intersecting wall joints; (7) it is likely the cmu walls are cracked behind the plaster and brick veneers; (8) the nature of the original framing will likely cause the doors and wall cracks to be a maintenance problem, which usually tend to increase in magnitude with age; (9) walls are insulated with only 1" of Styrofoam between the cmu walls and the interior plaster; (10) HVAC system is the original system with poor performance; (11) no publicly accessible restrooms.

Q. PLEASE GENERALLY DESCRIBE THE EXISTING WAREHOUSE BUILDING.

A. The warehouse building is a one-story concrete masonry unit bearing wall building with one interior column/beam bearing line and a bar joist roof. There is a large outdoor loading dock along one long wall of the building. The outside dimensions are approximately 68 feet by 179 feet plus the loading dock. This building contains all of the repair supplies and tools that cannot be stored outside.

Q. PLEASE DESCRIBE THE CURRENT CONDITION OF THE WAREHOUSE BUILIDNG AND DISCUSS ANY IMPORTANT ISSUES OF CONCERN.

A. The discussion of BFW's findings relative to the warehouse building can be found at RSB-1, Pages 6 through 8. Among issues of concern are: (1) since the roof is one piece most of the joints appear to be ineffective; (2) it is heated but not cooled so there are seasonable temperature and humidity swings in the interior of the building; (3) walls have extensive cracking along the long side walls; (4) significant wall cracking at the end walls of the building; (5) appears to be unreinforced

masonry construction with no structural attachment of the walls to the foundations other than the cmu mortar beds.

Q. PLEASE GENERALLY DESCRIBE THE GARAGE BUILDING.

A. The garage is a one-story concrete masonry unit bearing wall building with one interior column/beam bearing line and a bar joist roof. There are some conditioned spaces at the end of the building. This building is used to store Jackson Purchase's rolling fleet. The sidewall column spacing is 11' center to center, which results in less than 11' wide truck bays after deductions for door framing.

Q. PLEASE DESCRIBE THE CURRENT CONDITION OF THE GARAGE BUILIDNG AND DISCUSS ANY IMPORTANT ISSUES OF CONCERN.

A. The discussion of BFW's findings relative to the garage building can be found at RSB-1, Pages 8 through 10. Among issues of concern are: (1) bracing is only provided by the cmu "boxes" at each end of the building; (2) openings to the vehicle bays are very narrow and there are only inches of clearance on each side of the larger trucks; (3) visible cracking in the walls; (4) in general it is an unconditioned flexible building with unreinforced cmu anchors at each end with the doors likely to be open, which makes it behave as an open canopy in a high wind condition; (5) roof is reported to be is a source of condensation dripping under certain conditions.

Q. PLEASE SUMMARIZE BFW'S CONCLUSIONS REGARDING THE CONDITION OF THE BUILDINGS CONTAINED ON JACKSON PURCHASE'S EXISTING HEADQUARTERS CAMPUS.

A. These buildings are the main components of the operations, service and repair aspects of Jackson Purchase. Because the utility would be categorized as an

essential service during a catastrophic event, the requirements for buildings to house these operations present a higher standard than ordinary commercial construction. This would not generally have been accounted for 50 years ago when they were designed and constructed. The actual structural design seems to be ordinary commercial quality of the time. Much has been learned about building behavior in the past 50 years and construction of this type in this seismic zone would not be permitted with modern building codes. The defects described above will be ongoing issues and will continue to deteriorate over time. Generally, as buildings start to deteriorate the decline accelerates toward the end of the useful life of the building. Although these buildings have been maintained as well as could be expected, they are not going to improve. With regard to remodeling these buildings to correct the issues, the extent of the repairs would probably dictate that they be upgraded to comply with the current building code, including energy conservation requirements and essential services structural requirements.

Q. WHAT WOULD BE REQUIRED TO UPDATE THE EXISTING OFFICE BUILDING?

A. To update the office building would require the following:

- Removing and replacing the roof along with additional insulation;
- Exposing and strengthening the steel framing and potentially the column foundations for additional bracing anchorage;
- Modifying the perimeter cmu walls and associated brick veneer for sufficient insulation and sufficient expansion/contraction joints;

- Replacement of the HVAC mechanical system including the above ceiling ductwork;
- Replacement of certain electrical systems including revisiting generator provisions and in consideration of the current energy codes;
- Replacement of the suspended ceilings due to ductwork modifications;
- Potential modification to restrooms to provide accessible customer facilities in the public spaces, including any associated slab demolition and replacement;
- Architectural space planning changes to accommodate the current uses and needs;
- Replacement of finishes.

Because this is an essential services operation, the office building would have to remain in operation during all construction, which would require temporary relocations to available spaces. This approach limits the amount of demolition and repair that can be undertaken at any time. Temporary offices can be brought in to provide some relief but likely would be of limited benefit in this situation. The dispatch and server spaces would be particularly problematic.

Q. WHAT WOULD BE REQUIRED TO UPDATE THE EXISTING WAREHOUSE BUILDING?

A. To update the warehouse building would require the following:

- Removing and replacing the roof along with additional insulation;
- Exposing and strengthening the steel framing and potentially the column foundations for additional bracing anchorage;
- Modifying the perimeter cmu walls and associated brick veneer for sufficient insulation and sufficient expansion/contraction joints;

- The current warehouse is heated but not air conditioned, so it does not currently have humidity control. There are some conditioned rooms at one end. Depending on the defined use a larger mechanical system may be required or needed operationally;
- Replacement of certain electrical systems including revisiting generator provisions and in consideration of the current energy codes;
- Replacement of the suspended ceilings in the conditioned spaces due to ductwork modifications;
- Replacement of finishes.

Because this is an essential services operation the warehouse building would have to remain operational during all construction, which would require temporary relocations of equipment and inventory to available spaces. This approach limits the amount of demolition and repair that can be undertaken at any time. Temporary storage units can be utilized for some items, but the need for quick access to repair parts after a catastrophic event would need to be considered.

Q. WHAT WOULD BE REQUIRED TO UPDATE THE EXISTING VEHICLE GARAGE?

A. Updating the vehicle garage is not feasible. The existing building frame column spacing renders the vehicle bays nearly unusable and we would not recommend upgrading the other components of the building if the vehicle bays cannot be corrected. Unfortunately, the columns between bays are the main supports for the building and a complete demolition and replacement of the garage would be required.

Q. IN YOUR PROFESSIONAL OPINION IS IT FEASIBLE FOR JACKSON PURCHASE TO REMODEL THESE BUILDINGS?

A. No. The amount of work necessary to accomplish this including structural, mechanical, and architectural systems would likely reach or exceed the cost of new buildings. It is my professional opinion that these buildings are at or near the end of their useful lives and should all be replaced by new construction.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.

STRUCTURAL ASSESSMENT

JACKSON PURCHASE ENERGY

2900 IRVIN COBB DRIVE

PADUCAH, KY

JUNE 10, 2019

BFW PROJECT NO. 19198

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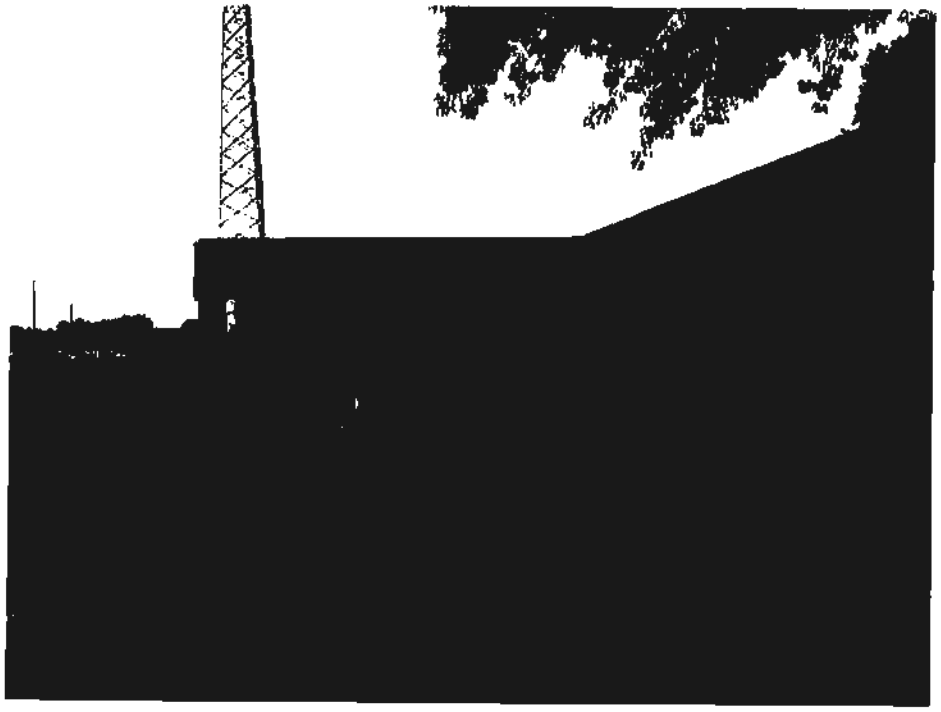
This report was developed to provide a general assessment of the structural condition of the current main office, warehouse, and garage at the Irvin Cobb Drive location. These buildings house the operations employees, the data systems, dispatch, the main repair stores, and the large service trucks.

There are two generators supporting the main office. There is a communication tower between the main office and the garage.

The plans for these building are dated 1969. Assuming construction shortly after, that would put the buildings at 49-50 years old.

MAIN OFFICE

The main office is a generally square one story building with a partial mechanical room above the occupied spaces. It is generally square, approximately 130' x 150'.



There is a drive under canopy at the west end of the building.

This building is a steel post-and-beam frame supporting a bar joist-concrete deck roof. The steel frame appears to be designed with ordinary pinned connections (no moment frames). However, there are some frame lines with double rows (over/under) beams that would simulate a moment frame. All of the columns are small and would not be able to function as elements of moment frame joints. Lateral bracing of this building appears to be provided with minimally reinforced concrete masonry unit (cmu) walls around the perimeter of the building. The only cmu reinforcement indicated is joint reinforcement and some vertical bars at the ends of walls. The vertical bars are noted that they can be terminated within 8" of the tops of the walls, so a structural connection was not anticipated. In addition, the typical wall to footing detail does not indicate any connection of the cmu to the footing other than a mortar bed. Since the plans do not contain any provisions to connect the masonry walls to the steel frames, the value of the cmu walls as bracing would be very limited.

The plans indicate an original roof system consisting of metal form deck, 2 ½" of concrete, and 2" of rigid insulation. This is topped by a standard built-up roof and gravel cover. The gravel cover has been removed and the roof appears to be a single ply membrane now. The only other roof insulation is some batt fiberglass placed over the ceiling tiles. This means the roof and the steel framing supporting it is probably subject to significant dimension changes with seasonal temperature changes at the roof level. The bases of the columns would remain at their original locations. In effect, the top of the frame would be expanding and contracting with outside temperature swings. Most of the perimeter doors are reported to be an ongoing maintenance problem in that sometimes they can be closed and sometimes they have to be worked on to get them to close. This is consistent with the behavior of a building frame that changes with temperature. The doors other than the front entrance have secure badged access to

the building and must be repaired each time they are not operable. There are also multiple cracks in the interior masonry and plaster, most noticeably at the roof/ceiling joints and at intersecting wall joints.

This also indicates differential movement between walls and roof. It is likely that the cmu walls are cracked behind the plaster and brick veneers. There are also multiple active brick veneer joints in the outside walls.

Due to the nature of the original framing the doors and wall cracks will likely always be a maintenance problem. These types of defects tend to increase in magnitude with age because the building will never fully recover to its original position from each new temperature change movement.

There are other miscellaneous operational issues with the office building. The walls are indicated as insulated with 1" of Styrofoam between the cmu walls and the interior plaster.

The HVAC system in the upper mechanical room is the original system and is reported to perform poorly. Given the limited insulation of this building this is not surprising.

In addition, there are not any publicly accessible restrooms. All restrooms are behind badged access doors and require escorting when they are requested by the public.

WAREHOUSE

The warehouse building is a one story masonry (cmu) building with one interior column/ beam line and a bar joist roof. The outside dimensions are approximately 68' x 170' plus an outside loading dock. This building contains all of the repair supplies and tools that cannot be stored outside. The ends of the joists are supported on masonry walls. There is an outdoor loading dock with overhanging roof along approximately 2/3 of one long wall. There is also a small outdoor loading dock at the north end of the building. There are vertical control joints in the walls which are also noted on the original plans at approximately 36' center to center. There are also slip joints specified in the interior main beam line at approximately ¼ and ¾ of the length of the building. Since the roof is one piece most of these joints appear to be ineffective. The building is heated but not cooled so there are seasonal temperature and humidity swings in the interior of the building. The walls have extensive cracking along the long side walls. There is also significant wall cracking at the end walls of the building.

Based on the original documents this also appears to be unreinforced masonry construction with no structural attachment of the walls to the foundations other than the cmu mortar beds.

GARAGE

The garage is similar in construction to the warehouse, but is divided into 11' wide (center to center) vehicle bays in the middle ½ of the building.

The bracing is only provided by the cmu "boxes" at each end of the building.

After deducting the columns and door framing at the vehicle bays the openings are very narrow and there are only inches of clearance on each side of the larger trucks.

The offices at the south end of the garage are conditioned and there was less noticeable cracking in this area. However, there is still visible cracking.

In general this building would behave as an unconditioned flexible building with unreinforced cmu anchors at each end. Because it is unconditioned the doors are more likely to be open, which can cause the building to behave as an open canopy in a high wind condition. The roof is reported to be a source of condensation dripping under certain conditions.

CONCLUSIONS

These buildings are the main components of the operations, service, and repair aspects of this utility. Because the utility would be categorized as an essential service during a catastrophic event, the requirements for buildings to house these operations are a higher standard than ordinary commercial construction. This would not generally have been accounted for 50 years ago when they were designed and constructed. The actual structural design seems to be ordinary commercial quality of the time. Much has been learned about building behavior in the past 50 years and construction of this type in this seismic zone would not be permitted with modern building codes. The defects described above will be ongoing issues and will continue to deteriorate over time. Generally as buildings start to deteriorate the decline accelerates toward the end of useful life of the building. Although these buildings have been maintained as well as could be expected, they are not going to improve. With regard to remodeling these buildings to correct the issues, the extent of the repairs would probably dictate that they be upgraded to comply with the current building code, including energy conservation requirements and essential services structural requirements.

To update the office building would require:

1. Removing and replacing the roof along with additional insulation
2. Exposing and strengthening the steel framing and potentially the column foundations for additional bracing anchorage
3. Modifying the perimeter cmu walls and associated brick veneer for sufficient insulation and sufficient expansion/contraction joints
4. Replacement of the hvac mechanical system including the above ceiling ductwork
5. Replacement of certain electrical systems including revisiting generator provisions and in consideration of the current energy codes
6. Replacement of the suspended ceilings due to ductwork modifications
7. Potential modification to restrooms to provide accessible customer facilities in the public spaces, including any associated slab demolition and replacement
8. Architectural space planning changes to accommodate the current uses and needs
9. Replacement of finishes

Because this is an essential services operation the office building would have to remain in operation during all construction, which would require temporary relocations to available spaces. This approach limits the amount of demolition and repair that can be undertaken at any time. Temporary offices can be brought in to provide some relief but likely would be of limited benefit in this situation. The dispatch and server spaces would be particularly problematic.

To update the warehouse building would require:

1. Removing and replacing the roof along with additional insulation

2. Exposing and strengthening the steel framing and potentially the column foundations for additional bracing anchorage
3. Modifying the perimeter cmu walls and associated brick veneer for sufficient insulation and sufficient expansion/contraction joints
4. The current warehouse is heated but not air conditioned so it does not currently have humidity control. There are some conditioned rooms at one end. Depending on the defined use a larger mechanical system may be required or needed operationally.
5. Replacement of certain electrical systems including revisiting generator provisions and in consideration of the current energy codes
6. Replacement of the suspended ceilings in the conditioned spaces due to ductwork modifications
7. Replacement of finishes

Because this is an essential services operation the warehouse building would have to remain operational during all construction, which would require temporary relocations of equipment and inventory to available spaces. This approach limits the amount of demolition and repair that can be undertaken at any time. Temporary storage units can be utilized for some items, but the need for quick access to repair parts after a catastrophic even would need to be considered.

Updating the vehicle garage is not feasible. The existing building frame column spacing renders the vehicle bays nearly unusable and we would not recommend upgrading the other components of the building if the vehicle bays cannot be corrected. Unfortunately, the columns between bays are the main supports for the building and what would be required would essentially be a complete demolition and replacement.

The amount of work necessary to accomplish this including structural, mechanical, and architectural systems would likely reach or exceed the cost of a new building. It is my opinion that these buildings are at or near the end of their useful lives.

Due to the extent of upgrading described above, an estimate of cost was not attempted.

If any additional information or clarification is needed, please feel free to contact us.

BACON FARMER WORKMAN Engineering and Testing, Inc.

Ronald S. Bacon, P.E. 12510