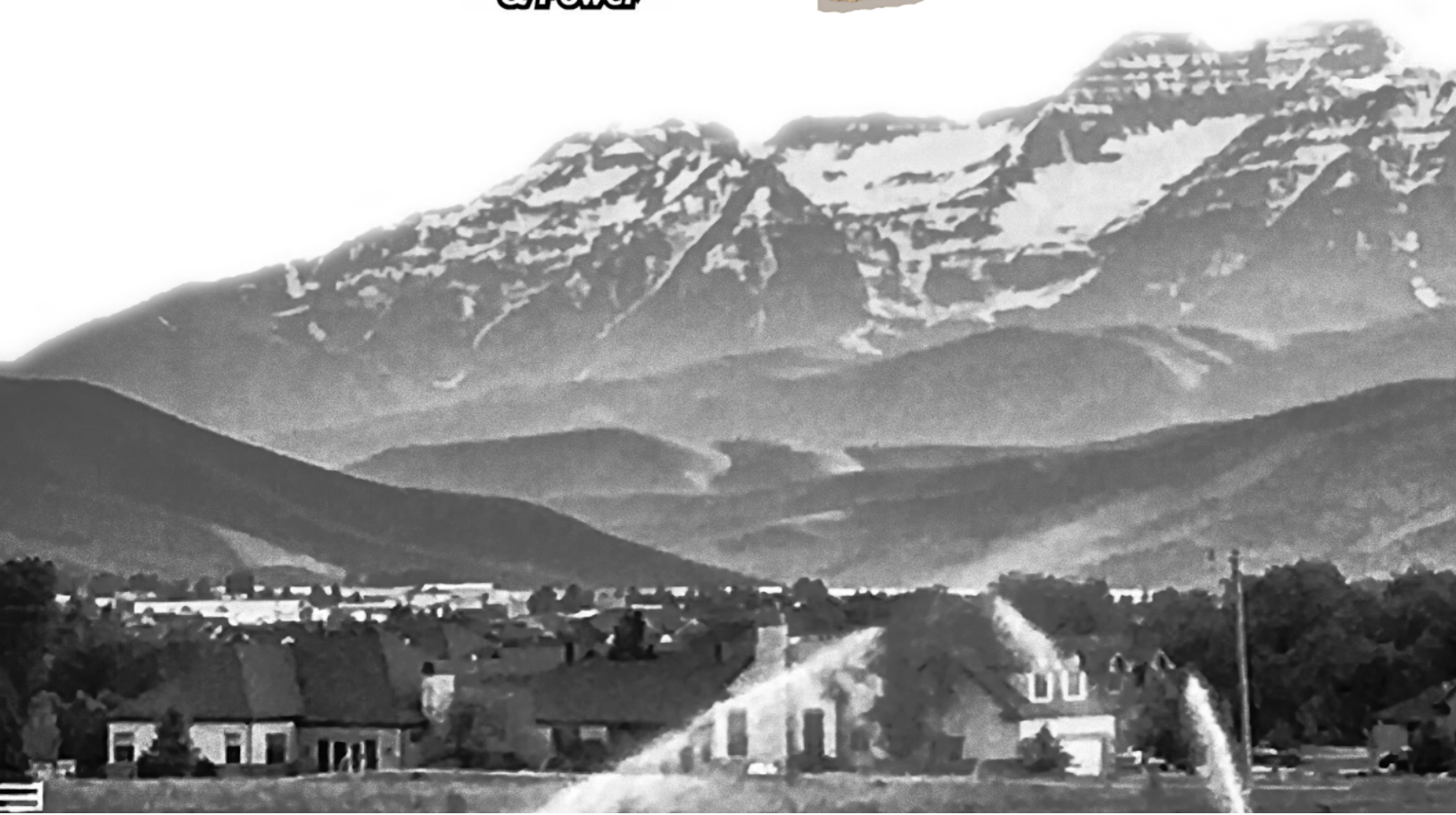
BUILDING AND SITE ANALYSIS

HEBER LIGHT AND POWER, HEBER CITY OPERATIONS SITE



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STATEMENT OF PURPOSE

The architectural firm, Lythgoe Design Group, inc., has been contracted with Heber Light and Power to perform an existing building and site analysis on their property located at 735 West 300 South, Heber City, UT 84032, hereafter called the Heber City Operations Site. The purpose of this document is to present the general information of the site and the buildings located at the Heber City Operations Site as well as Lythgoe Design Group's observations and findings. The observations and findings will be used to provide a critical, outside analysis and perspective of the Heber City Operations Site as well as suggested courses of action where appropriate.

ANALYSIS PRESENTATION AND FORMAT

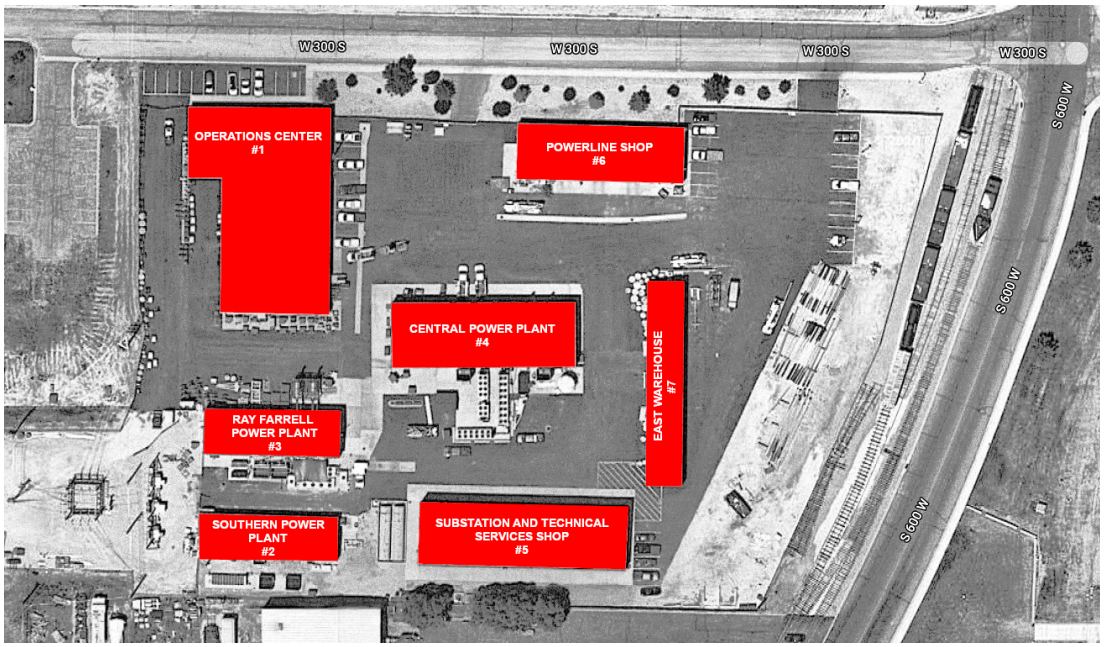
The executive summary will present the most important findings, observations, and proposals found and should serve as a general guide and condensed summary of the information contained later on in the analysis. Building information shall be presented in separate, dedicated sections with the following subsections: general building information, room/area analysis, building analysis, and building summary. The building summary subsection, located at the end of each building section, contains the most important information pertinent to that particular building and its associative areas. A SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis shall also be provided. Miscellaneous site locations and areas will be presented in a similar manner, located in a separate section.

LYTHGOE DESIGN GROUP, INC.

Lythgoe Design Group, inc. is a sub-chapter S corporation located in the Heber Valley area. Since 1995, LDG has been offering high quality, personal design to both the high end residential and small commercial markets. Coming from a second generation construction family, Lane Lythgoe integrates both the artistic and technical skill sets by combining his formal education in Engineering (BS BYU) and Business (MBA, Phoenix) with his professional licenses in both Architecture (ut# 137121) and Construction (ut# 1465694). It is this combination that allows LDG to access, define, create, and solve design challenges in a multi disciplined environment. We look forward to working with you on your building project.

EXECUTIVE SUMMARY

After researching, and recently touring the Heber City Operations Site, Lythgoe Design Group, inc. analyzed the following buildings: the Operations Center, the Southern Power Plant, the Ray Farrell Power Plant, the Central Power Plant, the Substation and Technical Services Shop, the Power Line Shop, and the Eastern Warehouse. In addition, miscellaneous site locations, such as the Southeastern Material Storage Area and the Operation Center Laydown Area, were taken into consideration during analysis as well. A summary of the findings, observations, and proposals are as follows:



Operations Center - The architecture and general structure of the Operations Center is in great condition and should be kept and repurposed. Throughout the building, a general trend emerged of valuable warehouse space being cannibalized to make room for more office spaces, often on a case-by-case basis without forethought into future expansions. These case-by-case office space expansions often lead to redundant systems, such as heating and air solutions. While the repurposing of warehouse space is understandable with HL&P growth, warehouse efficiency is in decline. We propose that a new, dedicated office work space, built in mind for future expansion, be constructed and that current offices located in the Operations Center be reclaimed as warehouse space.

Southern Power Plant - The architecture and general structure of the Southern Power Plant is in good condition, especially considering its age and use. The power plant has fair expandability with empty bays for additional generators to accommodate future needs. The most pressing issue is the lack of proper fire suppression methods found within the building. A suitable fire suppression system should be installed as soon as possible to eliminate risk to structure, assets, and personnel within the Southern Power Plant.

Ray Farrell Power Plant - The architecture and general structure of the Ray Farrell Power Plant is in good condition. As with the Southern Power Plant, a critical item facing this building is the lack of proper fire suppression methods. A suitable fire suppression system should be installed as soon as possible to eliminate risk.

Central Power Plant - The architecture and general structure of the Central Power Plant is in great condition. The power plant has great expandability with empty bays for additional generators when the need arises. While there are minor improvements to be made, there are no pressing issues that need to be addressed in regards to this power plant.

Substation and Technical Services Shop - The architecture and general structure of the Substation and Technical Services Shop is in great condition, which should be expected given its age. While there are minor improvements to be made, such as modifying bathrooms to be ADA compliant and installing truck lifts, there are no pressing issues that need to be addressed in regards to this building.

Power Line Shop - The architecture and general structure of the Power Line Shop is, in general, in poor condition, which is in no small part due to its age. With current expansion and growth, operation space needs are excelling those available within this building. However, one of the largest issues with this building is that the facilities are poorly maintained, especially in the breakroom and bathrooms which has a huge impact on employee morale. We propose that the Power Line Shop be torn down and repurposed into a laydown area. A new facility to house Power Line Shop operations should be constructed with proper space for storage, training areas, quality breakrooms, and room for future growth.

Eastern Warehouse - The architecture and general structure of the Eastern Warehouse is in terrible condition, with little structural integrity. A large portion of the Eastern Warehouse is not built on sound foundation footings, which compromises its structural integrity, especially in the case of seismic disasters. All equipment and supplies that are stored there, as well as the health and safety of workers who utilize this facility, are at risk. We propose that this building be dismantled as soon as feasible and repurposed into a laydown area.

West Trail Area - An unused parcel of land located to the west of the campus that serves as a connection to the trail system. We propose that this area be expanded to the county complex, located to the west of the Heber City Operations Site.

East Laydown Area and Southeast Material Storage - Site locations on the east side of the campus. Both areas can be expanded if the parcel of land to the east can be acquired.

Due to the critical nature of Heber LIght & Power services to the Heber Valley and the long term sustainability of the community, it is also our recommendation that further structural and electrical studies need to be conducted to assess the integrity of buildings and the associated components in regards to natural or man-made disasters. While all plausible disasters should be considered, studies should focus on earthquakes and EMPs. EMPs, or Electromagnetic Pulses, are brief, but powerful, electromagnetic disturbances that can be caused by natural phenomena, such as lightning, or be man-made, such as a high altitude nuclear explosion. EMPs are known to disrupt or destroy sensitive electronic equipment. ("RED" addendum added 2020.6.24)

OPERATIONS CENTER

I. General Building Information

Number:	1
Location:	Northwestern most point of lot
Stories:	One
Square Footage:	13,990 sq. ft.
Age / History:	~1980 (40 years old), used to be a door factory before acquisition
Architecture:	• Metal framed, with standalone wood framing for office spaces • Brick and metal ribbed siding • Concrete slab flooring • 12' high metal ribbed roofing (redone 7 years ago)
Functions / Purpose:	Warehouse, Planning, Dispatching, HR, Legal Offices, Data Analytics, Visitation
Occupants:	Office and Administration Workers, Warehouse Workers
Observations:	• Architecture and structural elements of the building are in good condition. • Warehouse space is continually being repurposed into new office spaces for the growth of administration staff. Often these office spaces are being constructed on a case-by-case basis, so redundancy in systems such as the heating and air is high. • Because of the good condition of the building, and the need for dedicated office space, it might be best to relocate office workers to a new location and reclaim much needed warehouse space.

II. Room and Area Analysis

i. Entrance and Front Offices

Room / Area Number:	101
Location:	North side
Function / Purpose:	Entrance, Administration, Planning, Human Resources, Visitation, Document Handling
Occupants:	Office and Administration Workers, Planners, Assistant Planners, Operation Manager, HR Manager, Visitors
Finishes:	Dropped Panel Ceilings, Square-carpeted Flooring, White baseboard trim, gypsum painted wall
Equipment / Furniture:	Security lights, Exit signage, security cameras / CCTV, thermostats, computers, desks, white boards, Personal items
Observations:	• Planners meet with 15-20 visitors a week on an appointment-basis. • HR offices have special locks to protect employee information.
Proposal:	• Eliminate all offices from the existing building except those for direct management of warehouse staff and operations. • Relocate offices to new administration locations.

ii. Server Room

Room / Area Number:	102
Location:	Northern side, by HR on east side of entrance hallway
Function / Purpose:	Server housing for data storage
Occupants:	IT Workers
Finishes:	8' high dropped ceiling, painted gypsum walls, square carpeted floors
Equipment / Furniture:	Servers and related equipment
Observations:	• Previously an office that has since been retro-fitted.
Proposal:	• Eliminate server room from the existing building. • Relocate server room to be closer to other administration locations.

iii. Breakroom

Room / Area Number:	103
Location:	Northern side
Function / Purpose:	Breakroom for employees, R&R, meal preparation
Occupants:	Office workers, administration workers, warehouse workers
Finishes:	8' high gypsum ceiling, painted gypsum walls, metal flooring
Equipment / Furniture:	Stove, fridge, microwave, kitchen counters, coffee machine, notice board, copy machine, kitchen cabinets
Observations:	• No Fire Extinguisher. • Office equipment (copy machine) located inside the break room.
Proposal:	• Keep the breakroom for warehouse staff, update finishes.

iv. Bathrooms

Room / Area Number:	104
Location:	Northern side
Function / Purpose:	Restrooms
Occupants:	Office workers, administration workers, warehouse workers
Finishes:	8' high gypsum ceiling, painted gypsum walls, tiled floors
Equipment / Furniture:	Toilets, urinals, mirrors, soap dispensers, paper towel dispensers, sinks, cabinets,
Observations:	• Large handicap stalls are not ADA compliant, but can be remodeled to comply with ADA code requirements.
Proposal:	• Keep the breakroom bathrooms for warehouse staff. • Capture adjoining space near the large stalls to satisfy code requirements of ADA bathroom sizing regulations and install grab bar locations as necessary.

v. Conference Room

Room / Area Number:	105
Location:	Southern side
Function / Purpose:	Conference calls, team meetings
Occupants:	Office and administration workers
Finishes:	8′ high gypsum ceiling, painted gypsum walls, carpeted flooring
Equipment / Furniture:	Office chairs, conference table, projector, phones, whiteboards, cabinet storage
Observations:	• Used quite a bit. • While it is still functional, it is too small for conferences.
Proposal:	• Eliminate the conference room from the existing building. • Relocate conference room to new administration locations, preferably where there is more space.

vi. Dispatch

Room / Area Number:	106
Location:	Eastern side
Function / Purpose:	Receive and coordinate dispatch requests
Occupants:	Primary dispatchers
Finishes:	8′ high gypsum ceiling, painted gypsum walls, carpeted flooring
Equipment / Furniture:	Phones, computers, office chairs, maps, documents
Observations:	• During high dispatch volume times, or when the primary dispatch is unavailable, a secondary dispatcher, located in the back cubicles, will handle dispatch requests.
Proposal:	• Eliminate the dispatch room from the existing building. • Relocate dispatch room to new administration locations.

vii. Back Offices and Cubicles

Room / Area Number:	107
Location:	Southern side by the warehouse
Function / Purpose:	Office space for the attorney, the data analyst, and the secondary dispatchers
Occupants:	Office and administration workers, data analysts, secondary dispatchers, attorneys
Finishes:	8′ high gypsum ceiling, painted gypsum walls, carpeted flooring
Equipment / Furniture:	Legal documents, computers, office chairs, tables, cubicles, cabinets,
Observations:	• Law office is used 1-2 times a week, includes special locks to protect confidential information. • Data analyst and secondary dispatchers share cubicle space • Some gypsum has been removed from the walls -- exposing wood studs and wiring.
Proposal:	• Eliminate the back offices from the existing building. • Relocate back offices and cubicles to new administration locations.

viii. Warehouse

Room / Area Number:	108
Location:	Southern side
Function / Purpose:	Storage, maintenance
Occupants:	Warehouse workers
Finishes:	Concrete floors, insulated metal framing
Equipment / Furniture:	Warehouse supplies, forklifts, ladders, PCB transformers, tools, LED lights, storage racks
Observations:	• Warehouse space has been diminishing due to repurposing of space for offices during growth. • New heaters were installed a few years ago and insulation is good. • Concrete floors are in good condition, just need a power wash and a fresh epoxy finish.
Proposal:	• Keep and expand the warehouse by reclaiming space currently being used by administration and office workers on the north side of the building.

ix. PCB Containment Area

Room / Area Number:	109
Location:	Southwestern side
Function / Purpose:	PCB Transformers storage and containment
Occupants:	Warehouse workers
Finishes:	Concrete floors, insulated metal framing, plywood, ribbed metal siding
Equipment / Furniture:	PCB transformers, storage racks
Observations:	• PCB transformers are tested for high amounts of PCB (polychlorinated biphenyls) and bagged. • Transformers that fail the test (low PCB) are stored until enough have accumulated for environmental services to transport them to be recycled. Transformers that pass the test (high PCB) are immediately reported to environmental services (usually happens to older transformers, but is a rare occurrence).
Proposal:	• Keep and remodel PCB Containment Area to be a cleaner, less cluttered area to eliminate hazards of working with PCB transformers while in this space.

III. Building Analysis

SWOT ANALYSIS

STRENGTHS	WEAKNESSES

• [General]
  ○ Metal framing and building architecture are in great condition.
• [Offices]
  ○ Big expansion for administration and office worker roles.
• [Warehouse]
  ○ Insulation is in great condition.
  ○ New heaters.
	• [General]
	  ○ Valuable warehouse space is being repurposed into administration offices.
	• [Offices]
	  ○ Due to expansion of offices on a case-by-case basis, redundant heating and air systems are prevelent.
	• [Break Room]
	  ○ Break room space is being occupied by office equipment.
	• [Bathrooms]
	  ○ Bathrooms are not ADA compliant due to size requirements and grab bar locations.
	• [Warehouse]
	  ○ Valuable warehouse space is being repurposed into administration offices.
	• [PCB Containment Area]
	  ○ PCB Containment Area is unnecessarily cluttered and poses hazards to warehouse workers working in the vicinity.

OPPORTUNITIES	**THREATS**

• [General]
  ○ Opportunity to reclaim warehouse space and create a proper office space for administration and office workers.
• [Bathrooms]
  ○ Can be remodeled into ADA compliance by capturing adjoining spaces by the large stalls and installing grab bars in proper locations.
• [Conference Room]
  ○ Can be expanded by taking over adjoining spaces.
• [Warehouse]
  ○ Concrete flooring is in good condition and can be refurbished by a simple power wash and a fresh layer of epoxy.
	• [General]
	  ○ Other power company warehouse spaces contain only break rooms, bathrooms, and minimal office spaces for warehouse managers, with the majority of the space being dedicated to warehouse operations.
	• [Disaster]
	  ○ LOW TO MODERATE - Due to the building's structure and equipment, if impacted by a natural or man-made disaster, emergency operations will be hampered. In the event of an EMP, computer and dispatch systems would be disrupted.
	• [Break Room]
	  ○ Fire safety violations, mainly due to lack of proper fire extinguisher placement.
	• [Bathrooms]
	  ○ Bathrooms are not ADA compliant due to size requirements and failure of proper grab bar locations.

IV. Building Summary

On a recent visit to the Operations Center, we found a metal framed building structure being utilized as a mixed purpose building with warehouse and office spaces. The architectural and structural integrity of the building was in great condition and recent remodels to the roofing and heaters add to the value of the building. However, a trend of repurposing valuable warehouse space into office work space was noticeable and being done on a case-by-case basis without thought into future expansions. The growth of administration and office spaces isn't in itself negative, but the function of the warehouse is steadily decreasing in efficiency due to the cannibalization of their previous space. With this in mind, we would recommend:

- All office spaces located in the north side of the building are removed with the exception of a break room, bathrooms, and an office for direct warehouse operations managerial staff.
- Relocate office and administration staff above to a new location.
- The bathrooms are expanded and retrofitted into ADA compliance.
- Warehouse space be expanded to reclaim the current, non-critical, office spaces.

POWER PLANT #1 - SOUTHERN POWER PLANT

I. General Building Information

Number:	2
Location:	Southwest of plot
Stories:	One
Square Footage:	3,533 sq. ft.
Age / History:	~1986 (34 years old)
Architecture:	• CMU w/ metal framing • CMU and metal ribbed siding • Concrete slab flooring • Metal roofing
Functions / Purpose:	Power plant, general technical operations
Occupants	Power plant workers
Observations:	• Architecture of the building is in generally good condition. • Currently, the power generators in this power plant are operated on an "as needed" basis during peak usage hours. Power can be expanded by installing an additional generator into the fourth generator bay. • There is a lack of fire suppression assemblies within this building.

II. Room and Area Analysis

i. Maintenance and Workshop Room

Room / Area Number:	201
Location:	East side
Function / Purpose:	Maintenance, mechanical and plumbing operations.
Occupants:	Power plant operators, generator technicians
Finishes:	CMU, exposed insulated metal roofing, concrete floor
Equipment / Furniture:	Engine oil tank w/ plumbing outlets, water cleaner and purifier, heaters, fluorescent lights, tools and hardware, pumps, electrical junction boxes, HVAC
Observations:	• Engine oil tank is directly plumbed into engines.
Proposal:	• Keep and expand in the future as necessary.

ii. Generator Bay

Room / Area Number:	202
Location:	Center of building
Function / Purpose:	Bay to house generators for power production
Occupants:	Power plant operators, generator technicians
Finishes:	CMU, exposed insulated metal roofing, concrete floor
Equipment / Furniture:	(1) 1.8MW generator, (2) 1.3MW generator, oxygen catalysts, CO scrubbers, fluorescent light fixtures, HVAC, emergency hand and eye wash station, general plumbing and electrical work
Observations:	• Generator bay has an empty space available for a fourth generator as needed in the future. • Minimal fire suppression methods within the current building. There are plans in the future to provide a nitrogen gas fire suppression system. • Power plant #1 generators operate on an "as needed" basis. All three generators typically run during peak hours between 5pm and 8pm. Power plant #1 generators average 2,000 hrs of use every year.
Proposal:	• Acquire a fourth generator when future needs demands it. • Install nitrogen or carbon-dioxide based fire suppression system as soon as possible to prevent fire hazards.

iii. Generator Technician's Office

Room / Area Number:	203
Location:	West side
Function / Purpose:	Generator operations, technician office, recreational room
Occupants:	Power plant workers, generator technicians
Finishes:	CMU, 8' high dropped ceiling tiles, carpet flooring
Equipment / Furniture:	Generator and power plant output controls, workout and recreational equipment, desks, chairs, whiteboards, heaters, personal effects, HVAC, emergency hand and eye wash station, MSDS, documents
Observations:	• During peak hours, the generator technician's office would be very loud and uncomfortable.
Proposal:	• Relocate generator technician's office to a better location away from the generator bay, but close enough to still supervise the power plant, or retrofit current generator technician's office to include noise dampening measures and more organizational space.

III. Building Analysis

SWOT ANALYSIS

STRENGTHS	WEAKNESSES

• [General]
  ○ Architecture and structure of the building is in generally good condition.
• [Generator Bay]
  ○ Additional bay open for future power generation expansion.
  ○ Generators, while a little older, are run for fewer hours compared to other generators on the site, prolonging their lifespan.
• [Technician's Office]
  ○ Generator technician is located close-by in case of emergency or immediate attention needed for the generators.
	• [General]
	  ○ Smaller than the other two power plants located on campus.
	  ○ Minimal to no fire suppression systems are found within the building.
	• [Technician's Office]
	  ○ Due to proximity to the generator bay, the technician's office is often unclean and noisy during peak hours.

OPPORTUNITIES	**THREATS**

• [Generator Bay]
  ○ Expand power generation in the future as the need arises.
	• [General]
	  ○ Minimal to no fire suppression methods located within the power plant introduces numerous health and safe risks, as well as code violations which could impact productivity.
	• [Disaster]
	  ○ MODERATE - Due to the building's structure and equipment, if impacted by a natural or man-made disaster, emergency operations will be impacted. In the event of an EMP, all electronic equipment would be disrupted or damaged.

IV. Building Summary

On our visit to the Southern Power Plant during a recent visit, we found a CMU and metal framed building structure housing power generators, workspaces, and an office for a generator technician. The architectural and structural integrity of the building was in good condition given its age. In addition, generators housed in the Southern Power Plant are run on an "as needed" basis, prolonging their lifespan and there is unused generator space ready to be utilized when the need arises. It should be noted, however, that the working conditions in the generator technician's office are not ideal. Importantly, there are currently minimal to no fire suppression measures in place to protect the structure, assets, and personnel within the building in case of a fire. With this in mind, we would recommend the following:

- Fire suppression measures, such as industrial scale nitrogen gas or carbon dioxide gas systems, should be implemented as soon as possible to mitigate possible hazards in the future.
- Relocate and /or retrofit the offices of generator technicians to a cleaner, quieter working space on the campus, while maintaining sufficient proximity to respond to technical issues.

POWER PLANT #2 - RAY FARRELL POWER PLANT

I. General Building Information

Number:	3
Location:	Southwestern side, directly south of the Operations Center
Stories:	One
Square Footage:	4,156 sq. ft.
Age / History:	~1991 (29 years old)
Architecture:	• Wood framed structure • Metal ribbed siding • Concrete slab flooring • Metal roofing, redone in 2010
Functions / Purpose:	Power Plant, general technical operations
Occupants	Power plant workers, generator technicians
Observations:	• Roofing redone in 2010 and looks to be in great condition. • Architectural and structural elements look to be in good condition.

II. Room and Area Analysis

i. Generator Bay

Room / Area Number:	301
Location:	N/A
Function / Purpose:	Bay to house generators for power production
Occupants:	Power plant workers, generator technicians
Finishes:	Gypsum wall finish, concrete flooring, insulated exposed metal roofing and structural elements.
Equipment / Furniture:	(2) 750kW natural gas generator, (2) 1.8MW natural gas generator, engine oil tank w/ direct plumbing outlets, oxygen catalysts, CO scrubbers, fluorescent light fixtures, fire extinguishers, HVAC systems, emergency hand and eye wash station, general plumbing and electrical work
Observations:	• All generators present in this building utilize natural gas. • Minimal fire suppression methods within the current building. There are plans in the future to provide a nitrogen gas fire suppression system. • Attic space above the eastern part of the generator bay.

III. Building Analysis

SWOT ANALYSIS

STRENGTHS	WEAKNESSES

• [General]
  ○ The architecture and structure of the building look to be in good condition.
  ○ Roofing was completely redone only 10 years ago.
	• [General]
	  ○ Minimal to no fire suppression systems are found within the building.

OPPORTUNITIES	**THREATS**

• [General]
  ○ Attic space can be utilized for additional equipment operations or item storage.
	• [General]
	  ○ Minimal to no fire suppression methods located within the power plant introduces numerous health and safe risks, as well as code violations which could impact productivity.
	• [Disaster]
	  ○ MODERATE - Due to the building's structure and equipment, if impacted by a natural or man-made disaster, emergency operations will be impacted. In the event of an EMP, all electronic equipment would be disrupted or damaged.

IV. Building Summary

On our visit to the Ray Farrell Power Plant during a recent visit, we found a wood framed building structure housing power generators with good architectural and structural integrity. However, there are currently minimal to no fire suppression measures currently in place to protect the structure, assets, and personnel within the building in case of a fire. With this in mind, we would recommend:

- Fire suppression measures, such as industrial scale nitrogen gas or carbon dioxide gas systems, should be implemented as soon as possible to mitigate possible hazards in the future.

POWER PLANT #3 - CENTRAL POWER PLANT

I. General Building Information

Number:	4
Location:	Center of the site
Stories:	One
Square Footage:	6,437 sq. ft.
Age / History:	~2005 (15 years old)
Architecture:	• Metal framing • Metal ribbed siding • Concrete slab flooring • Metal roofing
Functions / Purpose:	Power Plant, general technical operations
Occupants	Power plant workers, generator technicians
Observations:	• Architecture and structural elements of the building are in great condition. • Currently, the power generators in this power plant are the newest and most efficient generators on the campus. Power operations can be significantly expanded by installing additional generators into the fourth, fifth, and sixth bays.

II. Room and Area Analysis

i. Observation Room

Room / Area Number:	401
Location:	West side
Function / Purpose:	Control and monitoring, observation of generators,
Occupants:	Office and Administration Workers, Planners, Assistant Planners, Operation Manager, HR Manager, VIsitors
Finishes:	Gypsum wall finish, concrete flooring, ~15' high dropped ceiling tiles
Equipment / Furniture:	Generator and power plant output controls and monitoring devices, desks, fluorescent light fixtures, HVAC systems, general electrical wiring, documents
Observations:	• Observation windows are located on the east side of the room overseeing the generator bay. • A few ceiling tiles are missing and a few have acquired some water damage.
Proposal:	• Install missing ceiling tiles and replace damaged ceiling tiles.

ii. Generator Bay

Room / Area Number:	402
Location:	Center of building
Function / Purpose:	Bay to house generators for power production
Occupants:	Power plant workers, generator technicians
Finishes:	Concrete floors, exposed insulated metal roofing, walls with metal ribbed siding
Equipment / Furniture:	(1) 2MW generator, (1) 2.2MW generator, (1) 2.5MW generator, oxygen catalysts, CO scrubbers, carts, ladders, HVAC, emergency hand and eye wash stations, fans, chairs
Observations:	• Generator bay has 3 empty spaces available for generators as needed in the future. • This generator bay houses the newest, most efficient generators on site. • Power plant #3 generators average 5,000 hrs of use every year.

III. Building Analysis

SWOT ANALYSIS

STRENGTHS	WEAKNESSES

• [General]
  ○ Building architecture and structure are new and in great condition.
• [Generator Bay]
  ○ Clean and well organized.
  ○ Future proofed with empty bays open for additional generators in the future.
	• [General]
	  ○ Partial water damage in the observation and control room above sensitive equipment.

OPPORTUNITIES	**THREATS**

• [Generator Bay]
  ○ Expand power generation in the future as the need arises.
	• [Disaster]
	  ○ MODERATE - Due to the building's structure and equipment, if impacted by a natural or man-made disaster, emergency operations will be impacted. In the event of an EMP, all electronic equipment would be disrupted or damaged.

IV. Building Summary

On our visit to the Central Power Plant during a recent visit, we found a metal framed building structure housing power generators with good architectural and structural integrity. The operations within this building are in generally great condition, however, some ceiling tiles in the observation room are missing or have water damage. As these ceiling tiles are located directly above sensitive electrical equipment, we would recommend the following:

- Replace missing and damaged ceiling tiles in the observation room and monitor for future damage.

SUBSTATION AND TECHNICAL SERVICES SHOP

I. General Building Information

Number: 5

Location: Southeast of plot

Stories: Two

Square Footage: 8,343 sq. ft.

Age / History: ~2012 (8 years old)

Architecture:
- Steel framed building
- Metal ribbed siding
- Concrete slab flooring
- Metal roofing

Functions / Purpose: Vehicle maintenance, equipment maintenance, metering servicing, capacitor servicing, substation documentation, substation management

Occupants: Mechanics, substation manager, technicians, FAA drone pilots

Observations:
- The building is very new and all architectural and structural elements are in great condition.
- This building contains a lot of bathrooms to meet personnel and code requirements.

II. Room and Area Analysis

i. Service Bays

Room / Area Number: 501

Location: Ground level - east side of building

Function / Purpose: Metering services, vehicle maintenance, equipment maintenance

Occupants: Technicians, mechanics

Finishes: Exposed metal framing and roofing with insulation, concrete floors, plywood finishes on bay separators and interior office and bathroom spaces

Equipment / Furniture: Metal storage shelves, LED lights, heaters, electric meters, tools and hardware, workbenches, chairs, emergency wash stations, HVAC, first aid station

Observations:
- Vehicle maintenance could be easier with truck lifts
- Bays also serve as parking for larger vehicles. Occasionally, large equipment is brought in for welding and maintenance. Brought in through large overhead doors.
- Metering technicians spend time at the meter and capacitor workbench maintaining and programming them for better power factors
- Some supplies are left on the floor due to limited storage capacity. Employees mention the need for more clean, organized storage and working space.

Proposal:
- If possible, install truck lifts for mechanics to more easily maintain vehicles.
- Construct a larger, more organized working space for meter servicing, capacitor servicing, and general supply storage.

ii. Substation Bay Offices and Bathrooms

Room / Area Number:	502
Location:	Ground level - east side of building
Function / Purpose:	Office space for mechanics and technicians, bathrooms
Occupants:	Technicians, mechanics
Finishes:	Gypsum wall finish, 8' high gypsum ceiling finish, concrete flooring
Equipment / Furniture:	Offices - chairs, desks, AC units, phones, personal effects Bathroom - toilets, sinks, soap dispensers, cleaning supplies,
Observations:	• Bathrooms look to be ADA compliant • There are a lot of bathrooms located within this building to comply with code and personnel requirements. • Offices are pretty basic, probably serving more as a short resting area for the mechanics and document storage than anything else.

iii. Substation Lower Offices and Bathrooms

Room / Area Number:	503
Location:	Ground level - west side of building
Function / Purpose:	Document storage, cubicle space for substation workers
Occupants:	Substation workers
Finishes:	Gypsum wall finish, 8' high gypsum ceiling finish, carpeted, bathroom floors are tiled
Equipment / Furniture:	Offices - desks, chairs, cubicles, documents, storage, cabinets, personal, effects Bathrooms - toilets, sinks, soap dispensers, grab bars, mirror
Observations:	• Bathrooms look to be ADA compliant • Substation workers leave a messy office environment. • Low levels of organization. • Two bathrooms are present, one mens' and one womens'. However, there is a lack of female personnel in this office space.
Proposal:	• Resign bathrooms as gender neutral. • General clean up and install better organizational storage for technical documents.

iv. Upper Level

Room / Area Number:	504
Location:	Upper level
Function / Purpose:	Training, breakroom, office space, drone storage
Occupants:	Substation workers, substation manager, FAA drone pilots
Finishes:	Office and Breakroom - gypsum wall finish, carpeted flooring, dropped ceiling tiles Bathroom - gypsum wall finish, tiled flooring, dropped ceiling tiles Kitchen - gypsum wall finish, tiled flooring, dropped ceiling tiles
Equipment / Furniture:	Office and Breakroom - conference table, chairs, desks, projector and screen, computers, drones Bathroom - toilet, sink Kitchen - cabinets, fridge, garbage bins, microwave, first aid station, sink, coffee machine
Observations:	• Bathrooms are not ADA compliant, grab bars are missing. • Drones could use separate, dedicated storage for safe keeping • A little messy and disorganized.
Proposal:	• Make bathrooms ADA compliant, install necessary grab bars and expand bathroom size if necessary. • Create dedicated storage for drones and batteries.

III. Building Analysis

SWOT ANALYSIS

STRENGTHS	WEAKNESSES

• [General]
  ○ Building architecture and structure are new and in great condition
• [Service Bays and Bathrooms]
  ○ A lot of bathrooms to satisfy needs of personnel and code requirements.
  ○ Offices for mechanics to utilize during work.
	• [General]
	  ○ Lack of organized storage.
	• [Offices]
	  ○ Unorganized and messy.
	• [Upper Bathrooms]
	  ○ Bathrooms are not ADA compliant due to failure of proper grab bar locations and possible sizing requirements.

OPPORTUNITIES	**THREATS**

• [Service Bays]
  ○ Install truck lifts for mechanics to better service vehicles.
• [Upper Level]
  ○ Build dedicated storage for drones and related equipment.
	• [Disaster]
	  ○ LOW TO MODERATE - Due to the building's structure and equipment, if impacted by a natural or man-made disaster, emergency operations will be hampered. In the event of an EMP, metering and capacitor servicing will be impacted.
	• [Upper Bathrooms]
	  ○ Bathrooms are not ADA compliant due to failure of proper grab bar locations and possible sizing requirements.

IV. Building Summary

On our visit to the Substation and Technical Services Shop during a recent visit, we found a steel metal framed building structure. The building is new, being recently built in 2010 and houses maintenance and servicing operations, including metering services, capacitor services, and vehicle maintenance. While the building itself is in great condition, the workspaces often lack organized storage capacity and certain bathrooms within the building are not ADA compliant. Workflows of mechanics can also be optimized by installing truck lifts to speed up maintenance of vehicles. With this in mind, we would recommend the following:

- Install more organized storage solutions for workers to utilize.
- If possible, install truck lifts for mechanics to better service vehicles.
- Create organized, clean working spaces with plenty of storage for personnel to utilize.
- Rework upper level bathrooms to be ADA compliant by installing proper grab bars and expanding bathroom space if necessary for size requirements.

POWER LINE SHOP

I. General Building Information

Number:	6
Location:	Northeast of plot
Stories:	One
Square Footage:	6,500 sq. ft.
Age / History:	~1975 (45 years old)
Architecture:	• Steel metal framing • Metal ribbed siding • Concrete slab flooring • Metal roofing
Functions / Purpose:	Power line training, maintenance, servicing
Occupants	Power line workers, trainees, electricians, servicers
Observations:	• Architecture and structural elements of the building are in poor condition. • Majority of spaces are dirty, dimly lit, and worn-out. The breakroom and bathrooms are in especially poor condition and are a huge detriment to morale. • Roofing is in poor condition, and is scheduled to be redone within 5 years.

II. Room and Area Analysis

i. Power Line Shop and Training Area

Room / Area Number:	601
Location:	West side
Function / Purpose:	Worker dispatch, training, maintenance
Occupants:	Power line workers, trainees, electricians, servicers
Finishes:	Exposed steel metal framing and roofing with insulation, concrete flooring
Equipment / Furniture:	Service and dispatch vehicles, training power lines, metal racks, fluorescent lights, equipment storage
Observations:	• Outgrown space - limited working space available. • Practice lines are few and doesn't allow many opportunities for training in teams. • Roof is listed to be redone soon (within next 5 years).
Proposal:	• Remove this area and relocate it to a new space for with greater size and scope than currently present. • Include more practice lines for individual and team training.

ii. Meeting Area

Room / Area Number:	602
Location:	East side
Function / Purpose:	Meeting area
Occupants:	Power line workers, trainees, electricians, servicers
Finishes:	Mixed plywood and exposed insulated metal wall, exposed insulated metal roofing, concrete flooring
Equipment / Furniture:	Ceiling fans, fluorescent lights, table, chairs
Observations:	• Dimly light. • Not well furnished and not practical to hold meetings.
Proposal:	• Remove this area and relocate functions to a new facility with better equipment and a cleaner environment.

iii. Breakroom

Room / Area Number:	603
Location:	Northeast side
Function / Purpose:	Breakroom
Occupants:	Power line workers, trainees, electricians, servicers
Finishes:	Gypsum wall finish, 8' high gypsum ceiling finish, metal flooring
Equipment / Furniture:	TV, fridge, microwave, cabinets, trash bins, tables, chairs, bookcases, lockers
Observations:	• Very dirty and run down. • There are not enough lockers for every employee, so they have to share or find somewhere else to place their items. • Scores the lowest on the employee surveys and is a big drain on morale.
Proposal:	• Remove this area and relocate functions to a new facility with better equipment and a cleaner environment.

iv. Bathrooms

Room / Area Number:	604
Location:	Northeast side
Function / Purpose:	Bathroom
Occupants:	Power line workers, trainees, electricians, servicers
Finishes:	Gypsum wall finish, 8' high gypsum ceiling finish, polyvinyl flooring
Equipment / Furniture:	Shower, toilet, sink, urinal, soap dispenser, hygiene items, cleaning items
Observations:	• All fixtures, furniture, and equipment are very dirty and used. • No proper storage for hygiene or cleaning items, so they are scattered across the bathroom. • Scores the lowest on the employee surveys and is a big drain on morale.
Proposal:	• Remove this area and relocate functions to a new facility with better equipment and a cleaner environment.

III. Building Analysis

SWOT ANALYSIS

STRENGTHS	WEAKNESSES

• [General]
  ○ None.
	• [General]
	  ○ The building is old and in poor architectural condition.
	  ○ The majority of spaces within the building are dirty, old, dimly lit, and worn-out.
	• [Meeting Area]
	  ○ Devoid of necessary equipment and furnishings to hold productive meetings.
	• [Breakroom]
	  ○ Scores the lowest on employee satisfaction surveys and is a drain on morale for hard-working men and women.
	  ○ Insufficient number of lockers for personnel, forcing them to double-up or to clutter up other spaces with their personal items.
	• [Bathroom]
	  ○ Dirty and does not include storage for personal hygiene products, thus scattering them about the space.
	  ○ Dimly lit.

OPPORTUNITIES	**THREATS**

• [General]
  ○ There is an opportunity to scrap or completely remodel the building now before the roof is redone, pushing the issue further down the timeline.
	• [General]
	  ○ Lowers morale and does not encourage personnel to rest.
	  ○ Lack of proper storage incentivizes the cluttering up spaces that need to be kept clear for their functions.
	• [Disaster]
	  ○ HIGH - Due to the building's structure and equipment, if impacted by a natural or man-made disaster, emergency operations will be impaired or non functioning. In the event of an EMP, electronic equipment will be disrupted. In the event of an earthquake with magnitude 6 or greater, the building is at high risk of major damage or collapse.
	• [Breakroom and Bathrooms]
	  ○ Dirty environment makes it susceptible to infestations of insects and vermin.

IV. Building Summary

On our visit to the Power Line Shop during a recent visit, we found an older steel metal framed building structure with poor architectural elements. The primary issues surrounding this building are its age and condition. While the building is older, the larger issue is that facilities are poorly maintained, lack storage for employees and equipment, and are too cramped for needed training due to growth. Given the age and condition of the building, we would recommend the following:

- The power line shop is torn down and turned into needed laydown area.
- A new facility be constructed for the powerline shop with the needed storage, training areas, and quality breakrooms and bathrooms for personnel.

EAST WAREHOUSE

I. General Building Information

Number:	7
Location:	East of plot
Stories:	One
Square Footage:	4,194 sq. ft.
Age / History:	~1970 (50 years old), built on the foundation of the old pea cannery when it burned down
Architecture:	• Wood framed building • Metal ribbed siding • Concrete slab flooring • Metal roofing • No foundation footing is located on the east side of the building
Functions / Purpose:	Miscellaneous storage
Occupants	General workers
Observations:	• The warehouse is filled with miscellaneous items that workers couldn't or didn't want to find a place for. • The building has no insulation or heating equipment, making it ill-suited for temperature sensitive items that might be stored there. • With no foundation footing on the east side, the building is a seismic hazard and endangers all personnel who go in there as well as the item stored in there.

II. Building Analysis

SWOT ANALYSIS

STRENGTHS	WEAKNESSES

• [General]
  ○ Useful for miscellaneous storage.
	• [General]
	  ○ Due to the lack of proper structural foundation work, it poses a significant and immediate safety risk for all personnel that utilize this space.

OPPORTUNITIES	**THREATS**

• [General]
  ○ The space that this building occupies would be a great location for laydown.
	• [General]
	  ○ The lack of structural elements are a violation of building, health, and safety codes.
	• [Disaster]
	  ○ SEVERE - Due to the building's structure and equipment, if impacted by a natural or man-made disaster, building operations will be permanently suspended. In the event of an earthquake with magnitude 6 or greater, the building will be destroyed along with any equipment it was housing.

III. Building Summary

With the above in mind, we would recommend:

- The Eastern Warehouse be immediately torn down and repurposed into laydown area.

MISCELLANEOUS SITE LOCATIONS

I. Site Analysis

i. Operations Center Laydown Area

Area Number:	801
Location:	East side, located by the operations center
Function / Purpose:	Outdoor storage area of equipment and supplies
Equipment:	Transformers and other equipment and supplies
Observations:	• Laydown Area is in short supply due to company growth. • Equipment has around a 6 week turnover period, so supplies do not stay in the laydown area for long.
Proposal:	• If any building spaces are to be removed soon and new facilities constructed, new prime laydown area could be sectioned off. This would alleviate a shortage of space caused by growth of operations.

ii. Diesel Tanks

Area Number:	802
Location:	South side, located between the Southern Power Plant and the Substation and Technical Services Shop
Function / Purpose:	Storage of diesel used in emergency diesel generators
Equipment:	(2) 15,000 gallon storage tanks, concrete secondary enclosure - located above ground
Observations:	• Redundant storage of diesel in case of with the tanks (primary self containment) and the concrete enclosure (secondary self containment). • Currently, there are no diesel generators on this property, but diesel is kept for emergency purposes. • There is an agreement with a field supplier to rotate out old diesel fuel for new diesel to prevent it becoming too dirty.
Proposal:	• Maintain current status, expand diesel storage capacity as necessary in the future.

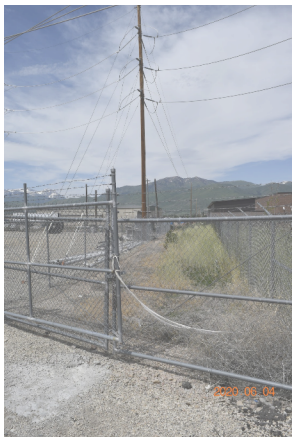
iii. High Pressure Gas Line

Area Number:	803
Location:	Southwest side, located east of the Southern Power Plant
Function / Purpose:	Supply natural gas lines across campus, reducing high pressure natural gas to lower pressures
Equipment:	Gas line
Observations:	• All generators currently on site run off of natural gas.
Proposal:	• Maintain current status, expand as necessary in the future.

iv. Power Plant Transformers

Area Number:	804
Location:	West side, located west of the Southern Power Plant
Function / Purpose:	Stepping down their dedicated power plant voltage
Equipment:	Three transformers, each with its own dedicated power plant, with two installed in 1980 and one installed recently. One de-energized transformer on standby for emergencies.
Observations:	• A transformer on this scale takes ~18 months to de-energize.
Proposal:	• Maintain current status, expand as necessary in the future.

v. West Trail and Acres



Area Number:	805
Location:	West side
Function / Purpose:	Access from Southfield park to east ballpark
Equipment:	N/A
Observations:	• Area dedicated for trail system connection.
Proposal:	• Expand the trail to the county complex.

vi. Urea Tanks

Area Number:	806
Location:	Center of campus, south of Central Power Plant
Function / Purpose:	Store and inject urea into diesel engines to eliminate NOx emissions.
Equipment:	Storage tanks
Observations:	• Urea injection is only useful for diesel engines, natural gas engines don't emit enough NOx emissions.
Proposal:	• Maintain current status, expand as necessary in the future.

vii. East Laydown Area

Area Number:	807
Location:	East side
Function / Purpose:	Outdoor storage area of equipment and supplies
Equipment:	Steel, timber, building supplies, miscellaneous equipment and supplies
Observations:	• Limited space to expand eastward without acquisition of additional land.
Proposal:	• Negotiate the purchase of the land east of the laydown area to expand needed laydown operations.

viii. Southeast Site Material Storage and Transport Area

Area Number:	808
Location:	Southwest side, located south of east laydown area
Function / Purpose:	Material storage and transport
Equipment / Materials:	Tractors, dumpsters, gravel, sand
Observations:	• Additional gravel and sand is often needed on transformer installation job sites, so workers bring extra for fill and cut landscaping.
Proposal:	• If land is acquired to the east, operations can be expanded.

ADDENDUM ANALYSIS

I. Executive Summary

After discussions with Heber Light & Power board members and employees, it was determined that further studies would need to be conducted to address observations and proposals in the previous building and site analysis report. Until operations could be expanded, current buildings would need to be remodeled to satisfy needs. Ultimately, the Operations Center, located on the north side of campus, was chosen to be the first to be updated because it houses critical operations, such as dispatch and warehouse storage. Other locations were determined to be impractical and expensive

A new analysis was performed on the Operations Center to see where improvements could be made. The analysis was conducted with four criteria in mind: efficiency of operations, safety, health/wellbeing, and accommodations/compliance. Using the analysis as a baseline, a conceptual floor plan of the Operations Center remodel was created along with its estimated cost.

II. Introduction and Purpose of Addendum

i. Introduction

The purpose of this building and site analysis addendum is to further discuss the needs and analysis of the Operations Center building located on the north side of the Heber Light and Power campus. This analysis was determined to be necessary after discussions with board members and employees at Heber Light and Power about the role the Operations Center would play in the future operations.

ii. Overview of History, Selection, and Scope

After the previous Building and Site Analysis report of the Heber Light and Power campus, discussions took place between Lythgoe Design Group, inc. and Heber Light and Power about how critical proposals and suggestions brought up in that report could be addressed. Of the different suggestions and proposals discussed, it was determined that, until a future expansion of the Heber Light and Power campus could be completed, different operations would need to be remodeled or improved. The operations needing improvement include improvement of office spaces, improvement of dispatch stations and offices, and relocation/improvement of board "war" rooms. However, the most important aspect of operations improvement was the better accommodations and work environment for employees, particularly those with disabilities.

There were a few buildings that were considered for remodeling to better improve the operations of Heber Light and Power. However, it was ultimately chosen that the Operations Center, located on the north side of campus, would be the primary target of improvement. This was considered after analyzing each building for their current purposes and ease of remodeling. The Substation and Technical Services Shop, located on the south side of campus, was also heavily considered. However, the Substation and Technical Services Shop was built without thought given to accessibility and remodeling the building to fit the purposes described above would be both impractical and expensive. The Substation and Technical Services Shop does not have adequate square footage to develop a breakroom, multiple offices, dispatch center, and war room. In addition, the Substation and Technical Services Shop would need to be remodeled on two levels, where expensive solutions would need to be taken for ADA compliance.

III. Operations Center Analysis

i. Overview of New Analysis

While the previous analysis provided broad insight into the overall design and quality of the Operations Center, this new analysis will focus more heavily on specifics and the satisfaction of certain criteria. The Operations Center was evaluated on the criteria of (I) Efficiency of Operation, (II) Safety, (III) Health and Wellbeing, and (IV) Accommodations and Compliance. These criteria were applied to each existing space/operation located within the Operations Center to see where improvement was needed. It is also of note that these criteria often influence one another, and a case can often be made that improvement to one will bring about improvement in all four.

ii. Entrance and Front Offices

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EFFICIENCY OF OPERATION

- No dedicated reception area
  - Visitors have no clear place to get information.
  - Visitors and even HL&P personnel will disturb the work of other personnel as they try and find someone with the information they need.
- No visual sightline to the north or east of the campus.
  - This makes it difficult to oversee and supervise operations.
- No dedicated waiting area
  - Visitors must stand and/or block lanes of traffic through the building when they enter.
- Insufficient lighting
  - HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time.
  - Eye strain and fatigue will affect work performance.

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SAFETY

- Egress issues
  - Southern egress travel ways must pass through warehouse space in order to exit the building.
  - Opens up concerns with compliance with fire and emergency safety codes.

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HEALTH AND WELLBEING

- Insufficient lighting
  - HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time.
- Outdated, lackluster, and unpleasant interior design
  - The comfortability of an employee's working space greatly influences their disposition, which, in turn, greatly influences their work performance.
  - Retention of employees is greatly dependent on how they feel about their working conditions. Poor working conditions will lead to greater loss of quality employees.

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ACCOMMODATIONS AND COMPLIANCE

- Many elements are not ADA compliant.
  - Parking spaces are not ADA compliant
  - Building walkup and entrance doors are not ADA compliant
  - Seating is not provided for disabled visitors
  - Non-ADA compliance has disastrous effects on operations.
  - Personnel and visitors who are disabled find it very difficult to navigate the building.
  - Personnel find it very difficult to perform their work.
  - Opens HL&P up to civil lawsuits.
- Egress issues
  - Southern egress travel ways must pass through warehouse space in order to exit the building.
  - Opens up concerns with compliance with fire and emergency safety codes.

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iii. Server Room

EFFICIENCY OF OPERATION	SAFETY
● Insufficient lighting ○ HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time. ○ Eye strain and fatigue will affect work performance. ● Inadequate organization ○ Locating equipment and supplies is made unnecessarily difficult, wasting time and leading to work inefficiency. ● Equipment is susceptible to damage in case of emergencies, such as earthquakes ○ Damaged equipment will hamper the ability of HL&P to respond in emergency situations.	● Higher voltage lines are used with server room equipment ○ Care must be taken to ensure that higher voltage lines are secure and safe, particularly during emergency operations.
HEALTH AND WELLBEING	**ACCOMMODATIONS AND COMPLIANCE**
● Insufficient lighting ○ HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time.	● ADA compliance issues ○ Server room has not been designed in a way for disabled IT personnel to work within the space. ○ Opens HL&P up to civil lawsuits.

iv. Breakroom

EFFICIENCY OF OPERATION	SAFETY
● Equipment, cabinets, and appliances are worn and outdated. ○ New, more efficient Energy Star appliances could be used instead.	● Bathrooms are directly accessible from breakroom ○ There might be health and safety concerns surrounding the proximity of these two spaces.
HEALTH AND WELLBEING	**ACCOMMODATIONS AND COMPLIANCE**
● Insufficient lighting ○ HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time. ● Outdated, lackluster, and unpleasant interior design ○ The comfortability of an employee's working space greatly influences their disposition, which, in turn, greatly influences their work performance. ○ Retention of employees is greatly dependent on how they feel about their working conditions. Poor working conditions will lead to greater loss of quality employees.	● Kitchen layout is not compliant with ADA standards ○ Personnel and visitors who are disabled find it very difficult to navigate the breakroom. ○ Cabinets, sinks, appliances, etc. should be updated to be more easily accessible and usable for those with disabilities.

v. Bathrooms

EFFICIENCY OF OPERATION	SAFETY
● Equipment and appliances are worn and outdated. ○ New, more efficient low-flow plumbing fixtures and appliances could be used instead.	● No immediate concerns
HEALTH AND WELLBEING	**ACCOMMODATIONS AND COMPLIANCE**
● No immediate concerns	● Bathroom is not compliant with ADA standards ○ Personnel and visitors who are disabled find it very difficult to navigate the bathroom. ○ Fixtures, Sinks, appliances, etc. should be updated to be more easily accessible and usable for those with disabilities according to ADA standards. ○ Opens HL&P up to civil lawsuits.

vi. Conference Room

EFFICIENCY OF OPERATION	SAFETY
● Personnel have mentioned that the conference room is not being utilized as it should be. ○ Larger conferences are taking place in other locations, often in places without disabled access. ○ Redundant conference room spaces should be consolidated into one large conference "war" room.	● No immediate concerns.
HEALTH AND WELLBEING	**ACCOMMODATIONS AND COMPLIANCE**
● Insufficient lighting ○ HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time. ● Outdated, lackluster, and unpleasant interior design ○ The comfortability of an employee's working space greatly influences their disposition, which, in turn, greatly influences their work performance. ○ Retention of employees is greatly dependent on how they feel about their working conditions. Poor working conditions will lead to greater loss of quality employees.	● Conference spaces should be consolidated to one location which is accessible to all.

vii. Dispatch

EFFICIENCY OF OPERATION	SAFETY

• Room is far too small for operation needs
  ○ Room is small and does not have enough organizational storage for operational needs
• The Dispatch room is missing necessary access and features to help their personnel
  ○ A localized break area, accessible without keying in, should be available
  ○ A localized bathroom should be readily available.
  ○ Windows and glass to better monitor operations on the campus
  ○ Equipment and room layout is not ergonomic
• Equipment is not properly secured in case of emergency / earthquake
  ○ Creates issues with operation in case of emergency.
	• Many operations on the HL&P rely on dispatchers to be on their "A" game. With current conditions, dispatchers are needlessly stressful working environments, posing a danger to other HL&P operations.

HEALTH AND WELLBEING	**ACCOMMODATIONS AND COMPLIANCE**

• Insufficient lighting
  ○ HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time.
• Outdated, lackluster, and unpleasant interior design
  ○ The comfortability of an employee's working space greatly influences their disposition, which, in turn, greatly influences their work performance.
  ○ Retention of employees is greatly dependent on how they feel about their working conditions. Poor working conditions will lead to greater loss of quality employees.
	• Dispatch is not ADA compliant
	  ○ Dispatch has not been designed in such a way for disabled operators to easily move and work within their environment.
	  ○ Too small and cramped to navigate

viii. Back Offices and Cubicles

EFFICIENCY OF OPERATION	SAFETY
• Better accommodations than most other areas.	• No immediate concerns.
HEALTH AND WELLBEING	**ACCOMMODATIONS AND COMPLIANCE**

• Insufficient lighting
  ○ HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time.
• Outdated, lackluster, and unpleasant interior design
  ○ The comfortability of an employee's working space greatly influences their disposition, which, in turn, greatly influences their work performance.
  ○ Retention of employees is greatly dependent on how they feel about their working conditions. Poor working conditions will lead to greater loss of quality employees.
	• There are certain equipment and spaces where disabled access is difficult.

ix. Warehouse

EFFICIENCY OF OPERATION	SAFETY

● Warehouse is overloaded to the point that storage needs to be done outside and in other locations.
● Lacks efficient work flow
  ○ Aisles are not aligned properly and jig-jog
● Insufficient lighting
● Surfaces need to be cleaned
  ○ Floors need to be resurfaced with epoxy coating.
● Sensitive equipment is being stored in old, dusty environments
● Racks are not secured in case of an emergency and/or earthquake.
	● Sensitive and dangerous equipment is being stored in old, dusty environments.

HEALTH AND WELLBEING	**ACCOMMODATIONS AND COMPLIANCE**
● Insufficient lighting ○ HL&P personnel and visitors suffer from eye strain/fatigue when within the building for extended periods of time.	● No immediate concerns.

x. PCB Containment Area

EFFICIENCY OF OPERATION	SAFETY
● As PCBs could be stored in other locations, the containment area is a wasted space that could be used for other purposes, such as offices.	● PCBs are located within a building that also houses offices and other human occupancy envelopes. ○ PCBs should be located in a different storage location.
HEALTH AND WELLBEING	**ACCOMMODATIONS AND COMPLIANCE**
● PCBs are located within a building that also houses offices and other human occupancy envelopes. ○ PCBs should be located in a different storage location.	● No immediate concerns.

IV. Operations Center Remodel

i. Remodel Overview

To begin the conceptual design of the Operations Center remodel, an existing floor plan of the building would need to be made first. Lythgoe Design Group, inc. field-measured the building and made details and notes of the existing structural members and design elements. After acquiring the measurements, a computer model was made to better understand and design using the building's spatial features. This computer model was used in meetings with management and different departments to discuss improvements in their operations. The following section contains a conceptual floor plan using Lythgoe Design Group, inc.'s needs analysis and the input of Heber Light and Power management and employees.

ii. Remodel Floor Plan and Technical Information

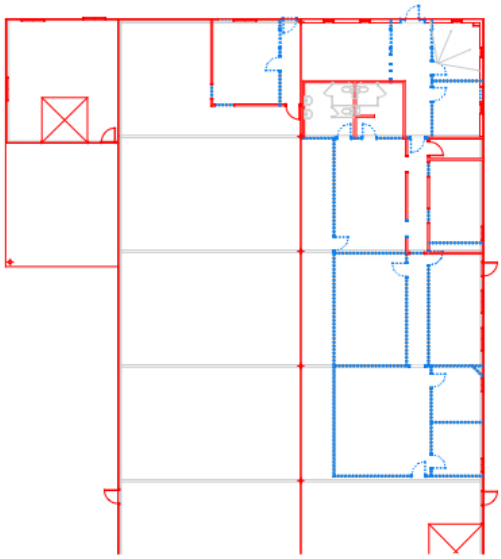

Figure A1. Conceptual Demo Floor Plan - Structures to remain highlighted red, structures to be demolished and removed highlighted in blue.

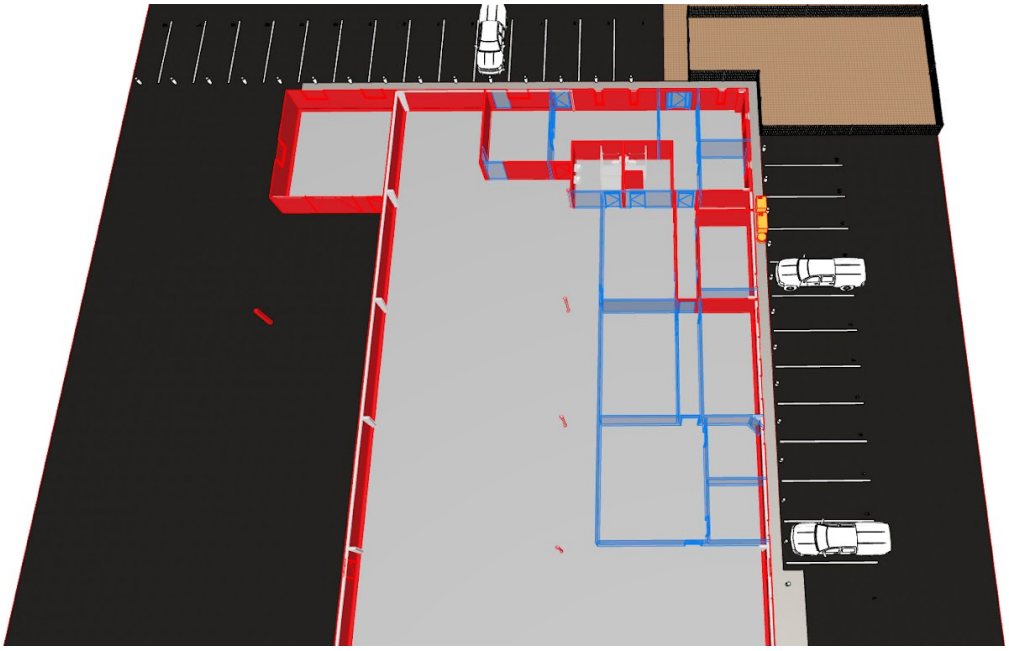

Figure A2. Demo Floor Plan 3D Perspective - Three dimensional view of Figure A1.

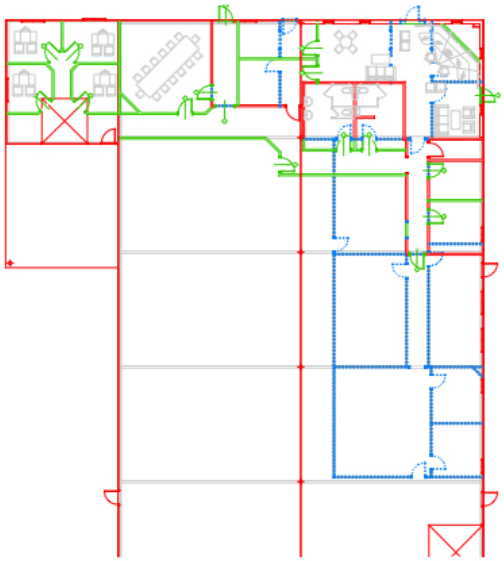

Figure A3. Conceptual Demo Floor Plan with New Structures - Structures to remain highlighted red, structures to be demolished highlighted blue, new structures highlighted green.

Figure A4. Demo Floor Plan with New Elements 3D Perspective - Three dimensional view of Figure A3.

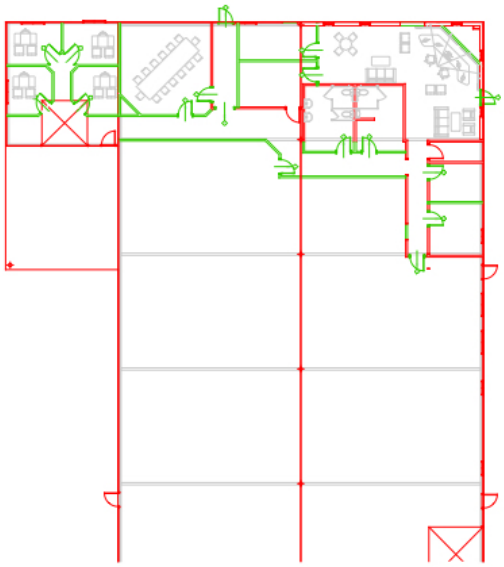

Figure A5. Conceptual New Floor Plan - Structures to remain highlighted in red, new structures highlighted in green.

Figure A6. New Floor Plan 3D Perspective - Three dimensional view of Figure A5.

iii. Cost Estimate

Based on the conceptual floor plan above, as well as input from Heber Light & Power personnel, the following is an estimated cost calculation of the proposed Operations Center remodel.

HL&P; Command Center (REMODEL) Estimated Cost Calculation

Function of Space	Square Footage (SF)	Price Per Square Foot ($ / SF)	Estimated Cost ($)
Entire building SF	12,750.00 SF	$0.00 / SF	$0.00
Demolition SF	5,200.00 SF	$15.00 / SF	$78,000.00
Remodel SF	3,340.00 SF	$110.00 / SF	$367,400.00
Contigency & soft costs	3,340.00 SF	$10.00 / SF	$33,400.00

TOTAL ESTIMATED COST	$478,800.00