UNIVERSITY of ALASKA
Many Traditions One Alaska

Chair of FLMC and CFO Approvals

1. UAF Life Sciences – FLM Chair – Project Change Request
2. UAF Patty Ice Arena Roof – CFO – SDA
3. UAF Atkins Power Plant Renewal, Phase 2 – CFO – SDA
4. UAF Arctic Health CANHR Health Clinic – CFO - Project Change Request

Division of Design & Construction
590 University Avenue
P.O. Box 758160
Fairbanks, AK 99775-8160
Phone (907) 474-5299 Fax (907) 474-7554

Total Project Cost	~~$88,275,000~~ $88,578,000
Approval Required	Chair, F&LMC

MEMORANDUM

TO: Kit Duke
Chief Facilities Officer

THROUGH: Scott Bell
Associate Vice Chancellor, Facilities Services

THROUGH: Jonathan Shambare
Director, Design and Construction

FROM: Cameron Wohlford
Sr. Project Manager

DATE: October 24, 2011

SUBJECT: Project Change Approval
Project Name: Life Sciences Research and Teaching Facility
Project No.: 2010100 LFRF

In accordance with Regents' Policy 05.12, approval by the Chair of F&LMC is required for this project. Your prompt review of this project would be greatly appreciated.

Requisite materials are enclosed.

cc: Pat Pitney
Vice Chancellor
Administrative Services
LFRF (101)

PROJECT CHANGE APPROVAL

Name of Project:	**Life Sciences Research and Teaching Facility**
Location of Project:	**UAF, Fairbanks Campus**
Project Number:	**2010100 LFRF**
Date of Request:	**October 24, 2011**

Total Project Cost:	**$ 88,578,000 (TPC increase $303,000)**
Approval Required:	**Change Approval by Chair, F&LMC**
Prior Approvals/Actions:	**Preliminary Administrative Approval: 08/15/06** **Formal Project Approval: 01/25/10** **Schematic Design Approval: 11/03/10**

POLICY CITATION

In accordance with Regents' Policy 05.12.047, approval levels required for changes in the source of funds, increases in budget, or material in project scope identified subsequent to schematic design approval shall be determined by the chief finance officer based on the extent of the change and other relevant circumstances. This determination requires judgment, but will generally be based on the nature of the funding source, the amount, and the budgetary or equivalent scope impact relative to the approved budget at the schematic design approval stage, and assigned as follows:

- Changes with an estimated impact in excess of $1.0 million will require approval by the board based on recommendations from the regents' committee responsible for facilities;
- **Changes with an estimated impact in excess of $0.4 million but not more than $1.0 million will require approval by the regents' committee responsible for facilities;**
- Changes with an estimated impact in excess of $0.2 million but not more than $0.4 million will require approval by the chair of the regents' committee responsible for facilities;
- Changes with an estimated impact in of $0.2 million or less will require approval by the chief finance officer.

RATIONALE AND RECOMMENDATION

The Life Sciences Facility will provide multiuse teaching and research labs, classrooms, and office space for life science research and academic purposes. The research portion will provide nearly 60,000 gsf lab space for biology research. The teaching portion will provide 40,000 gsf of academic classroom and lab space for biology and wildlife degree programs. The Life Sciences project also includes expansion of the West Ridge utilidor steam line, and a greenhouse replacement.

A major portion of the project involves installing utilities to the site that are sized appropriately and placed accordingly to allow for future expansion and growth of the campus on West Ridge.

Variance Report

As part of the new construction project, a new sewer lift station was planned to be installed to the north of the facility and was to be sized to handle multiple facilities in the area of Life Sciences. During subsequent design phases, the lift station was eliminated and replaced with a more favorable gravity sewer line. The gravity line is a much more reliable method of moving sanitary waste from the facility to the campus main piping.

The design of the gravity sewer main aligns down Sheenjek Drive and allows for connection by not only Life Sciences, but any existing or new facilities along that road. Two existing facilities along Sheenjek Drive (the State Virology Lab and the Biological Research Diagnostics (BiRD) Building) currently have lift stations that are costly to maintain and have a short life. The University has a strong desire to eliminate lift stations on campus due to their high operating and maintenance cost. With the new sewer line running along Sheenjek, both buildings can easily be connected to the gravity main and thus eliminate the costly lift stations.

The State of Alaska Department of Health & Social Services (DHSS) has agreed to the Life Sciences sewer project design and will connect their Virology lab building to the gravity main. This portion of the variance is easy to complete as the original contractors installed all of the necessary plumbing to a point 5 feet outside of the building for such future connectivity. The state will provide the necessary funding for a portion of sewer piping from the building to the gravity main installed by Life Sciences.

UAF Facilities Services has requested the BiRD building be placed on the new gravity sewer main as well to eliminate the costly lift station. This portion of the variance is difficult to complete and thus more costly than the Virology building. Work on the outside of the building includes a directional boring underneath a vast amount of existing utilities that feed the facility. Inside, various plumbing risers will need to be intercepted and rerouted to allow the building to drain by way of gravity. The university has allocated General Funds to make the connection from the building to the gravity main.

Total Project Cost and Funding Source(s)

Original Funding Sources:

Funding for the project will come from the State of Alaska FY11 General Obligation Bonds and from UA Revenue Bonds.

State of Alaska FY11 General Obligation Bond		$88,000,000
UA General Revenue Bond		$20,600,000
West Ridge Steam Capacity Expansion		($15,000,000)
Arctic Health Greenhouse		($ 5,325,000)
	Original TPC	**$88,275,000**

Additional Funding:

State of Alaska DHSS		$53,000
UAF General Funds		$250,000
	Additional Funding	$ 303,000
	Revised TPC	**$88,578,000**

Schedule for Completion

The schedule is not affected by the variance and remains the same as the schedule presented in the Schematic Design Approval.

DESIGN	
Conceptual Design	Complete
Formal Project Approval	*February 2010*
Schematic Design	February 2010 to September 2010
Schematic Design Approval	*November 2010*
Design Development	November 2010 to April 2011
Construction Documents	April 2011 to December 2011
CONTRACTOR SELECTION	
Advertise and Bid	November 2010
Selection Construction Contract	December 2010
CONSTRUCTION	
Start of Construction	April 2011
Date of Substantial Completion	December 2013
Date of Beneficial Occupancy	April 2014

Affirmation

Prior approvals:

Preliminary Administrative Approval	August 15, 2006
Project Agreement	December 6, 2006
Formal Project Approval	February 18, 2010
Schematic Design Approval	November 9, 2011

Action Requested

Approval by the Chair of the F&LMC for a Total Project Cost Increase from $88,275,000 to $88,578,000 for the Life Sciences Classroom and Laboratory Facility.

Supporting Documents

- One Page Budget
- Civil Site Plan (showing connections to buildings)

Approval

Recommends Project Change Approval:

Kit Duke, Chief Facilities Officer — Date: 2.10.12

Project Change Approval is hereby granted:

Carl Marrs, Chair — Date: 2/21/12

Facilities and Land Management Committee

UNIVERSITY OF ALASKA FAIRBANKS

PROJECT CHANGE APPROVAL

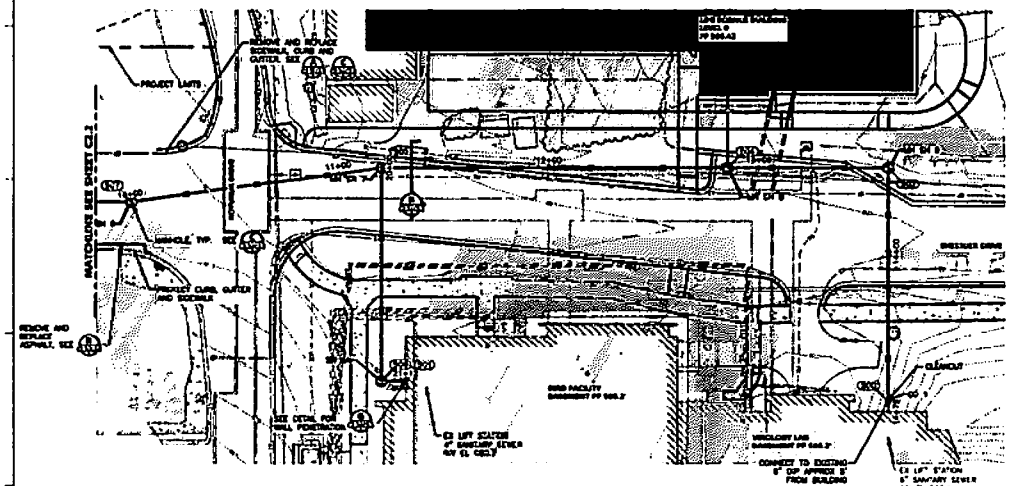
Name of Project:	**Life Sciences Research and Teaching Facility**
Location of Project:	**UAF, Fairbanks Campus**
Project Number:	**2010100 LFRF**
Date of Request:	**October 24, 2011**

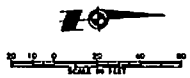
Total Project Cost:	**$ 88,578,000**
Approval Required:	**Change Approval by Chair, FLMC**
Prior Approvals/Actions:	**Preliminary Administrative Approval: 08/15/06** **Formal Project Approval: 01/25/10** **Schematic Design Approval: 11/03/10**

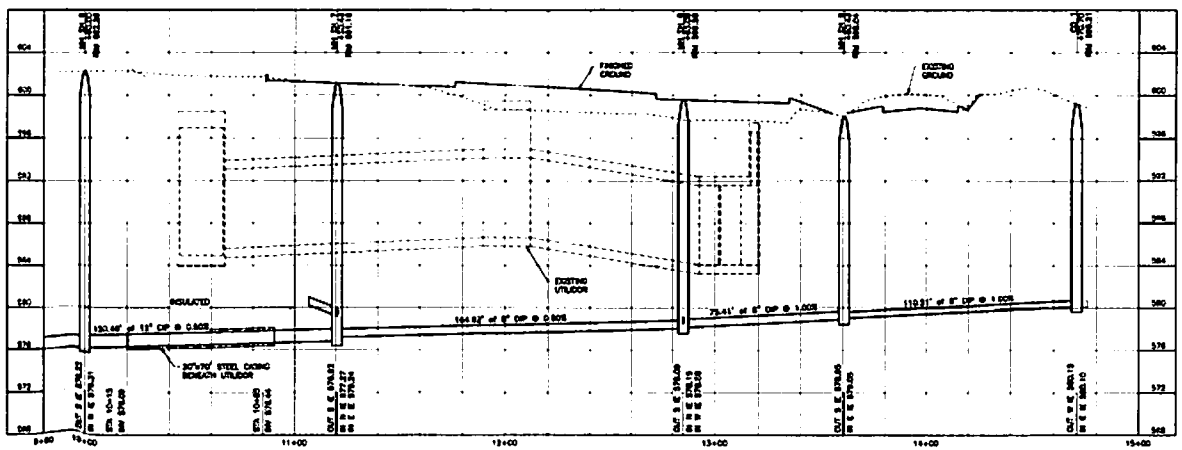
Supporting Documents

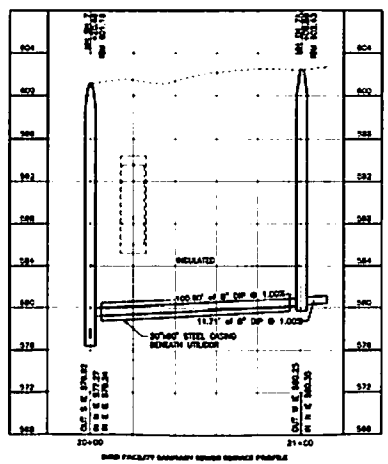
- One Page Budget
- Civil Site Plan (showing connections to buildings)

UNIVERSITY OF ALASKA		
Project Name: Life Sciences Classroom and Lab Facility		
MAU: UAF		
Building: Life Sciences Facility	Date:	10/24/2011
Campus: Fairbanks	Prepared by:	Wohlford
Project #: 2010100 LFRF	Acct #:	512035-50216
Total GSF Affected by Project:	97607	101100
PROJECT BUDGET	SDA Budget	TPC Increase
A. Professional Services		
Advance Planning, Program Development	$0	$0
Consultant: Design Services	$5,320,806	$5,787,572
Consultant: Construction Phase Services	$985,246	$1,276,686
Consul: Extra Services (List:CM@R Precon, Peer Review)	$0	$569,405
Site Survey	$25,000	$0
Soils Testing & Engineering	$50,000	$0
Special Inspections	$25,000	$125,000
Plan Review Fees / Permits	$275,000	$100,000
Other		
Professional Services Subtotal	**$6,681,052**	**$7,858,663**
B. Construction		
General Construction Contract(s)	$67,100,000	$67,700,000
Other Contractors (List: Parking, Building Relocation)	$1,350,000	$1,378,159
Construction Contingency	$3,867,425	$3,051,945
Construction Subtotal	**$72,317,425**	**$72,130,104**
Construction Cost per GSF	*$741*	*$713*
C. Building Completion Activity		
Equipment	$500,000	$500,000
Fixtures	$100,000	$150,000
Furnishings	$725,000	$650,000
Signage not in construction contract	$50,000	$50,000
Move-Out Costs	$0	$0
Move-In Costs	$300,000	$300,000
Art	$200,000	$200,000
Other (Interim Space Needs or Temp Reloc. Costs)	$0	$0
OIT Support	$450,000	$450,000
Maintenance Operation Support	$250,000	$250,000
Building Completion Activity Subtotal	**$2,575,000**	**$2,550,000**
D. Owner Activities & Administrative Costs		
Project Plng, Staff Support	$3,670,807	$3,714,245
Project Management	$2,810,717	$2,155,738
Misc. Expenses: Advertising, Printing, Supplies, Etc.	$220,000	$169,250
Owner Activities & Administrative Costs Subtotal	**$6,701,523**	**$6,039,233**
E. Total Project Cost	**$88,275,000**	**$88,578,000**
Total Project Cost per GSF	*$904*	*$876*
F. Total Appropriation(s)	**$88,275,000**	**$88,578,000**









1. CONTRACTOR SHALL SALVAGE AND REPLACE ALL STREET SIGNS
2. FOR SURFACE RESTORATION WORK NORTH OF REMOVALS, SEE DIAG. SITE PLAN, SHEET C1.2

UNIVERSITY OF ALASKA FAIRBANKS

LFRF
NEW LIFE SCIENCES BUILDING

BDS

SMITHGROUP

SEWER MAIN PLAN AND PROFILE (3 OF 3)

C2.3

2/17/2011 10:21 PM

Division of Design & Construction
590 University Avenue
P.O. Box 758160
Fairbanks, AK 99775-8160
Phone (907) 474-5299 Fax (907) 474-7554

Total Project Cost	$1,500,000
Approval Required	AVPF

MEMORANDUM

TO: Kit Duke
Associate Vice President of Facilities

THROUGH: Scott Bell
Associate Vice Chancellor, Facilities Services

THROUGH: Jonathan Shambare
Director, Design and Construction

FROM: Reed Morisky
Project Manager

DATE: January 31, 2012

SUBJECT: Schematic Design Approval
Project Name: Patty Ice Arena Roof Replacement R&R
Project No.: 2012037 PIRFR

In accordance with Regents' Policy 05.12, approval by the Associate Vice President of Facilities is required for this project. Your prompt review of this project would be greatly appreciated.

Requisite materials are enclosed.

cc: Pat Pitney
Vice Chancellor
Administrative Services

PIRFR (101)

SCHEMATIC DESIGN APPROVAL

Name of Project: **Patty Ice Arena Roof Replacement**

Location of Project: **UAF, Fairbanks Campus**

Project Number: **2012037 PIRFR**

Date of Request: **January 31, 2012**

Total Project Cost:	**$1,500,000**
Approval Required:	**Associate Vice President of Facilities (AVPF)**
Prior Approvals/Actions:	**Formal Project Approval: August 29, 2011**

POLICY CITATION

In accordance with Regents' Policy 05.12.043, Schematic Design Approval (SDA) represents approval of the location of the facility, its relationship to other facilities, the functional relationship of interior areas, the basic design including construction materials, mechanical, electrical, technology infrastructure, and telecommunications systems, and any other changes to the project since Formal Project Approval.

Unless otherwise designated by the approval authority or a Material Change in the project is subsequently identified, SDA also represents approval of the proposed cost of the next phase(s) of the project and authorization to complete the Construction Documents process, to bid and award a contract within the approved budget, and to proceed to completion of project construction.

For the Schematic Design Approval, if there has been no Material Change in the project since the Formal Project Approval, approval levels shall be as follows:

- TPC > $4 million will require approval by the Facilities and Land Management Committee (F&LMC).
- TPC > $2 million but ≤ $4 million will require approval by the Chairperson of the F&LMC.
- **TPC ≤ $2 million will require approval by the university's Associate Vice President of Facilities (AVPF).**
- TPC $150,001 to $250,000 requires approval by Vice Chancellor of Administrative Services or designee.

RATIONALE AND RECOMMENDATION

Background

The Patty Ice Arena was constructed in 1979 and is presently 32 years old. The roof system is original to the building. The existing roof system consists of a rag felt membrane, rag felt being organic (cotton) rags ground up and inserted as a binder in a felt roofing sheet. In the era it was installed (1979), using a rag felt membrane was acceptable. Most of those roofs have been replaced. The Patty Ice roof has received several patches to its membrane over the last couple of years. Currently, a well designed and constructed roof system is expected to last 20-25 years, with normal maintenance. This roof is the number one priority as it has caused recurring damage to the ice rink below. There is a concern that the structure could be compromised if replacement does not occur quickly.

Project Scope

Remove the existing roof system and replace with a new built up asphalt roof system.

Variance Report

None

Proposed Total Project Cost and Funding Source(s)

Funding Source:	FY12 Deferred Renewal Appropriation
Proposed TPC:	$1,500,000
Fund/Org:	571316-50216

Estimated Annual Maintenance and Operating Costs (O&M)

Maintenance and operations costs of the roof on the Patty Ice Arena are anticipated to drop to $300-$500 per year.

Consultant(s)

Bezek Durst Seiser was selected to provide design and estimating services for this project.

Other Cost Considerations

None

Backfill Plan

None

Schedule for Completion

DESIGN	
Conceptual Design	January 2011
Formal Project Approval	*August 29, 2011*
Schematic Design	January-February 2012
Schematic Design Approval	*February 2012*
Construction Documents	January-February 2012

BID & AWARD	
Advertise and Bid	January- February, 2012
Construction Contract Award	March 2012
CONSTRUCTION	
Start of Construction	May 2012
Date of Substantial Completion	August 2012
Date of Beneficial Occupancy	September 2012

Procurement Method for Construction
Traditional Design-Bid-Build

Affirmation
This project complies with Board Policy

Action Requested
Approval by the Associate Vice President of Facilities to develop the project documents through Schematic Design, proceed to bid and award a contract within the approved budget, and to proceed to completion of project construction.

Supporting Documents

- One Page Budget
- Roof Plan

Approval

Schematic Design Approval is hereby granted

2.7.12

Kit Duke, Associate Vice President of Facilities *Date*

SCHEMATIC DESIGN APPROVAL

Name of Project: **Patty Ice Arena Roof Replacement**

Location of Project: **UAF, Fairbanks Campus**

Project Number: **2012037 PIRFR**

Date of Request: **January 31, 2012**

Total Project Cost:	**$1,500,000**
Approval Required:	**Associate Vice President of Facilities (AVPF)**
Prior Approvals/Actions:	**Formal Project Approval: August 29, 2011**

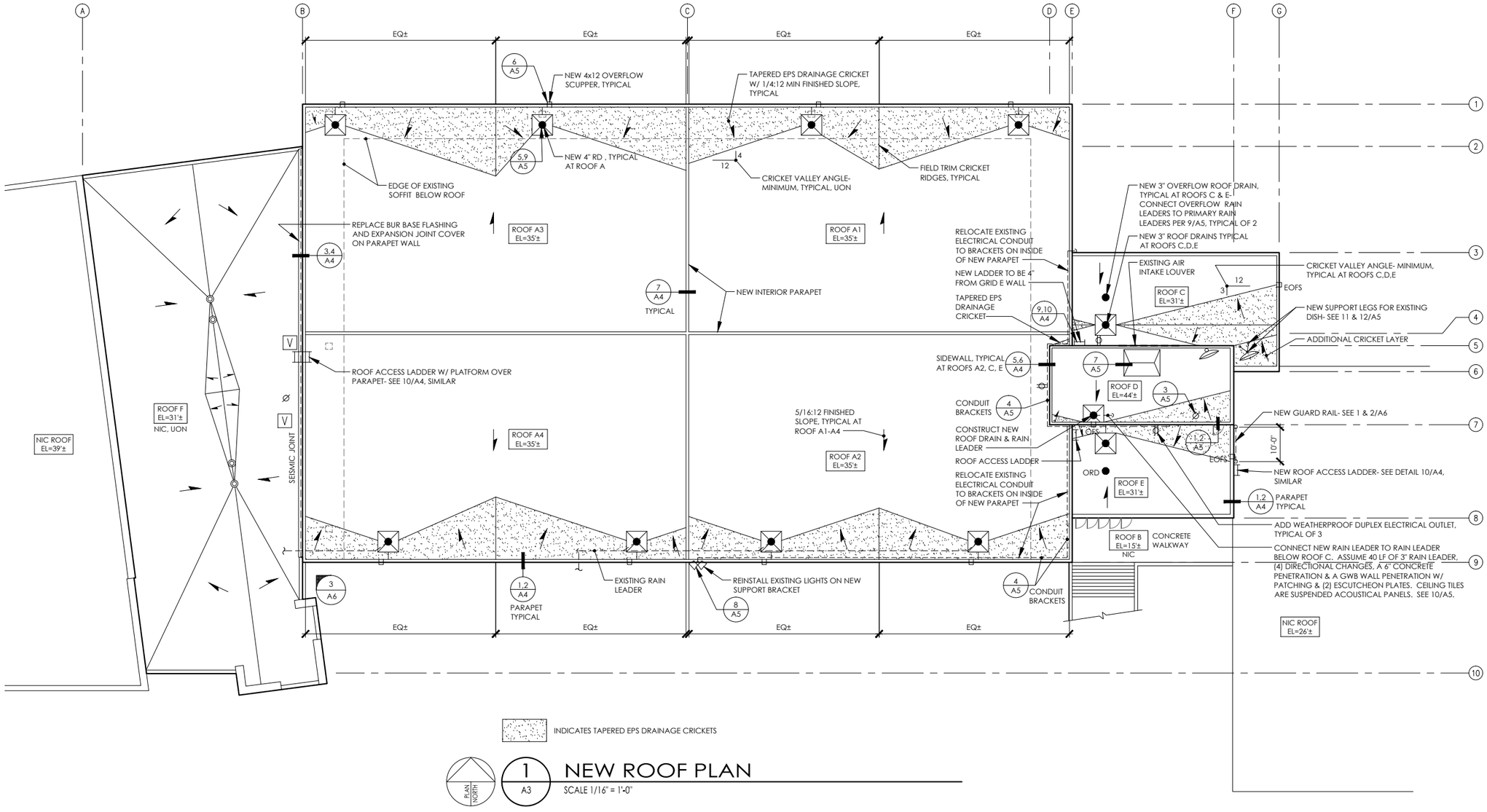
SUPPORTING DOCUMENTS

- One Page Budget
- Roof Plan

UNIVERSITY OF ALASKA

Project Name:	Patty Ice Arena Roof Replacement		
MAU:	UAF		
Building:	FS413 - Patty Ice Arena	Date:	January 26, 2012
Campus:	UAF - Main	Prepared By:	Reed Morisky
Project #:	2012037 PIRFR	Account No.:	103010-571316
Total GSF Affected by Project:	33100		

PROJECT BUDGET	FPA Budget	SDA Budget
A. Professional Services		
Advance Planning, Program Development		$0
Consultant: Design Services		$98,714
Consultant: Construction Phase Services		$30,000
Consul: Extra Services (List:_____)		$0
Site Survey		$0
Soils Testing & Engineering		$0
Special Inspections		$0
Plan Review Fees / Permits		$3,500
Other		$0
Professional Services Subtotal		**$132,214**
B. Construction		
General Construction Contract (s)		$1,000,238
Other Contractors (List:_____)		$59,820
Construction Contingency		$106,006
Construction Subtotal		**$1,166,064**
Construction Cost per GSF		***$35.23***
C. Building Completion Activity		
Equipment		$0
Fixtures		$0
Furnishings		$0
Signage not in construction contract		$0
Move-Out Cost/Temp. Reloc. Costs		$1,500
Move-In Costs		$500
Art		$0
Other (List:_____)		$0
OIT Support		$0
Maintenance/Operation Support		$10,000
Building Completion Activity Subtotal		**$12,000**
D. Owner Activities & Administrative Cost		
Project Planning and Staff Support		$58,963
Project Management		$118,060
Misc Expenses: Advertising, Printing, Supplies		$12,700
Owner Activities & Administrative Cost Subtotal		**$189,723**
E. Total Project Cost		**$1,500,000**
Total Project Cost per GSF		***$45.32***
F. Total Appropriation(s)		**$1,500,000**



INDICATES TAPERED EPS DRAINAGE CRICKETS

PLAN NORTH

1 / A3 NEW ROOF PLAN

SCALE 1/16" = 1'-0"

NOTES:

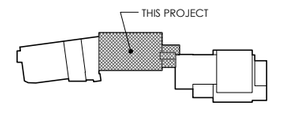
1. EXISTING ROOF DRAIN LOCATIONS HAVE NOT BEEN PRECISELY VERIFIED. CONTRACTOR IS TO FIELD VERIFY EXISTING DRAIN LOCATIONS AND SIZES.
2. CONTRACTOR TO LOCATE EXISTING ROOF DRAIN LOCATIONS PRIOR TO ORDERING CRICKET INSULATION. CONSTRUCT NEW CRICKETS SO THAT DRAINAGE AREAS ARE ROUGHLY EQUAL AT EACH ROOF DRAIN.
3. ROUTE ELECTRICAL POWER FROM ELECTRICAL PANEL THROUGH INSIDE OF MECHANICAL ROOM TO EACH OUTLET.
4. ROUTE ELECTRICAL CONDUIT WITH DRAINAGE SLOPE AND PROVIDE J-BOXES IF NEEDED TO DRAIN MOISTURE.

INSULATION THICKNESS CHART

ROOF SECTION	POLYISO INSULATION	TAPERED EPS INSULATION MINIMUM*	TAPERED EPS SLOPE CUT	EXISTING DECK SLOPE (VIF)
A1-A4	(3) 2 1/2" LAYERS	1/2"	1/8:12	1/8+:12 (.014)
C	(3) 2 1/2" LAYERS	3"	1/8:12	1/8:12
D	(3) 2 1/2" LAYERS	3"	1/8:12	1/8:12
E	(3) 2 1/2" LAYERS	3"	1/8:12	1/8:12

* MINIMUM INSULATION THICKNESS AT ROOF LOW POINT

KEY PLAN



UAF
UNIVERSITY OF ALASKA FAIRBANKS

STATE OF ALASKA
10TH
Victor V. Valenote
No.10438
January 25, 2012
REGISTERED PROFESSIONAL ARCHITECT

BDS
Bezek Durst Seiser, Inc.
3330 C Street, Suite 200
Anchorage, Alaska 99503
P.907.562.6076
F.907.562.6635
www.bdsak.com

FAIRBANKS, ALASKA

UAF
PATTY ICE
REROOF

UAF PROJECT NO.: 2012037 PIRFR
BDS PROJECT NO.: 61000306

PHASE
BID DOCUMENTS
DATE
January 25, 2012
DRAWING TITLE
NEW
ROOF PLAN

A3

Division of Design & Construction
590 University Avenue
P.O. Box 758160
Fairbanks, AK 99775-8160
Phone (907) 474-5299 Fax (907) 474-7554

Total Project Cost	$1,927,000
Approval Required	AVPF

MEMORANDUM

TO: Kit Duke
Associate Vice President of Facilities

THROUGH: Scott Bell
Associate Vice Chancellor, Facilities Services

THROUGH: Jonathan Shambare
Director, Design and Construction

FROM: Mike Ruckhaus
Sr. Project Manager

DATE: February 1, 2012

SUBJECT: Schematic Design Approval
Project Name: Atkinson Power Plant Renewal Phase 2
Project No.: 2012032 BARN2

In accordance with Regents' Policy 05.12, approval by the Associate Vice President of Facilities is required for this project. Your prompt review of this project would be greatly appreciated.

Requisite materials are enclosed.

cc: Pat Pitney
Vice Chancellor
Administrative Services

BARN2 (101)

SCHEMATIC DESIGN APPROVAL

Name of Project: **Atkinson Power Plant Renewal Phase 2**

Location of Project: **UAF, Fairbanks Campus**

Project Number: **2012032 BARN2**

Date of Request: **February 1, 2012**

Total Project Cost:	**$1,927,000 (Phase 2)**
Approval Required:	**Associate Vice President of Facilities (AVPF)**
Prior Approvals:	**Preliminary Administrative Approval: November 2008** **Formal Project Approval: June 3, 2011 ($40.4M TPC)**

POLICY CITATION

In accordance with Regents' Policy 05.12.043, Schematic Design Approval (SDA) represents approval of the location of the facility, its relationship to other facilities, the functional relationship of interior areas, the basic design including construction materials, mechanical, electrical, technology infrastructure, and telecommunications systems, and any other changes to the project since Formal Project Approval.

Unless otherwise designated by the approval authority or a Material Change in the project is subsequently identified, SDA also represents approval of the proposed cost of the next phase(s) of the project and authorization to complete the Construction Documents process, to bid and award a contract within the approved budget, and to proceed to completion of project construction.

For the Schematic Design Approval, if there has been no Material Change in the project since the Formal Project Approval, approval levels shall be as follows:

- TPC > $4 million will require approval by the Facilities and Land Management Committee (F&LMC).
- TPC > $2 million but ≤ $4 million will require approval by the Chairperson of the F&LMC.
- **TPC ≤ $2 million will require approval by the university's Associate Vice President of Facilities (AVPF).**

RATIONALE AND RECOMMENDATION

Background

UAF's Atkinson Heat and Power Plant and utilidors are the heart of campus infrastructure for providing heat, light, water, and other utilities to the students, staff, and faculty. As the campus expands, the demand on these aging utilities also increases. The power plant was originally constructed in 1964 and consisted of two stoker fired coal boilers and two 1.5 MW backpressure turbines. This equipment is still in service, and UAF depends on its reliable operation to supply heat and power to campus.

There have been additions and upgrades to the plant since 1964, but prior to this project, there has not been a major renewal of the plant since original construction. An oil fired boiler was installed in 1972 to provide additional steam capacity and reliability. The next major improvement to the plant was the installation of a 10MW steam extraction turbine in 1982 which was followed by the installation of another oil fired boiler. The last upgrade of the plant was the installation of a 9.6MW diesel engine generator in 1998.

The plant has provided the campus with reliable heat and power for many years, but an event in December, 1998 highlighted the need to renew aging equipment. The plant narrowly avoided a catastrophic failure when a boiler tube rupture filled the plant and switchgear room with water and steam. The resulting six hour power outage had a major impact on the campus, and it highlights the need to replace or rehabilitate the major equipment that is now over 45 years old.

In 2006, UAF hired a consultant to perform a comprehensive study of the condition of the existing utility systems, including the Atkinson Power Plant. The study also evaluated the need for utility expansion to keep pace with projected campus growth. The resulting Utility Development Plan contained the following recommendations:

> "*In order to continue to reliably serve all campus utility needs over the next twenty years UAF must:*
> - *Invest substantially in utility system capital asset renewal and utility infrastructure improvements*
> - *The best long term utility strategy is renewal and expansion of the Atkinson plant. This strategy is the best strategic, operational and financial fit for UAF."*

The funding to implement the total scope of work contained in the 2006 Utilities Development Plan will not be available in one appropriation, thus the work will be done in a phased approach. Formal Project Approval by the Board of Regents was granted for $40.4M in June 2011. The purpose of the aforementioned approval was to provide overall Formal Project Approval for all phases. Subsequent Schematic Design Approvals will be obtained for each phase as funding is received each fiscal year. The estimated duration of funding is estimated to span five fiscal years. The overall budget and progress for the total project will be periodically reported to the Board of Regents.

The attached Atkinson Power Plant Work Items provides an up to date summary of projects completed, in design and planned for the future. Phase 1 construction is nearly complete ($2.6M, FY11 funds).

Phase 1 work included correction of items that had failed or were near failure which highlighted the continued need to renew elements of the aging Atkinson Heat and Power Plant.

Project Scope

Phase 2 work consists of four primary items; each item will be described separately.

De-aerator Replacement: The de-aerator is an essential piece of equipment to operate the steam plant. It removes air from the steam to prevent corrosion in the boilers and turbine. The existing de-aerator represents a single point of failure for the entire Atkinson plant. It has been in continuous service since 1964. It is currently experiencing leaks at connection points that have been partially repaired while in service, but a total plant shutdown is needed to complete the repairs. It is proposed to provide a redundant de-aerator that can be put into service with a short plant shut down in lieu of replacing the existing equipment. The existing de-aerator can then be repaired and used as back-up. The installation of the new de-aerator will require removal of the side of the building for access.

Feed-water Heater Replacement: The existing feed-water heater has been in service since 1964. It is also a single point of failure for the power plant as the plant will not operate without it. The existing heater has required several emergency repairs in the last two years and it is believed it is near failure. It is proposed to replace the existing heater with new equipment at a time of low steam load. This plan will not require a complete plant shutdown.

Eliminate Single Points of Failure in Critical Piping: Plant operations have historically been difficult when boilers and turbines cannot be adequately isolated or bypassed during non-routine situations. This inability to have operation flexibility has been an item of concern for many years. This deficiency also has the potential to significantly lengthen an outage due to a pipe leak or boiler failure. A lengthy delay in service during winter could be catastrophic for the UAF campus. The proposed scope of work includes installation of 12 new valves and some bypass piping. These valves will allow boilers to be isolated and sections of the high pressure piping can be bypassed during a boiler failure.

Replace Variable Frequency Drives: Variable Frequency Drives (VFD's) were installed in the plant starting in approximately 1985 as they are more energy efficient and provide better control than standard electric motors and motor starters. These early vintage VFD's are no longer supported by the manufacturers, and spare parts are almost impossible to find. These VFD's drive many of the critical processes in the Atkinson Heat and Power Plant including boiler fans and pumps. The allocation of FY12 funds does not allow the replacement of all VFD's in the plant, but key VFD's that power fans and pumps for Boilers 3 and 4, as well as condenser fans for Turbine No. 3 will be replaced in this phase.

Variance Report

The original scope and cost estimates for the Atkinson renewal items were developed in 2006 with only basic concept engineering completed. There are many variables over time that will cause costs to go up and down including inflation and unknowns in the scope, and changed conditions in the plant. For the items that are proposed in Phase 2, The VFD replacement is approximately $900,000 over the originally

estimated cost for total replacement. This is mainly due to increases in electrical equipment costs and installation problems that were not originally identified.

The de-aerator replacement and critical piping changes are estimated to be approximately $800,000 less than originally estimated. This is primarily due to a different piping approach than was anticipated in the concept stage. The two changes result in a net increase of $100,000 from the amounts proposed in the Formal Project Approval and places a portion of the VFD replacement in a future phase.

Proposed Total Project Cost and Funding Source(s)

FY12 General Funds	571311-50216	$927,500
Bonds	514498-50216	$1,000,000
Total		**$1,927,500**

Estimated Annual Maintenance and Operating Costs (O&M)

It is anticipated that annual O&M will decrease.

Consultant(s)

Design Alaska, Inc. and Evergreen Engineering

Other Cost Considerations

None

Backfill Plan

N/A

Schedule for Completion

DESIGN	
Conceptual Design	October, 2006
Formal Project Approval	*June 2011*
Schematic Design	December 2011
Schematic Design Approval	*February 2012*
Equipment Purchase	April 2012
Design Development	March, 2012
Construction Documents	May 2012
BID & AWARD	
Advertise and Bid	May 2012
Construction Contract Award	June 2012
CONSTRUCTION	
Start of Construction	July 2012
Date of Substantial Completion	July 2013
Date of Beneficial Occupancy	July 2013

Procurement Method for Construction

Major equipment will be purchased using standard bid procedures. The design will be completed using the detailed vendor drawings. The construction contract will use traditional Design-Bid-Build contracts.

Affirmation

This project complies with Board Policy.

Action Requested

Approval by the Associate Vice President of Facilities to complete the project construction documents, and to bid and award the project in accordance with the total project budget

Supporting Documents

- One Page Budget
- Atkinson Power Plant Work Items
- Schematic Design Drawings

Approval

Schematic Design Approval is hereby granted

2.10.12

Kit Duke, Associate Vice President of Facilities *Date*

SCHEMATIC DESIGN APPROVAL

Name of Project: **Atkinson Power Plant Renewal Phase 2**

Location of Project: **UAF, Fairbanks Campus**

Project Number: **2012032 BARN2**

Date of Request: **February 1, 2012**

Total Project Cost:	**$1,927,000**
Approval Required:	**Associate Vice President of Facilities (AVPF)**
Prior Approvals/Actions:	**Preliminary Administrative Approval: November 2008** **Formal Project Approval: June 3, 2011 ($40.4M)**

SUPPORTING DOCUMENTS

- One Page Budget
- Atkinson Power Plant Work Items
- Schematic Design Drawings

UNIVERSITY OF ALASKA

Project Name:	Ben Atkinson Heating Plant Renewal Phase 2		
MAU:	UAF		
Building:	FS802	Date:	January 31, 2012
Campus:	Fairbanks	Prepared By:	Mike Ruckhaus
Project #:	2012032 BARN2	Account No.:	514498/571311-50216
Total GSF Affected by Project:	N/A		

PROJECT BUDGET	FPA Budget	SDA Budget
A. Professional Services		
Advance Planning, Program Development		$0
Consultant: Design Services		$180,000
Consultant: Construction Phase Services		$60,000
Consul: Extra Services (List:_____)		$0
Site Survey		$0
Soils Testing & Engineering		$0
Special Inspections		$15,000
Plan Review Fees / Permits		$0
Other		$0
Professional Services Subtotal		**$255,000**
B. Construction		
General Construction Contract (s)		$900,000
Other Contractors (List:_____)		$0
Construction Contingency		$149,000
Construction Subtotal		**$1,049,000**
Construction Cost per GSF		***N/A***
C. Building Completion Activity		
Equipment		$400,000
Fixtures		$0
Furnishings		$0
Signage not in construction contract		$0
Move-Out Cost/Temp. Reloc. Costs		$0
Move-In Costs		$0
Art		$0
Other (List:_____)		$0
OIT Support		$0
Maintenance/Operation Support		$0
Building Completion Activity Subtotal		**$400,000**
D. Owner Activities & Administrative Cost		
Project Planning and Staff Support		$76,680
Project Management		$146,100
Misc Expenses: Advertising, Printing, Supplies		$0
Owner Activities & Administrative Cost Subtotal		**$222,780**
E. Total Project Cost		**$1,926,780**
Total Project Cost per GSF		***N/A***
F. Total Appropriation(s)		**$1,927,500**

Atkinson Heat and Power Plant Renewal Scope
January 2012

The following table shows the items in their approximate order of priority to the operational mission and their status:

Atkinson Renewal Items for FY11 allocation of $2.6M:

Item	Item needed if new plant is constructed	Cost	Description
Partial replace boiler tubes for Boilers 1&2 **(Project: BAST – Complete)**	No	$990,000	Replace superheater tubes (approximately 25% of the total tubes) which inspections have shown to be in the worst condition. Also perform ultrasonic testing on the remainder of the tubes and other parts to ascertain their condition.
Replace Boiler No. 4 air pre-heater **(Project: BAPH4 complete)**	Yes	$245,000	A recent inspection has revealed that this heater is near failure. If it fails, boiler No. 4 will not be able to provide steam which significantly reduces the steam plant redundancy.
Additional domestic water aerator **(Phase 1 (BARN1) – 80% complete)**	Yes	$1,495,000	This item provides installation of a second parallel unit to enable extended shutdown of the existing tank and its internal components for inspection and repair. It requires a small addition to the building.
TOTAL		**$2,600,000**	

Atkinson Renewal Items for FY12 allocation of $1,927,500 ($927,500 GF + $1,000,000 Bond):

Item	Item needed if new plant is constructed	Cost	Description
Add second deaerator tank	Yes	$860,000	Existing unit has been in service in excess of 40 years. Install new unit in parallel with existing. Partial emergency repairs were completed in 2011 but replacement is needed.
Replace feedwater heater	Yes	$180,000	Existing feedwater heater is approaching the end of its useful life and is a potential single point of failure.
Eliminate single points of failure in critical piping (partial scope)	Yes	$520,000	Eliminate single points of failure in critical piping: A large portion of the piping system is on the order of 40 years old.
Replace existing variable frequency drives (partial scope)	Yes	$367,500	Replace 25 year old variable frequency drives as parts are not available to repair
TOTAL		**$1,927,500**	

Atkinson Plant Renewal Items (FY13-17), in order of priority:

Item **(Phases to be Determined)**	Item needed if new plant is constructed	Cost	Description
Replace existing variable frequency drives (partial scope)	Yes	$1,362,500	Replace 25 year old variable frequency drives as parts are not available to repair
Continuous emissions monitoring for Boiler No. 4	Yes	$425,000	Continuous Emissions Monitoring for Boiler No. 4: Existing air permit includes 10% capacity constraint for Boiler #4 that would be lifted with installation of continuous monitoring.
Eliminate single points of failure in critical piping (partial scope)	Yes	$648,000	Eliminate single points of failure in critical piping: A large portion of the piping system is on the order of 40 years old.
Eliminate single points of failure in condensate system	Yes	$337,000	This measure would provide the ability to handle condensate from a second holding tank location, allowing the existing 1964 vintage steel tank to be taken down for inspection and repair.
Increase RO capacity	Yes	$350,000	Reverse Osmosis is used in water treatment for make-up water in the steam generation process.

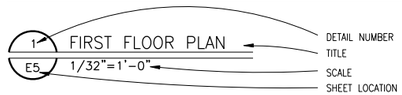
Replace existing demineralizer	Yes	$425,000	Demineralized water is used as make up in the steam generation process. Existing unit is approaching useful design life. The new demineralizer could supply the new power plant.
Replace obsolete control system	Yes	$2,500,000	This is an aging plant control system (1980's vintage). This system runs the bulk of the steam generation facility. Controllers are becoming difficult to obtain due to product obsolescence.
Expansion of ash silo	No	$4,000,000	The new coal boiler project would eliminate the need for this project.
Rail spur maintenance	Yes	$250,000	Because the University's rail spur is used as the primary conduit for coal, it has been in near continuous service for over 40 years and is in need of maintenance.
Reconstruct feedwater pumping station	No	$750,000	This measure would remove the abandoned 1960's vintage feedwater pumping station and replace it with new technology multistage pumps.
Additional water storage tank for redundancy	Yes	$2,500,000	Additional water storage tank for redundancy: This is a reliability and redundancy measure that would allow isolation and drainage of the existing tank for periodic cleaning, inspection and repair.
Utilidor ventilation	Yes	$425,000	Installation of fire rated door assemblies at the plant/utilidor access points and certain locations at campus buildings has eliminated natural ventilation in large portions of the utilidor system, causing a large amount of condensation on exposed steel and significant corrosion. This measure would install ventilation shafts in sealed areas of the utilidor system.
Pave Atkinson parking lot for dust control (air permit issue)	Yes	$200,000	Pave Atkinson parking lot for dust control (air permit issue): Efficient Operation of a utility plant of this nature requires relatively good vehicle access. During wet conditions, access to the backside of the plant is restricted.
Replace boiler tubes for Boilers 1&2	No	$11,475,000	Replace boiler tubes for Boilers 1&2: Existing units have been in service in excess of 40 years. Perform thorough NDE inspection of tubes. Replace as indicated. Rehabilitate existing mechanical components such as fans, coal elevator, stoker grates, ash removal, etc.

Improve domestic water taste (membrane filtration)	Yes	$425,000	Improve Domestic water taste (membrane filtration): This measure would install point-of-use membrane filtration units in key locations to reduce consumer concern about taste.
Back-up cooling water	No	$350,000	This is a reliability measure to provide redundancy in a system that is critical to operation of power generation. Existing single wall unit is in excess of design life.
Convert Boiler No. 3 to dual fuel (natural gas and oil)	Yes	$500,000	Add current natural gas burner technology to Unit #3 to allow operation with less expensive fuel source. Operation with natural gas may have a positive impact on the University's air quality permit application. (These are contained in the Natural Gas Strategy Capital Costs in Appendix A Section).
Replace thinwall steel chilled water piping on Lower Campus	Yes	$1,750,000	Replace thin wall steel chilled water piping on Lower Campus: Piping in portions of the existing chilled water distribution system on lower campus was constructed of a thin wall material subject to corrosion and failure.
Additional condenser capacity	No	$1,500,000	Additional condensers will allow the steam turbine to increase its output in the summer.
Replace steam and condensate lines to U-Park	Yes	$5,000,000	The pipes are near the end of their useful life.
New water plant controls	Yes	$200,000	Existing controls are not supported by the manufacturer and are at the end of their life.
Raw water pumping station re-build	Yes	$250,000	
Central air compressor replacement	Yes	$250,000	
TOTAL		**$35,872,500**	
PROJECT TOTAL (FY11/12 work plus FY13-17 work)		**$40,400,000**	

UNIVERSITY OF ALASKA FAIRBANKS
ATKINSON POWER PLANT RENEWAL
PHASE 2
PROJECT NUMBER 2010140 BARN

ELECTRICAL DRAWINGS INDEX

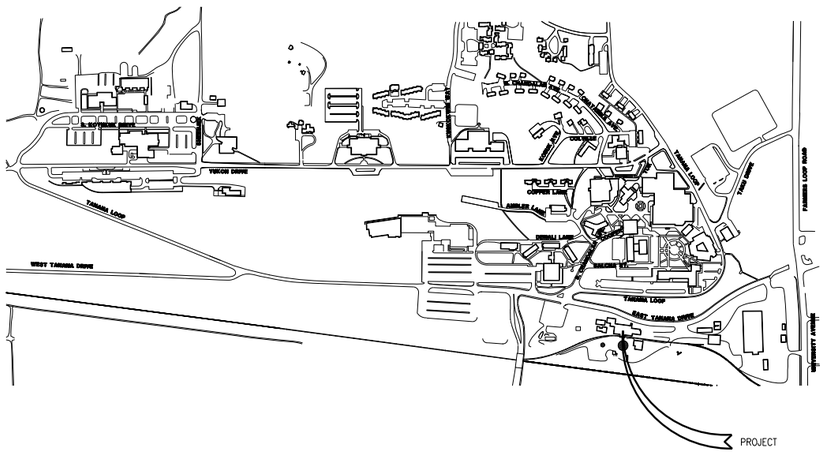
LEGEND



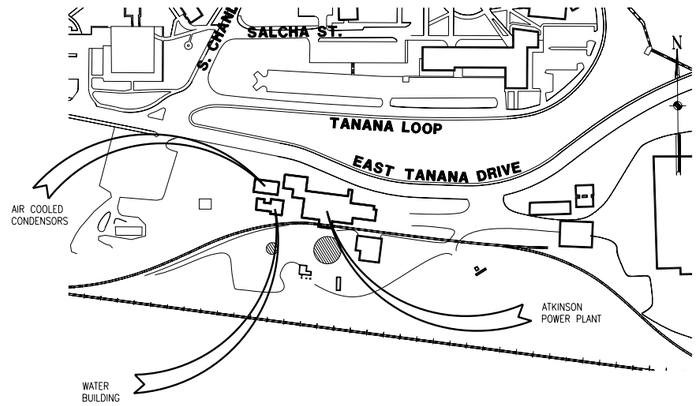
PLAN NORTH

123 ROOM NUMBER

VICINITY MAP – UAF



VICINITY MAP – FACILITY



GENERAL NOTES

1. ANY MATERIAL ENCOUNTERED DURING DEMOLITION WHICH IS SUSPECTED OF CONTAINING ANY HAZARDOUS MATERIAL (ASBESTOS) SHALL BE IMMEDIATELY REPORTED TO THE UNIVERSITY OWNER'S REPRESENTATIVE FOR REMOVAL.

Revision Date No.

ATKINSON POWER PLANT RENEWAL PHASE 2

Design Alaska
Architects Engineers Surveyors
601 College Road Fairbanks, Alaska 99701
Telephone 907 452 1241

NOT FOR CONSTRUCTION
DESIGN DEVELOPMENT DOCUMENTS
FOR REVIEW ONLY

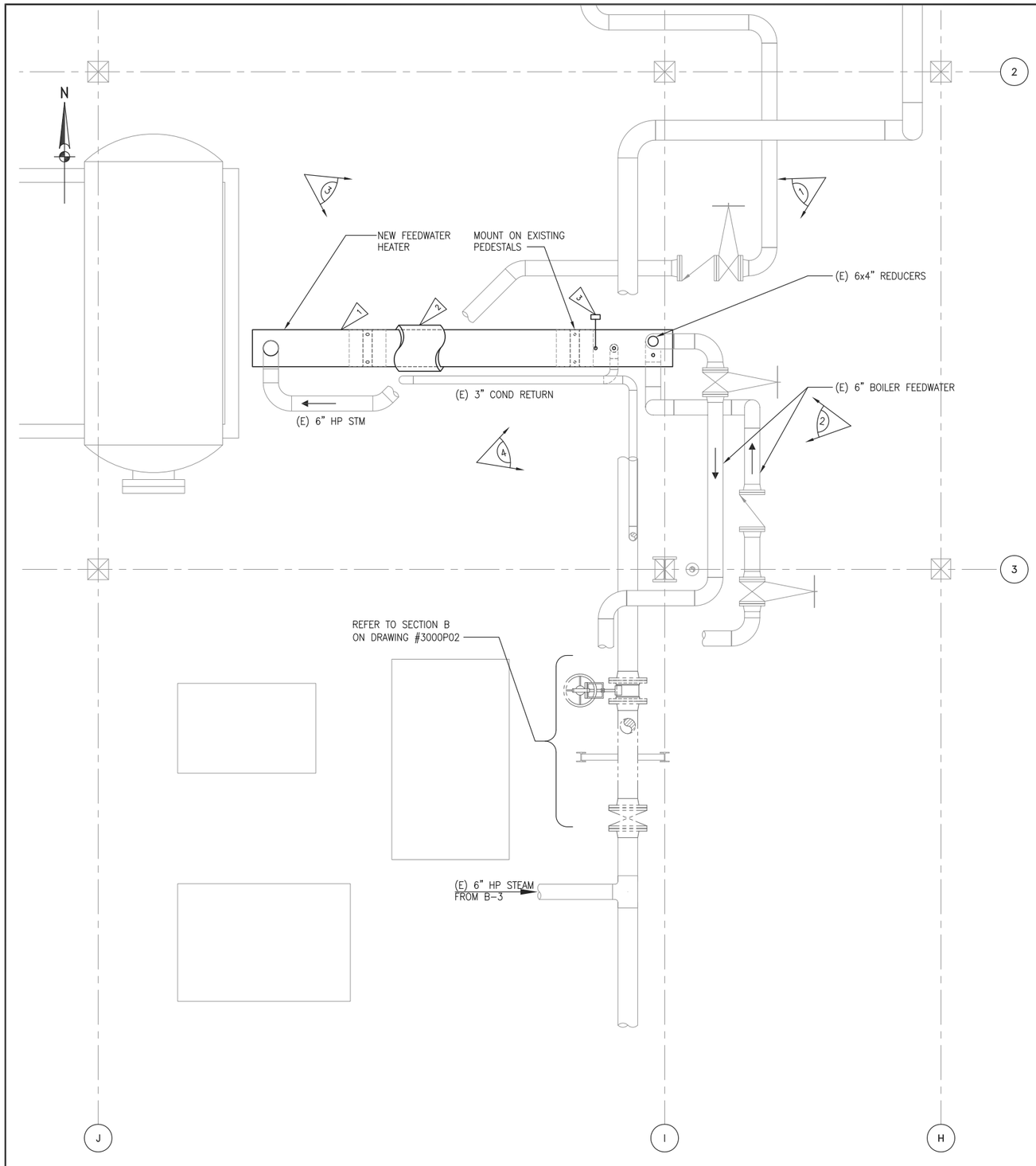
ELECTRICAL TITLE SHEET

3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

Date 28 NOV 2011 Comm. No. 031117
In Charge RAC
Drawn By RH
Checked By

T1

11/28/2011 2:59 PM
031117_T1.DWG



BASEMENT PIPING PLAN (EL: 422'-0")

1/2"=1'-0"

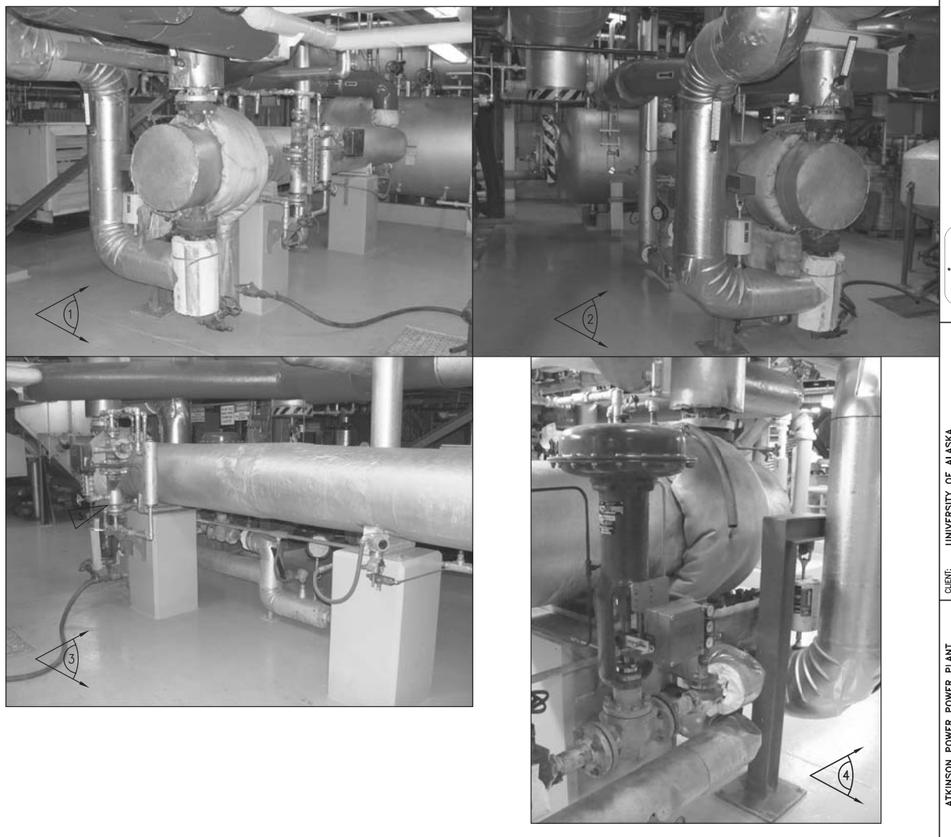
NOTES

A. FOR GENERAL NOTES AND PIPING SUPPORT DETAILS PXX-XX SEE DRAWING #100P01.

KEYED NOTES

1. REPLACE EXISTING FEEDWATER HEATER WITH NEW FEEDWATER HEATER. TIE-IN EXISTING PIPING TO NEW FEEDWATER HEATER. SEE FEEDWATER HEATER SPECIFICATIONS AND REFERENCE DRAWING #1000M01. NEW FEEDWATER HEATER NOZZLE LOCATIONS TO MATCH EXISTING.
2. 3½" FIBER GLASS INSULATION WITH ALUMINUM LAGGING. RE-USE EXISTING INSULATION JACKET AT EXPANSION JOINT. CONTRACTOR TO FIX ANY DAMAGED INSULATION/PIPING AT RE-INSTALL OF FEEDWATER HEATER.
3. RE-INSTALL EXISTING FISHER MAGNATROL AND ALL GAGES ON NEW FEEDWATER HEATER.

REFERENCE IMAGES:



REVIEW & COMMENT

REV	BY	APPD	DATE	DESCRIPTION
A	ZB	JRS	11/29/11	REVIEW & COMMENT

EVERGREEN ENGINEERING
Engineering and Construction Services
EUGENE, OREGON
www.evergreenengineering.com

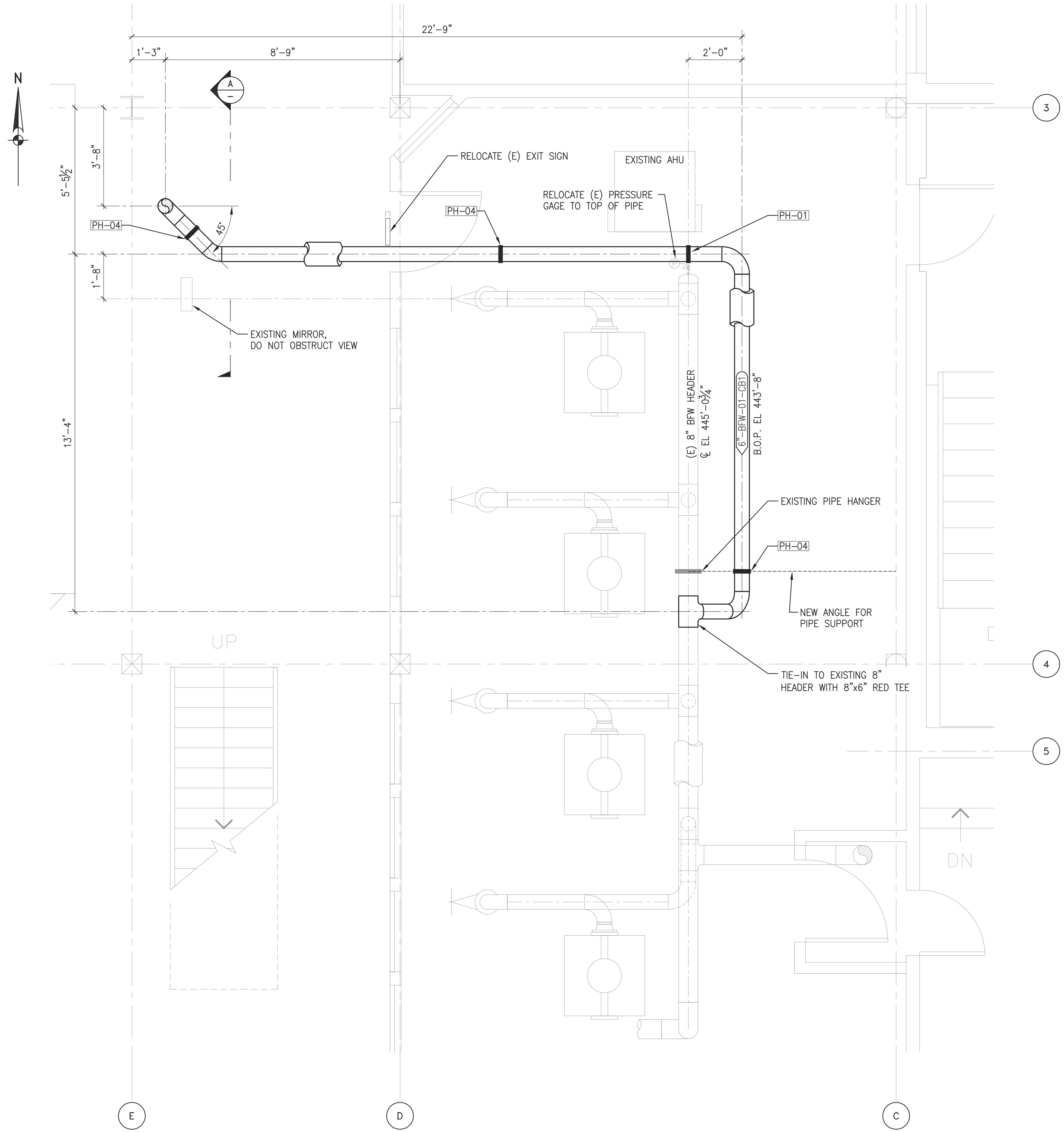
TITLE: ATKINSON POWER PLANT FEEDWATER HEATER REPLACEMENT BASEMENT PIPING PLAN

CLIENT: UNIVERSITY OF ALASKA
LOCATION: DESIGN ALASKA FAIRBANKS, AK

REV:	DRAWING #:	JOB #:	CLIENT REF #:	DESIGN:	DRAWN: ZB	CHECK:	APPD:
A	1000P01	2419.1	201014	SCALE: 1/2"=1'-0"	DATE: 11/4/11	DATE:	DATE:

THIRD ANGLE PROJECTION

CAD FILE: 1000P01rev

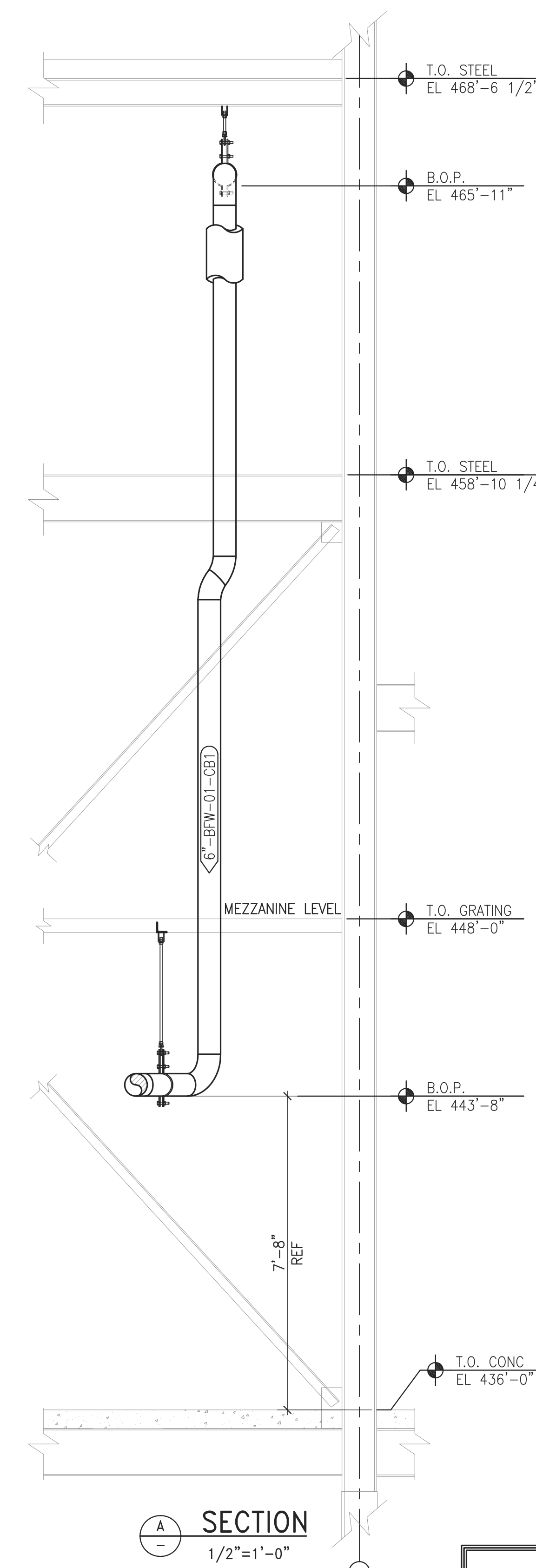


OPERATION FLOOR PIPING PLAN (EL: 436'-0")

1/2"=1'-0"

NOTES

A. FOR GENERAL NOTES AND PIPING SUPPORT DETAILS PXX-XX SEE DRAWING #100P01.



SECTION (A)

1/2"=1'-0"

REVIEW & COMMENT

REV	BY	APPD	DATE	DESCRIPTION
A	ZB	JRS	11/28/11	REVIEW & COMMENT

EVERGREEN ENGINEERING
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EUGENE, OREGON
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TITLE: ATKINSON POWER PLANT
DEAERATOR ADDITION
OPERATION FLOOR PIPING PLAN

CLIENT: UNIVERSITY OF ALASKA
DESIGN ALASKA
LOCATION: FAIRBANKS, AK

REV:	DRAWING #:	JOB #:	CLIENT REF #:	DESIGN:	DRAWN: ZB	CHECK:	APPD:
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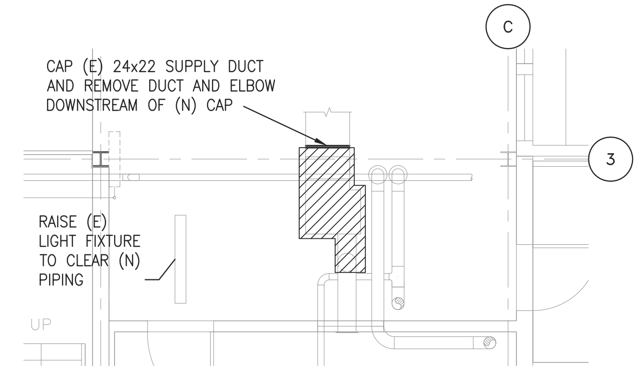
THIRD ANGLE PROJECTION

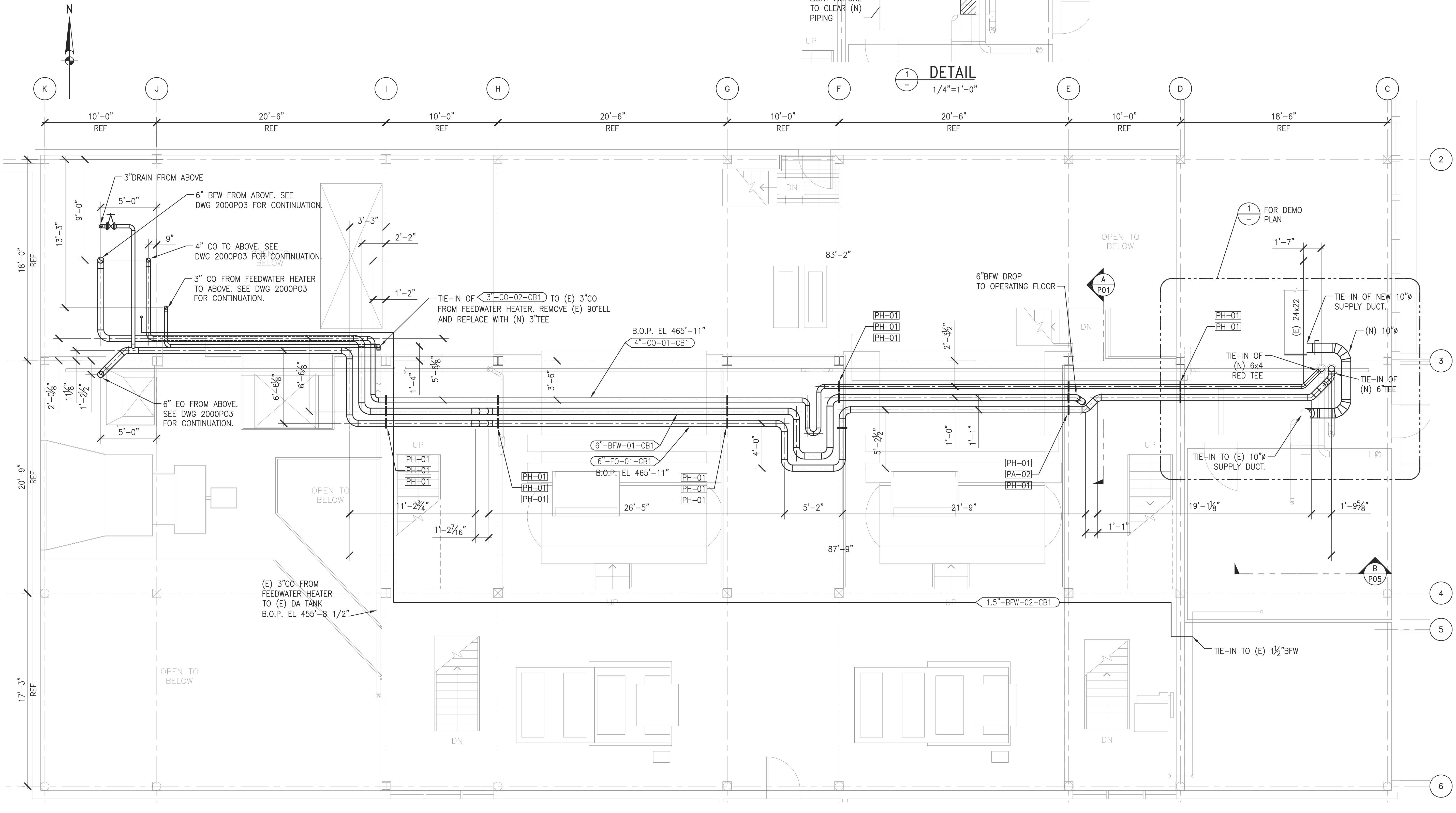
CAD FILE: 2000P01rev

NOTES

A. FOR GENERAL NOTES AND PIPING SUPPORT DETAILS PXX-XX SEE DRAWING #100P01.



1 DETAIL
1/4"=1'-0"



N
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10'-0" REF
20'-6" REF
10'-0" REF
20'-6" REF
10'-0" REF
20'-6" REF
10'-0" REF
18'-6" REF
2
3
4
5
6
18'-0" REF
20'-9" REF
17'-3" REF
3"DRAIN FROM ABOVE
6" BFW FROM ABOVE. SEE DWG 2000P03 FOR CONTINUATION.
4" CO TO ABOVE. SEE DWG 2000P03 FOR CONTINUATION.
3" CO FROM FEEDWATER HEATER TO ABOVE. SEE DWG 2000P03 FOR CONTINUATION.
6" EO FROM ABOVE. SEE DWG 2000P03 FOR CONTINUATION.
TIE-IN OF 3"-CO-02-CB1 TO (E) 3"CO FROM FEEDWATER HEATER. REMOVE (E) 90°ELL AND REPLACE WITH (N) 3"TEE
B.O.P. EL 465'-11"
4"-CO-01-CB1
6"-BFW-01-CB1
6"-EO-01-CB1
B.O.P. EL 465'-11"
6"BFW DROP TO OPERATING FLOOR
A P01
B P05
1 FOR DEMO PLAN
TIE-IN OF NEW 10"ø SUPPLY DUCT.
(N) 10"ø
TIE-IN OF (N) 6x4 RED TEE
TIE-IN OF (N) 6"TEE
TIE-IN TO (E) 10"ø SUPPLY DUCT.
(E) 24x22
PH-01
PA-02
(E) 3"CO FROM FEEDWATER HEATER TO (E) DA TANK B.O.P. EL 455'-8 1/2"
1.5"-BFW-02-CB1
TIE-IN TO (E) 1½"BFW
OPEN TO BELOW
UP
DN
83'-2"
87'-9"
26'-5"
5'-2"
21'-9"
19'-1⅛"
1'-9⅝"
1'-7"
1'-1"
11'-2¾"
1'-2⁷⁄₁₆"
5'-0"
9"
9'-0"
13'-3"
3'-3"
2'-2"
1'-2"
3'-6"
1'-4"
5'-6⅛"
6'-6⅛"
6'-6⅝"
4'-0"
5'-2½"
2'-3½"
1'-0"
1'-1"
2'-0⅛"
1'-2½"
1'-1⅜"

SHOP FLOOR PIPING PLAN (EL: 459'-0")
1/4"=1'-0"

REVIEW & COMMENT

REV	BY	APPD	DATE	DESCRIPTION
A	PS	JRS	11/28/11	REVIEW & COMMENT

EVERGREEN ENGINEERING
Engineering and Construction Services
EUGENE, OREGON
www.evergreenengineering.com

TITLE: ATKINSON POWER PLANT DEAERATOR ADDITION SHOP FLOOR PIPING PLAN

CLIENT: UNIVERSITY OF ALASKA DESIGN ALASKA
LOCATION: FAIRBANKS, AK

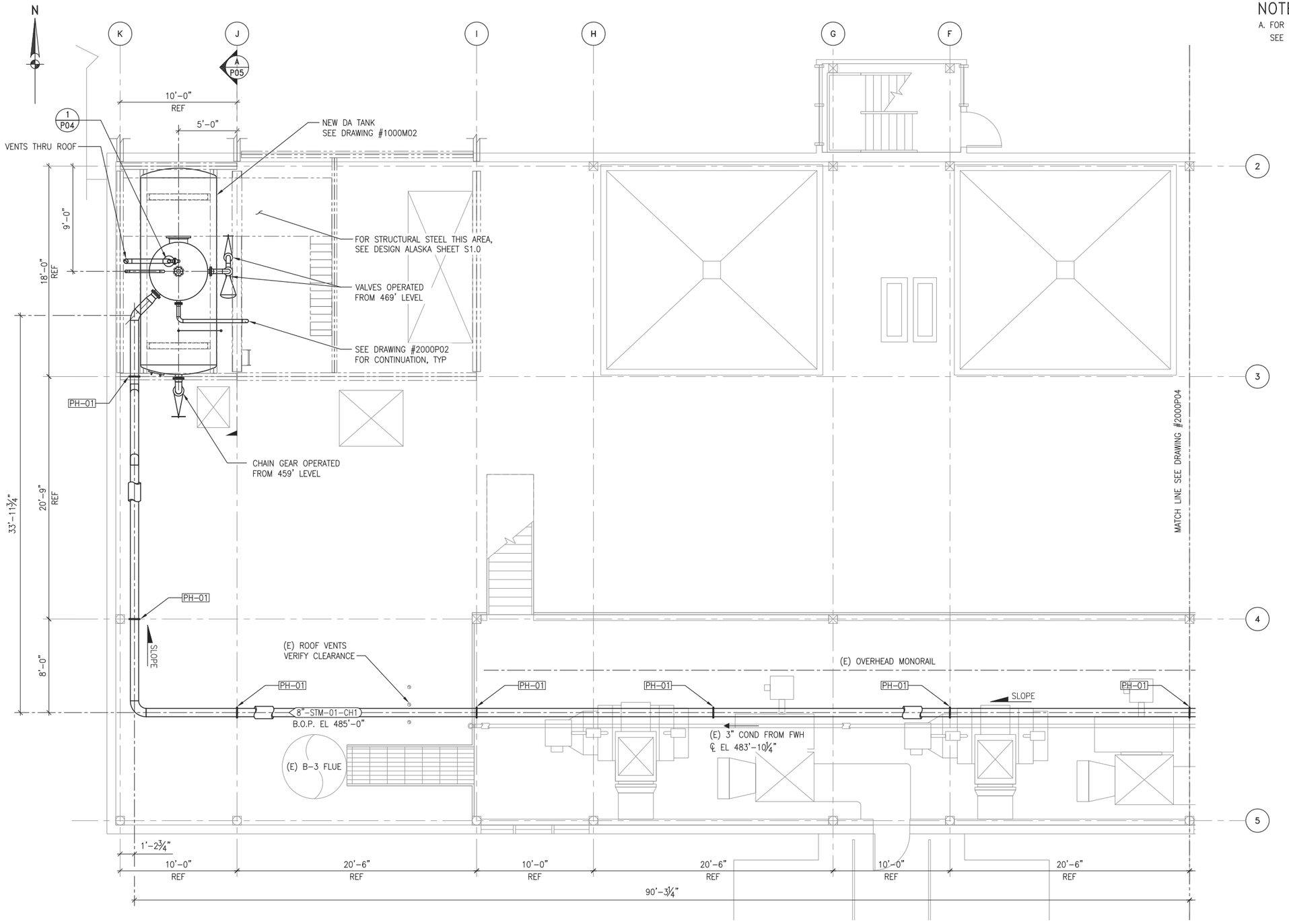
REV:	DRAWING #:	JOB #:	CLIENT REF #:	DESIGN:	DRAWN:	CHECK:	APPD:
A	2000P02	2419.1	2010140		PS		
				SCALE: 1/4"=1'-0"	DATE: 11/28/11	DATE:	DATE:

THIRD ANGLE PROJECTION

CAD FILE: 2000P02rev

NOTES

A. FOR GENERAL NOTES AND PIPING SUPPORT DETAILS PXX-XX SEE DRAWING #100P01.



FAN BALCONY PIPING PLAN (EL: 469'-0")

1/4"=1'-0"

REVIEW & COMMENT

REV	DESCRIPTION	DATE	APPD
A	REVIEW & COMMENT	11/29/11	JRS

REV	BY
A	PS

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EUGENE, OREGON
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CLIENT: UNIVERSITY OF ALASKA
LOCATION: DESIGN ALASKA FAIRBANKS, AK

DESIGN: DRAWN: ZB CHECK: APPD:
SCALE: 1/4"=1'-0" DATE: 11/4/11 DATE:

TITLE: ATKINSON POWER PLANT
DEAERATOR ADDITION
FAN BALCONY PIPING PLAN

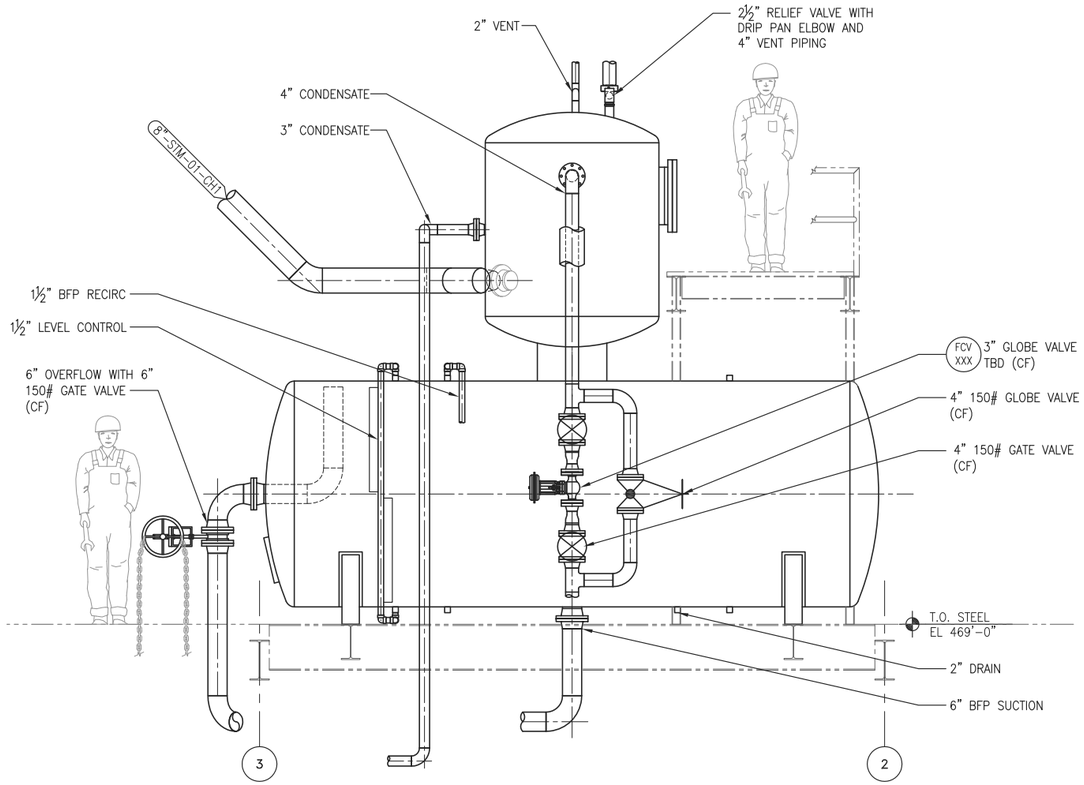
REV: A
DRAWING #: 2000P03
JOB #: 2419.1
CLIENT REF #: 201014O

CAD FILE: 2000P03.dwg

THIRD ANGLE PROJECTION

NOTES

A. FOR GENERAL NOTES AND PIPING SUPPORT DETAILS PXX-XX SEE DRAWING #100P01.
B. (CF) INDICATES VALVES THAT ARE CONTRACTOR FURNISHED.



A P03 SECTION
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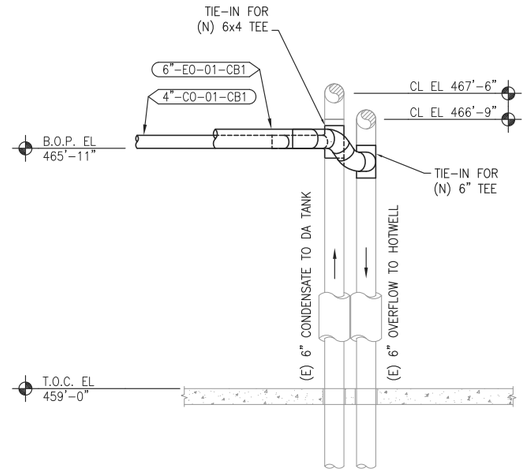


B P02 SECTION
1/2"=1'-0"

REVIEW & COMMENT

REV	DESCRIPTION	DATE	APPD
A	REVIEW & COMMENT	11/29/11	JRS

BY
ZB

EVERGREEN ENGINEERING
Engineering and Construction Services
EUGENE, OREGON
www.evergreenengineering.com

TITLE: ATKINSON POWER PLANT
DEAERATOR ADDITION
FAN BALCONY PIPING PLAN

CLIENT: UNIVERSITY OF ALASKA
LOCATION: DESIGN ALASKA
FAIRBANKS, AK

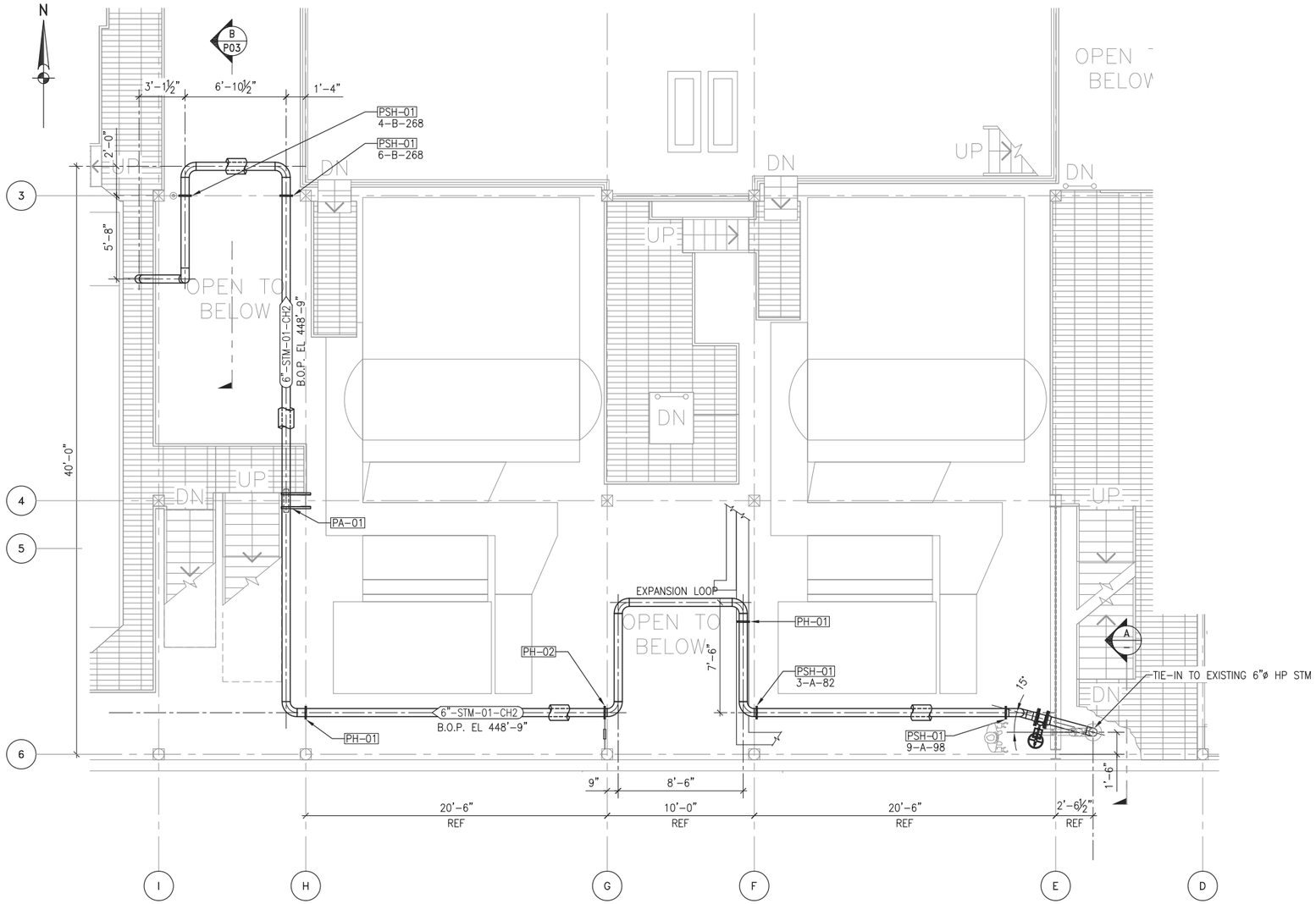
REV:	DRAWING #:	JOB #:	CLIENT REF #:	DESIGN:	DRAWN: ZB	CHECK:	APPR:
A	2000P05	2419.1	201014O	SCALE: 1/2"=1'-0"	DATE: 11/22/11	DATE:	DATE:

THIRD ANGLE PROJECTION

CAD FILE: 2000P05rev

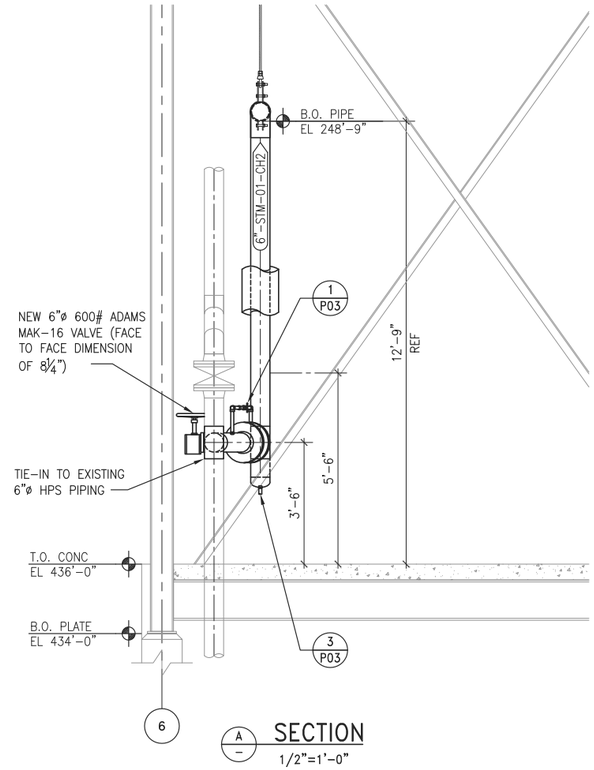
NOTES

A. FOR GENERAL NOTES AND PIPING SUPPORT DETAILS PXX-XX SEE DRAWING #100P01.



OPERATING FLOOR PIPING PLAN (EL: 436'-0")

1/4"=1'-0"



A — SECTION

1/2"=1'-0"

REVIEW & COMMENT

REV	DESCRIPTION	DATE	APPD	BY
A	REVIEW & COMMENT	11/29/11	JRS	ZB

EVERGREEN ENGINEERING
Engineering and Construction Services
EUGENE, OREGON
www.evergreenengineering.com

CLIENT: UNIVERSITY OF ALASKA
DESIGN ALASKA
LOCATION: FAIRBANKS, AK

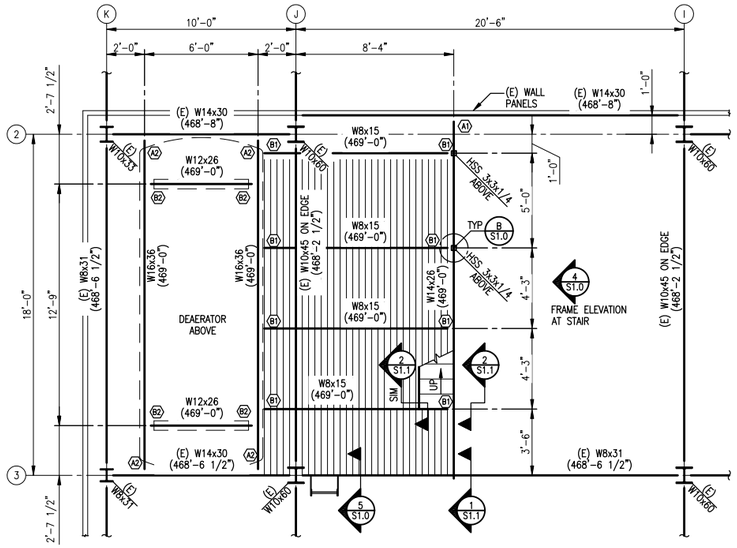
DESIGN:
DRAWN: ZB
CHECK:
SCALE: NOTED
DATE: 11/4/11
APPD:
DATE:

TITLE: ATKINSON POWER PLANT
HIGH PRESSURE STEAM BYPASS ADDITION
OPERATING FLOOR PIPING PLAN AND SECTION

REV: A
DRAWING #: 3000P02
JOB #: 2419.1
CLIENT REF #: 201140

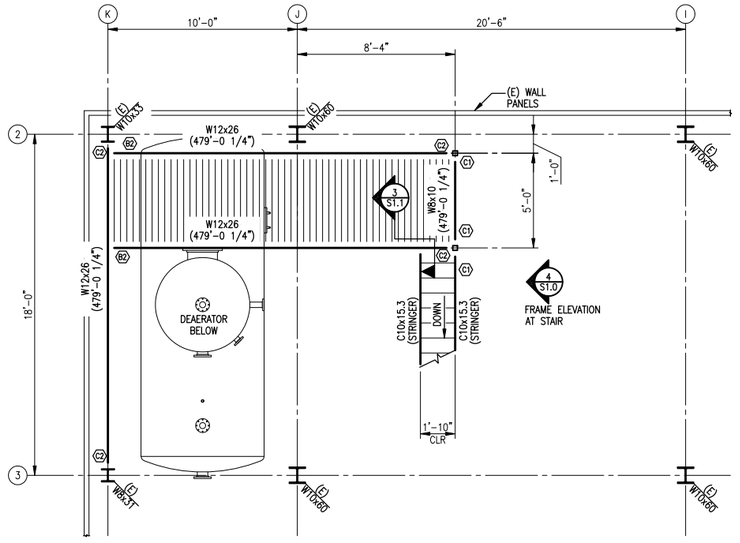
CAD FILE: 3000P02rev

IMPD ANGLE PROJECTION



1 FRAMING PLAN – FAN BALCONY LEVEL ELEV 469'
S1.0 1/4"=1'-0"

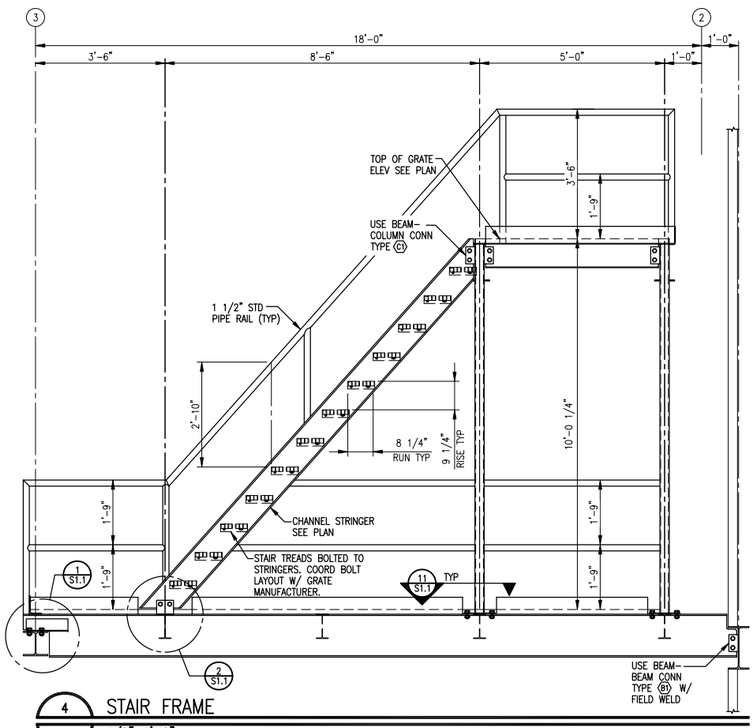
PLAN GENERAL NOTES:
1. BEAM FRAMING CONNECTIONS NOTED THUS: (A1). SEE BEAM FRAMING DETAILS SHEET S0.0.
2. FLOOR GRATE SHALL BE GALVANIZED 1 1/2"x3/16" W-19-4 STEEL GRATE.



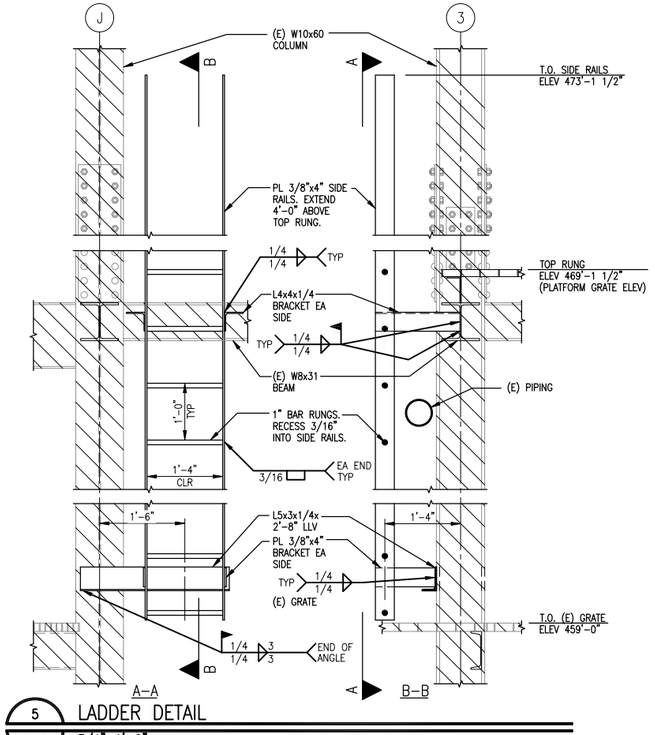
2 FRAMING PLAN – UPPER PLATFORM
S1.0 1/4"=1'-0"

PLAN GENERAL NOTES:
1. BEAM FRAMING CONNECTIONS NOTED THUS: (A1). SEE BEAM FRAMING DETAILS SHEET S0.0.
2. FLOOR GRATE SHALL BE GALVANIZED 1 1/2"x3/16" W-19-4 STEEL GRATE.

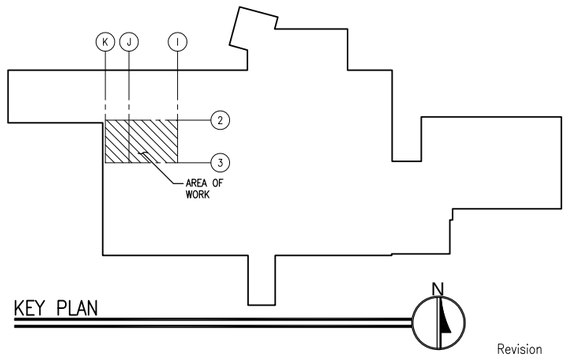
3 NOT USED
S1.0 NO SCALE



4 STAIR FRAME
S1.0 1/2"=1'-0"



5 LADDER DETAIL
S1.0 3/4"=1'-0"



KEY PLAN

Revision	Date	No.

ATKINSON POWER PLANT RENEWAL PHASE 2

Design Alaska
Architects Engineers Surveyors
601 College Road Fairbanks, Alaska 99701
Telephone 907 452 1241

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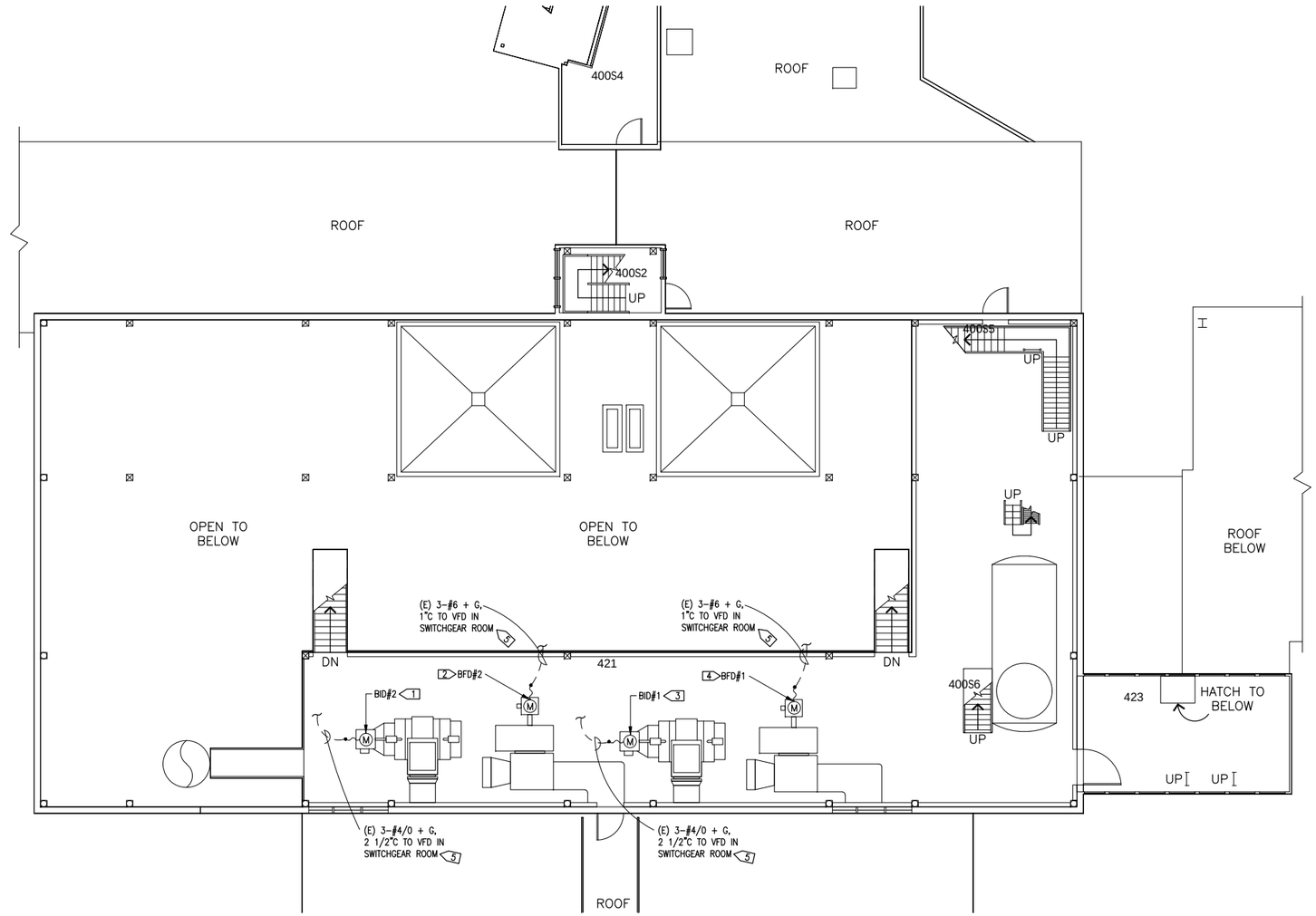
STRUCTURAL PLANS AND DETAILS

Date 28 NOV 2011	Comm. No. 031117
In Charge BWR	
Drawn By BWR	S1.0
Checked By MCD	

3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

12/2/2011 9:43 AM
031117 S1.0.DWG

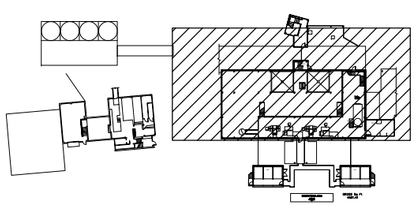


SPECIFIC NOTES

1. (E) BOILER #2 ID FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
2. (E) BOILER #2 FD FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
3. (E) BOILER #1 ID FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
4. (E) BOILER #1 FD FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
5. CONDUIT AND WIRING BETWEEN MOTOR AND VFD TO BE REPLACED.

1 / E1.4 ELECTRICAL DEMO PLAN – FLOOR 4

1/8"=1'-0'



KEYMAP

11/28/2011 8:33 AM
031117-E1.4.DWG

Revision	Date	No.

ATKINSON POWER PLANT RENEWAL PHASE 2

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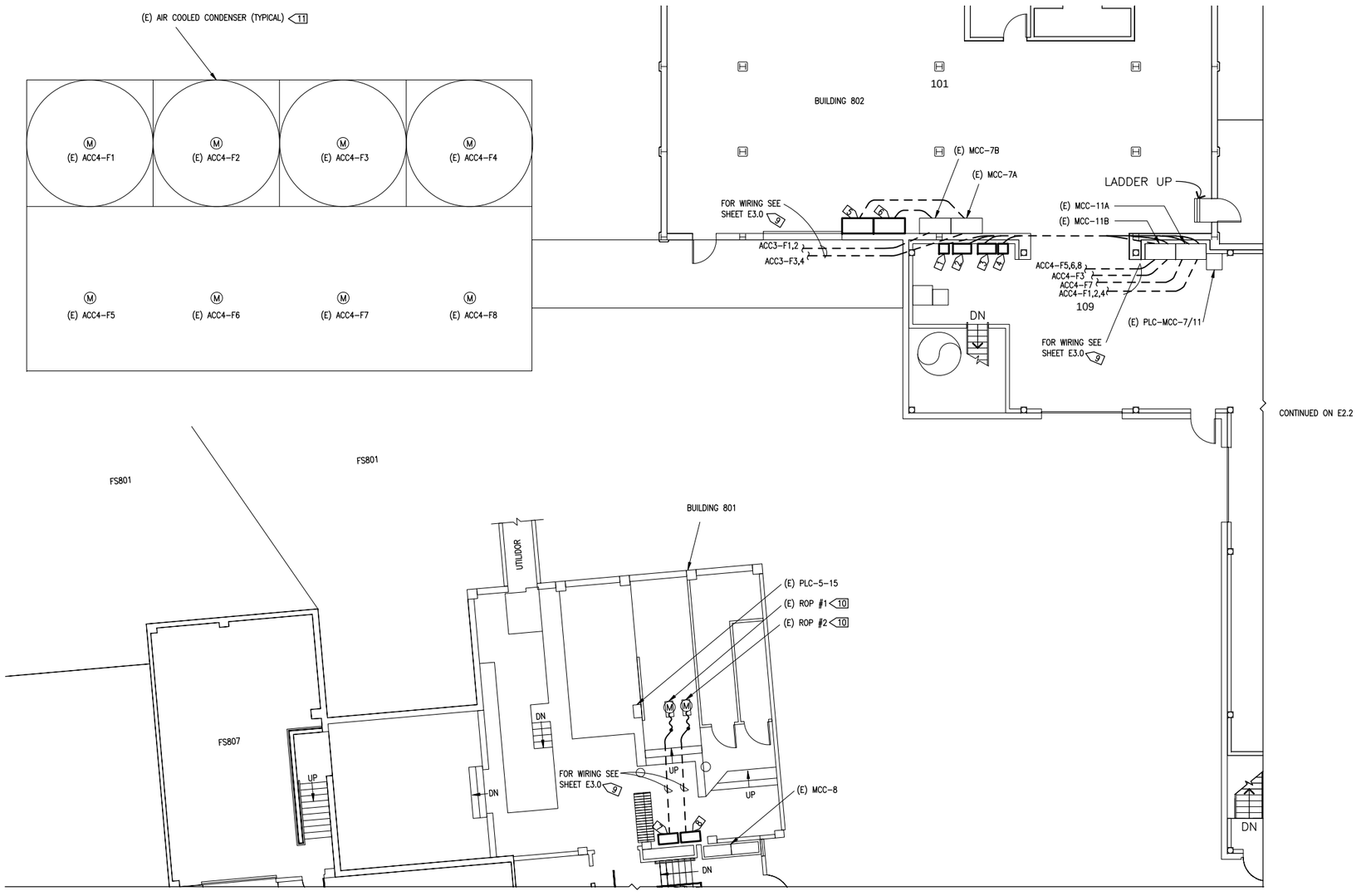
ELECTRICAL DEMO PLAN - FLOOR 4

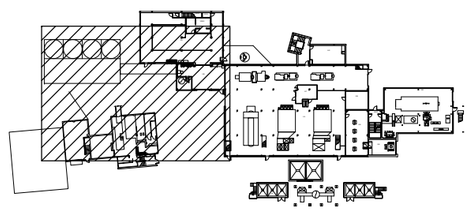
3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

Date 28 NOV 2011 Comm. No. 031117
In Charge RAC
Drawn By RH
Checked By

E1.4



1 E2.1 ELECTRICAL PLAN – FLOOR 1, WEST END.
1/8"=1'-0'



KEYMAP

SPECIFIC NOTES

1> (E) DISCONNECT SWITCH FOR VFD SERVING LOWER FANS (TOP). PROVIDE ACC #4 VFD (SERVING 'UPPER D' FAN #7), SEE VFD SCHEDULE SHEET E3.1.

2> PROVIDE ACC #4 VFD (SERVING LOWER FANS 1, 2 & 4), SEE VFD SCHEDULE SHEET E3.1.

3> REMOVE ACC #4 VFD (SERVING FANS 5, 6 & 8). SEE VFD SCHEDULE SHEET E3.1

4> (E) DISCONNECT SWITCH FOR VFD SERVING UPPER FANS (TOP). PROVIDE 'LOWER D' FAN #3 VFD (BOTTOM). SEE VFD SCHEDULE SHEET E3.1.

5> PROVIDE ACC #3 VFD (SERVING FANS 3 & 4). SEE VFD SCHEDULE SHEET E3.1.

6> PROVIDE ACC #3 VFD (SERVING FANS 1 & 2). SEE VFD SCHEDULE SHEET E3.1.

7> PROVIDE CAMPUS RO PUMP NO. 1 VFD. SEE VFD SCHEDULE SHEET E3.1.

8> REMOVE CAMPUS RO PUMP NO. 2 VFD. SEE VFD SCHEDULE SHEET E3.1.

9> PROVIDE MULTI-CONDUCTOR CABLE IN CONDUIT, XLPE INSULATION WITH SYMMETRICAL GROUNDING (3-EACH) CONDUCTORS. CABLE WILL BE LISTED FOR VFD USE.

10> (E) REVERSE OSMOSIS PUMP. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.

11> (E) AIR COOLED CONDENSER MOTORS. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.

GENERAL NOTES

1. EXISTING CONDUIT AND WIRING BETWEEN VFD AND MCC WILL BE REUSED AND RECONNECTED TO VFD FOR INPUT POWER REQUIREMENTS. SEE SHEET E3.0 FOR EXISTING FEEDER INPUT CONNECTIONS.

2. EXISTING MONITORING CONTROLS WIRING WILL BE RECONNECTED TO THE VFDs. (TO BE FINALIZED ON NEXT SUBMITTAL.)

Revision Date No.

ATKINSON POWER PLANT RENEWAL PHASE 2

Design Alaska
Architects Engineers Surveyors
601 College Road Fairbanks, Alaska 99701
Telephone 907 452 1241

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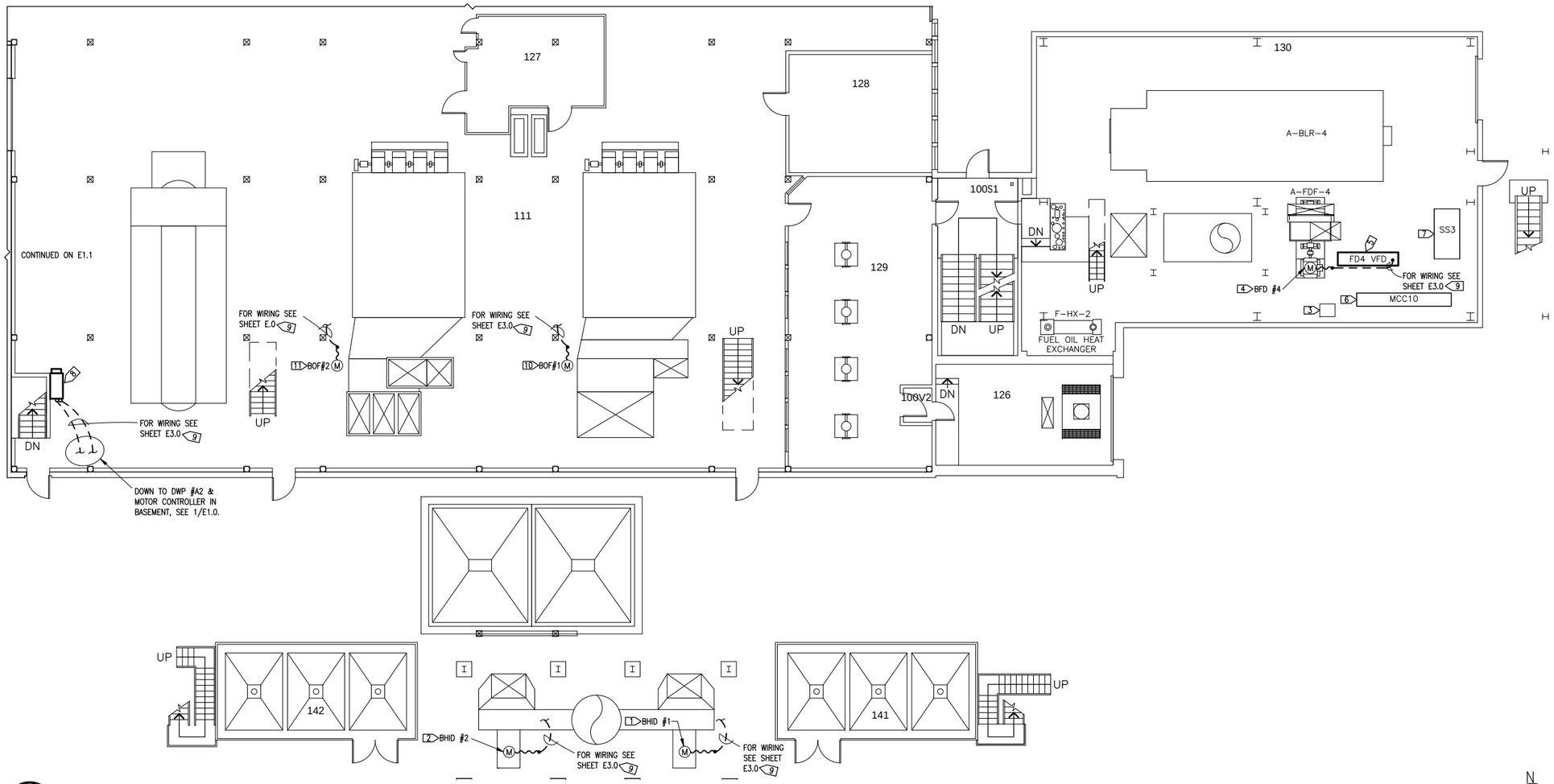
ELECTRICAL PLAN - FLOOR 1, WEST END

3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

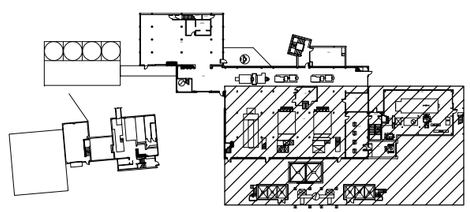
Date 28 NOV 2011 Comm. No. 031117
In Charge RAC
Drawn By RH
Checked By

E2.1

11/28/2011 8:33 AM
031117_E2.1.DWG



1 E2.2 ELECTRICAL PLAN – FLOOR 1, EAST END.
1/8"=1'-0"



KEYMAP

SPECIFIC NOTES

1. (E) BAGHOUSE I.D. FAN # 1. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
2. (E) BAGHOUSE I.D. FAN # 2. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
3. (E) PANEL PLC-MCC 10
4. (E) BOILER #4 FD FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
5. PROVIDE BOILER #4 FD FAN VFD. SEE VFD SCHEDULE ON SHEET E3.1.
6. (E) MCC 10
7. (E) DRY TYPE TRANSFORMER, 750KVA, 4160V-480Y/277V.
8. PROVIDE DOMESTIC WATER PUMP 'A2' VFD. SEE VFD SCHEDULE ON SHEET E3.1.
9. PROVIDE MULTI-CONDUCTOR CABLE IN CONDUIT, XLPE INSULATION WITH SYMMETRICAL GROUNDING (3-EACH) CONDUCTORS. CABLE WILL BE LISTED FOR VFD USE.
10. (E) BOILER #1 OVERFIRE FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
11. (E) BOILER #2 OVERFIRE FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.

GENERAL NOTES

1. EXISTING MONITORING CONTROLS WIRING WILL BE RECONNECTED TO THE VFDs. (TO BE FINALIZED ON NEXT SUBMITTAL.)

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3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

Revision Date No.

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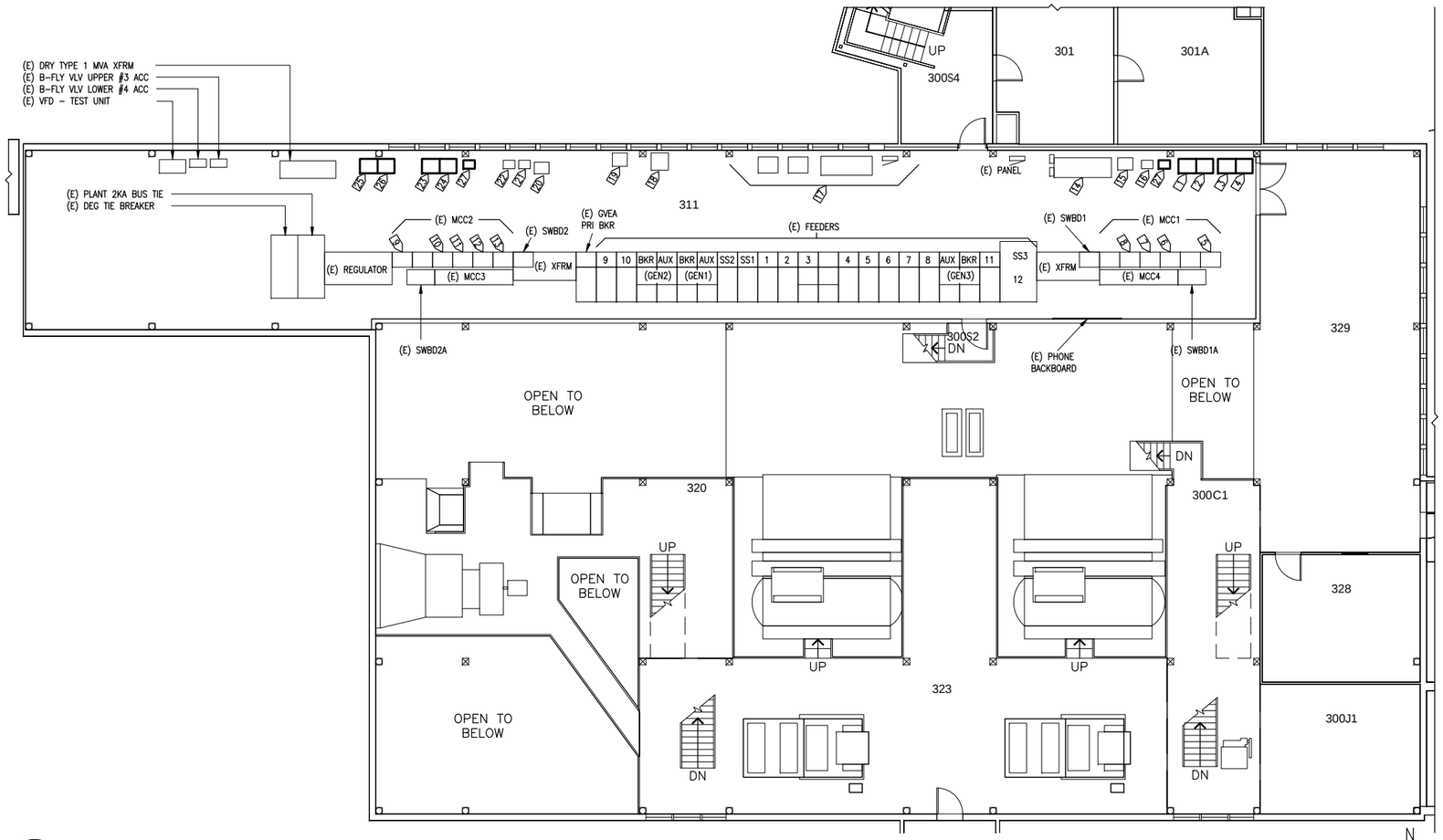
ELECTRICAL PLAN - FLOOR 1, EAST END

Date 28 NOV 2011 Comm. No. 031117
In Charge RAC
Drawn By RH
Checked By

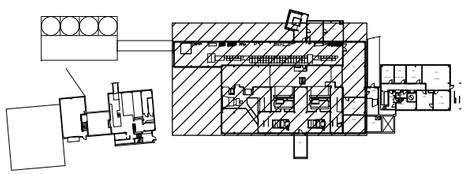
E2.2

11/28/2011 8:33 AM
031117 E2.2.DWG



1 E2.3 ELECTRICAL PLAN – FLOOR 3

1/8"=1'-0"



KEYMAP

SPECIFIC NOTES

1> PROVIDE BOILER #1 ID FAN VFD. SEE VFD SCHEDULE SHEET E3.1.

2> PROVIDE BOILER #1 ID FAN VFD (REDUNDANT). SEE VFD SCHEDULE SHEET E3.1.

3> PROVIDE BAGHOUSE ID FAN # 1 VFD. SEE VFD SCHEDULE SHEET E3.1.

4> PROVIDE BAGHOUSE ID FAN #1 VFD (REDUNDANT). SEE VFD SCHEDULE SHEET E3.1.

5> ABOVE: (E) BAGHOUSE #1 ID. FAN MAIN DISC. BELOW: (E) BFP-5 DISC.

6> MIDDLE: (E) UNIT LABELED "FORCED DRAFT FAN NO.1 BYPASS". BELOW: (E) DISCONNECT LABELED "FORCED DRAFT FAN NO.1 VFD".

7> (E) UNIT LABELED "OVERFIRE FAN NO.1 BYPASS". (E) DISCONNECT LABELED "OVERFIRE FAN NO.1 VFD".

8> ABOVE: (E) UNIT LABELED "#1 ID FAN MAIN DISCONNECT"

9> (E) BAGHOUSE #2 ID FAN MAIN DISCONNECT

10> (E) UNIT LABELED "OVERFIRE AIR NO.2 BYPASS". (E) DISCONNECT LABELED "OVERFIRE AIR FAN NO.2 VFD".

11> (E) UNIT LABELED "FORCED DRAFT FAN NO.2 BYPASS". (E) DISCONNECT LABELED "FORCED DRAFT FAN NO.2 VFD".

12> (E) UNIT LABELED "BOILER #2 ID FAN MAIN DISCONNECT"

13> (E) DISCONNECT & CONTROLLER LABELED "BOILER FEED PUMP NO. 4"

14> (E) BATTERY BANK W/DISCONNECTS AT WEST END

15> (E) PANEL PLC-MCC 1/4 ABOVE, (E) 125VDC SYSTEM BATTERY CHARGER BELOW.

16> (E) J-BOX FOR FORCED DRAFT FAN #1(TOP). PROVIDE OVERFIRE FAN NO.1 VFD" (BOTTOM). SEE VFD SCHEDULE SHEET E3.1.

17> (L-R) (E) BATTERY (2), (E) BATTERY DISC, (E) INVERTER, (E) PANEL UPS-1.

18> (E) PLC RACK CABINET.

19> (E) DRY TYPE TRANSFORMER.

20> (E) DELTA V PANEL UPS 1/4.

21> (E) J-BOX FOR FORCED DRAFT FAN #2 (TOP). PROVIDE OVERFIRE FAN #2 VFD" (BOTTOM). SEE VFD SCHEDULE SHEET E3.1.

22> (E) PANEL PLC-MCC 2/3

23> PROVIDE BOILER #2 ID FAN VFD. SEE VFD SCHEDULE SHEET E3.1.

24> PROVIDE BOILER #2 ID FAN VFD (REDUNDANT). SEE VFD SCHEDULE SHEET E3.1.

25> PROVIDE BAGHOUSE ID FAN #2 VFD. SEE VFD SCHEDULE SHEET E3.1.

26> PROVIDE BAGHOUSE ID FAN #2 VFD (REDUNDANT). SEE VFD SCHEDULE SHEET E3.1.

27> PROVIDE FD FAN #1 VFD (NORMAL & REDUNDANT IN SINGLE ENCLOSURE).

GENERAL NOTES

1. EXISTING CONDUIT AND WIRING BETWEEN VFD AND MCC/SWITCHBOARD WILL BE REUSED AND RECONNECTED TO VFD FOR INPUT POWER REQUIREMENTS. SEE SHEET E3.0 FOR EXISTING FEEDER INPUT CONNECTIONS.

2. EXISTING MONITORING CONTROLS WIRING WILL BE RECONNECTED TO THE VFDs. (TO BE FINALIZED ON NEXT SUBMITTAL.)

Revision Date No.

ATKINSON POWER PLANT RENEWAL PHASE 2

Design Alaska
Architects Engineers Surveyors
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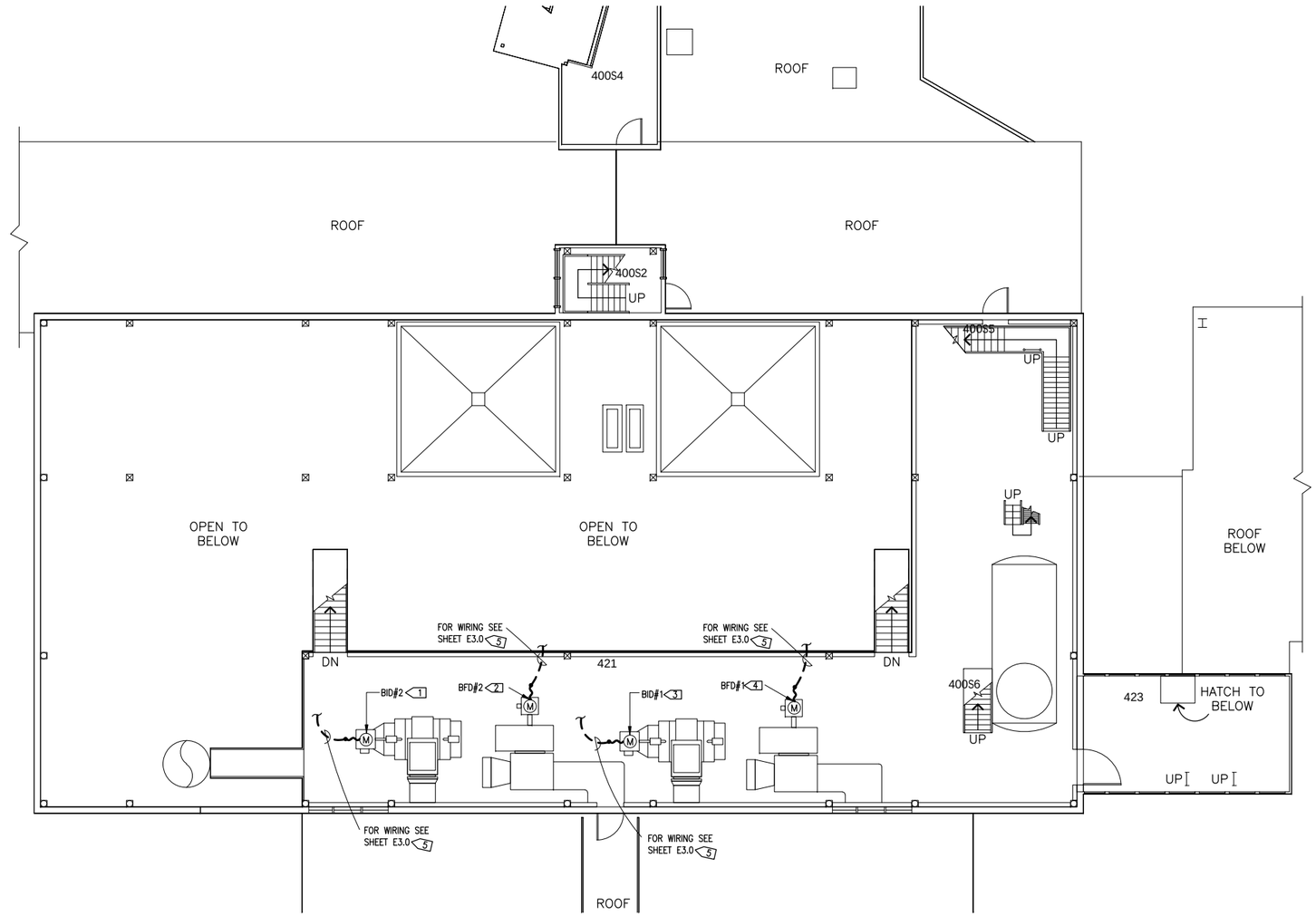
3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

ELECTRICAL PLAN - FLOOR 3

Date 28 NOV 2011 Comm. No. 031117
In Charge RAC
Drawn By RH
Checked By

E2.3

11/28/2011 8:33 AM
031117 E2.3.DWG



SPECIFIC NOTES

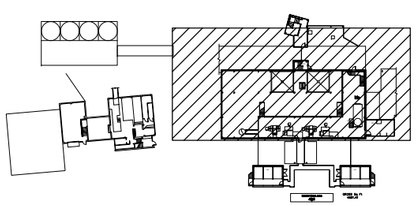
1. (E) BOILER #2 ID FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
2. (E) BOILER #2 FD FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
3. (E) BOILER #1 ID FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
4. (E) BOILER #1 FD FAN. SEE MOTOR NAMEPLATE DATA SCHEDULE SHEET E3.1.
5. PROVIDE MULTI-CONDUCTOR CABLE IN CONDUIT, XLPE INSULATION WITH SYMMETRICAL GROUNDING (3-EACH) CONDUCTORS. CABLE WILL BE LISTED FOR VFD USE.

GENERAL NOTES

1. EXISTING MONITORING CONTROLS WIRING WILL BE RECONNECTED TO THE VFDs. (TO BE FINALIZED ON NEXT SUBMITTAL.)

1 / E2.4 ELECTRICAL PLAN – FLOOR 4

1/8"=1'-0'



KEYMAP

N

Revision Date No.

ATKINSON POWER PLANT RENEWAL PHASE 2

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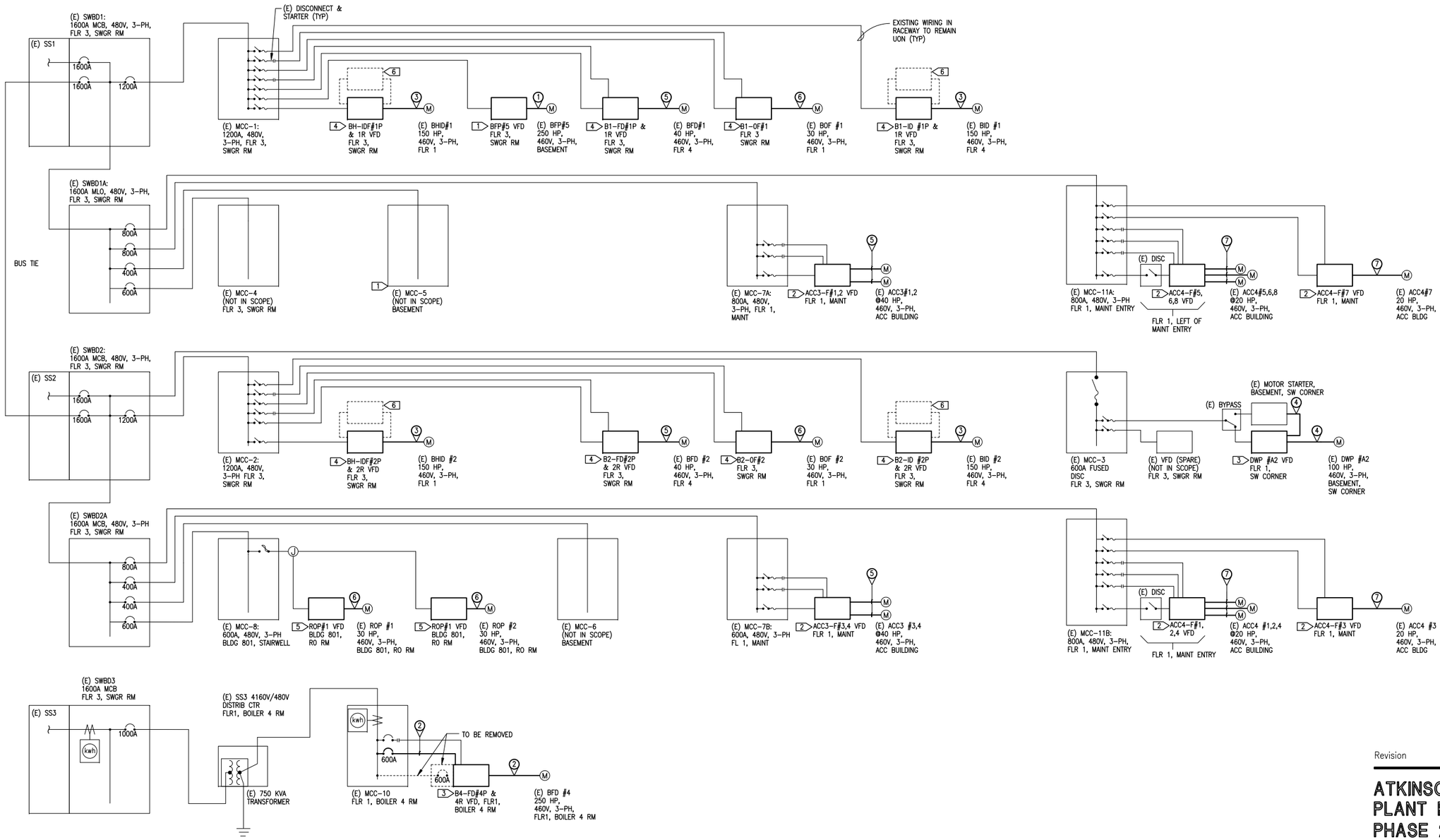
ELECTRICAL PLAN - FLOOR 4

3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

Date 28 NOV 2011 Comm. No. 031117
In Charge RAC
Drawn By RH
Checked By

E2.4

11/28/2011 8:33 AM
031117 E2.4.DWG



1 PARTIAL ELECTRICAL ONE LINE DIAGRAM
E3.0 SCALE: NONE

FEEDER SCHEDULE

FEEDER NUMBER	HP	SIZE: KCMIL OR AWG	MULTI-CONDUCTORS	PARALLEL RUNS	CONDUIT	REMARKS
1	250	#2/0	3/C + GND	2	1-1/2"	REPLACE CONDUIT & CONDUCTORS
2	250	500 KCMIL	3/C + GND		4"	REPLACE CONDUIT & CONDUCTORS
3	150	4/0	3/C + GND		3"	REPLACE CONDUIT & CONDUCTORS
4	100	#2/0	3/C + GND		2"	REPLACE CONDUIT & CONDUCTORS
5	40	#6	3/C + GND		1"	REPLACE CONDUIT & CONDUCTORS
7	30	#6	3/C + GND		1"	REPLACE CONDUIT & CONDUCTORS
8	20	#10	3/C + GND		1"	REPLACE CONDUIT & CONDUCTORS

SPECIFIC NOTES

1. VFD TO REPLACE EXISTING, SEE 1/E2.0 FOR LOCATION IN BASEMENT.
2. VFD TO REPLACE EXISTING, SEE 1/E2.1 FOR LOCATION ON FLOOR 1 WEST END.
3. VFD TO REPLACE EXISTING, SEE 1/E2.2 FOR LOCATION ON FLOOR 1 EAST END.
4. VFD TO REPLACE EXISTING, SEE 1/E2.3 FOR LOCATION ON FLOOR 3.
5. VFD TO BE REPLACED, SEE 1/E2.1 FOR LOCATION ON BLDG 801.
6. BYPASS SWITCH AND STARTER TO BE REMOVED.

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3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

Revision	Date	No.

ATKINSON POWER PLANT RENEWAL PHASE 2

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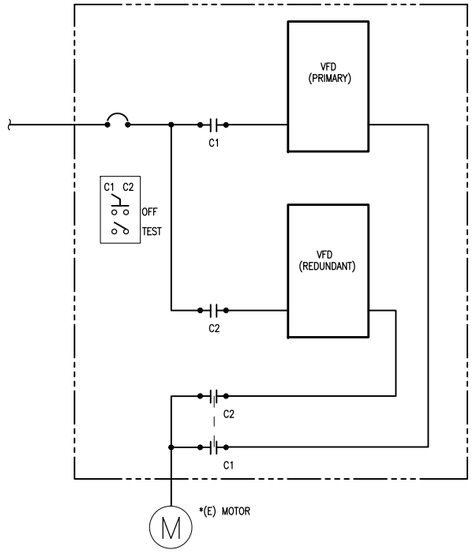
Architects Engineers Surveyors
601 College Road Fairbanks, Alaska 99701
Telephone 907 452 1241

PARTIAL ELECTRICAL ONE LINE DIAGRAM

Date 28 NOV 2011 Comm. No. 031117
In Charge RAC
Drawn By RH
Checked By

E3.0

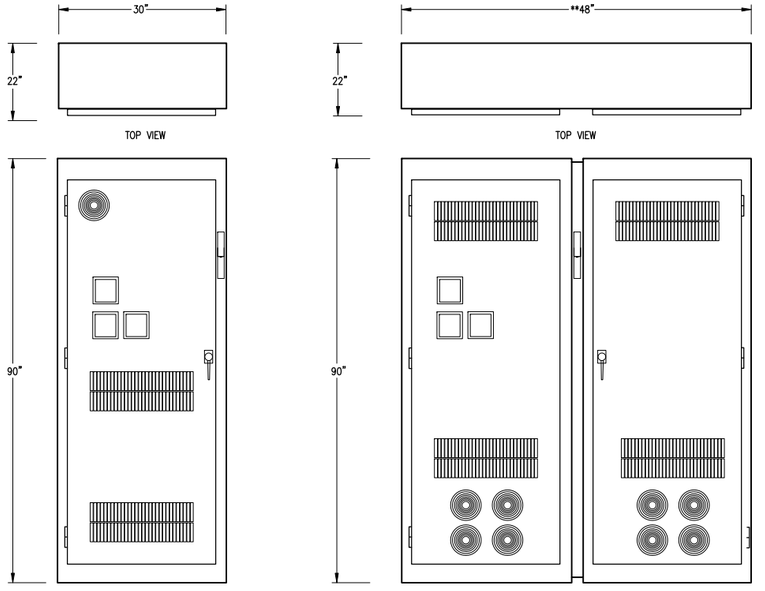
11/28/2011 8:45 AM
031117 E3.0.DWG



REDUNDANT VFD WITH
BYPASS & DISCONNECT

*NOTE: TYP FOR FD AND ID FANS

1 SCHEMATIC BLOCK DIAGRAM
E3.2 SCALE: NONE

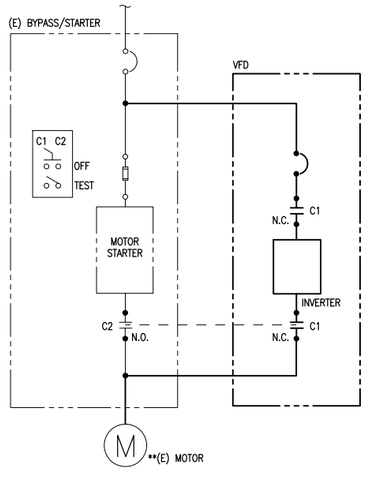


REDUNDANT VFD (40 HP)
WITH BYPASS & DISCONNECT

REDUNDANT VFD (150 & 250 HP)
WITH BYPASS & DISCONNECT

**NOTE: 60" WIDE FOR 250 HP

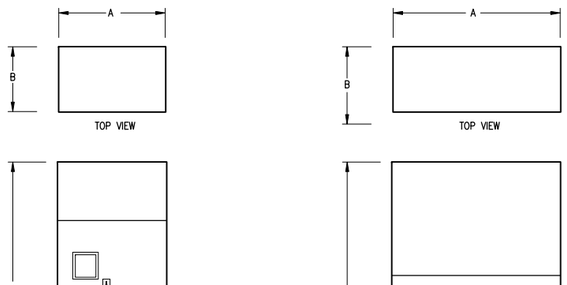
2 EQUIPMENT ELEVATION
E3.2 SCALE: NONE



VFD AND EXISTING
BYPASS / STARTER

**NOTE: TYP FOR OVERFIRE FANS, BOILER FEED PUMP,
RO PUMP,DOMESTIC WATER PUMP, ACC FANS

3 SCHEMATIC BLOCK DIAGRAM
E3.2 SCALE: NONE



	A	B	C
30 HP:	10"	8"	18"
40 HP:	10"	8"	18"
75 HP:	15"	11"	24"
100 HP:	15"	11"	24"
250 HP:	18"	11"	33"

NON-REDUNDANT VFD WITH BYPASS & DISCONNECT

4 EQUIPMENT ELEVATION
E3.2 SCALE: NONE

Revision Date No.

ATKINSON POWER PLANT RENEWAL PHASE 2

Design Alaska
Architects Engineers Surveyors
601 College Road Fairbanks, Alaska 99701
Telephone 907 452 1241

NOT FOR CONSTRUCTION
DESIGN DEVELOPMENT DOCUMENTS
FOR REVIEW ONLY

ELECTRICAL DIAGRAMS

Date 28 NOV 2011 Comm. No. 031117
In Charge RAC
Drawn By RH
Checked By

E3.2

3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

11/28/2011 8:34 AM
031117 E3.2.DWG

Division of Design & Construction
590 University Avenue
P.O. Box 758160
Fairbanks, AK 99775-8160
Phone (907) 474-5299 Fax (907) 474-7554

Total Project Cost	$3,657,000
Approval Required	AVPF

MEMORANDUM

TO: Kit Duke
Associate Vice President of Facilities

THROUGH: Scott Bell
Associate Vice Chancellor, Facilities Services

THROUGH: Jonathan Shambare
Director, Design and Construction

FROM: Cameron M. Wohlford
Sr. Project Manager

DATE: February 9, 2012

SUBJECT: Project Change Approval
Project Name: Arctic Health CANHR Health Clinic
Project No.: 2010128 AHCHC

In accordance with Regents' Policy 05.12, approval by the Associate Vice President of Facilities is required for this project. Your prompt review of this project would be greatly appreciated.

Requisite materials are enclosed.

cc: Pat Pitney
Vice Chancellor
Administrative Services
AHCHC (101)

PROJECT CHANGE APPROVAL

Name of Project: **Arctic Health CANHR Health Clinic**

Location of Project: **UAF, Fairbanks Campus**

Project Number: **2010128 AHCHC**

Date of Request: **February 9, 2012**

Total Project Cost:	**$3,657,000 (No TPC Change)**
Approval Required:	**Associate Vice President of Facilities (AVPF)**
Prior Approvals/Actions:	**Project Agreement: April 2010 (CWRA)** **Preliminary Administrative Approval: 03/31/2010 (CWRA)** **Formal Project Approval: 04/16/2010 (CWRA)** **Schematic Design Approval: 11/05/2010 (AHCHC)**

POLICY CITATION

In accordance with Regents' Policy 05.12.047, approval levels required for changes in the source of funds, increases in budget, or material in project scope identified subsequent to schematic design approval shall be determined by the chief finance officer based on the extent of the change and other relevant circumstances. This determination requires judgment, but will generally be based on the nature of the funding source, the amount, and the budgetary or equivalent scope impact relative to the approved budget at the schematic design approval stage, and assigned as follows:

- Changes with an estimated impact in excess of $1.0 million will require approval by the Board based on recommendations from the Regents' committee responsible for facilities;
- Changes with an estimated impact in excess of $0.4 million but not more than $1.0 million will require approval by the regents' committee responsible for facilities;
- Changes with an estimated impact in excess of $0.2 million but not more than $0.4 million will require approval by the chair of the regents' committee responsible for facilities;
- **Changes with an estimated impact in of $0.2 million or less will require approval by the chief finance officer or designee.**

RATIONALE AND RECOMMENDATION

Background

Schematic Design Approval was given by the Chair of the FLMC for the Arctic Health CANHR Health Clinic project in November of 2010. The project is creating space at the Fairbanks Campus of the University of Alaska Fairbanks in support of research aimed at the behavioral and nutritional sciences of Alaska's native peoples. UAF has been, and continues to be, a world leader in these research fields, and the project will advance the University's capacity, as well as support meaningful partnerships with UAF and community leaders. The project is a result of a recently approved grant from the National Institute of Health (NIH) funded through the NCRR Recovery Act of 2009. The project is under construction and is infilling an underutilized courtyard in the middle of the Arctic Health Research Building to create a nutritional and physical assessment lab.

Variance Report

Variance #1: The scope of work in the Schematic Design Approval for the AHRB portion of the grant was to finish all of the newly created space. The user group and NIH requested the space on the 2nd level be finished to a level that makes the approximately 2,000gsf useable office space. Unfortunately just prior to bidding the project, NIH removed their support for finishing the space and placed the burden on UAF to fund the work. UAF determined it was in its best interest to complete the space and has recently pulled together the necessary funding to have the current contractor proceed with completion. The funding sources are listed on Page 3. The completion date for the project will be extended to allow the contractor to complete the construction prior to occupancy of the first floor. The schedule for substantial completion is now April 2012.

Variance#2: At the time the project was bid, UAF had budgeted for a 5% contingency to cover increases in construction cost due to unforeseen conditions and design omissions. After the contract was awarded and NIH gave UAF approval to proceed, they required the project contingency be reduced to 2% of the construction cost. A waiver of the NIH grant requirement for such a low contingency was denied. UAF worked with the designer and contractor to keep change order cost to a minimum, and the 2% contingency fee was not exhausted until just recently. For all cost over the 2% contingency, NIH is requiring UAF utilize other funding sources. UAF proposes to utilize left over FY08 State Appropriations for the Arctic Health Deferred Renewal to cover additional contingency cost that directly relate to renewal of the existing spaces the project is affecting, thus freeing up a portion of the original NIH approved contingency fund.

Neither variance will cause the total project cost to increase as the original NIH funds have been reduced and will return to the federal funding agency at the close of the project.

Proposed Total Project Cost and Funding Source(s)

The funding source for this work is from a grant from the National Institute of Health and international research funding.

		@ SDA
NIH CO6 Grant from NCRR Recovery Act	$3,352,000	3,637,000
FY08 SOA Deferred Renewal Funding	$50,000	0
UAF FY11 Research Funds	$20,000	20,000
UAF FY12 Research Funds	$235,000	0
Total	**$3,657,000**	3,657,000

Schedule for Completion

DESIGN	
Conceptual Design	October 2009
Formal Project Approval	April 2010 (F&LMC)
Schematic Design	August 2010
Schematic Design Approval	October 2010
Construction Documents	April 2011
BID & AWARD	
Advertise and Bid	June 2011
Construction Contract Award	July 2011
CONSTRUCTION	
Start of Construction	July 2011
Date of Substantial Completion	April 2011
Date of Beneficial Occupancy	May 2012

Affirmation

This project complies with Board Policy, the campus master plan, and with the prior approvals:

Preliminary Administrative Approval: March 31, 2010
Formal Project Approval: April 16, 2010
Schematic Design Approval: November 5, 2010

Action Requested

Approval of the change in funding in accordance with the variance report and the total project budget.

Supporting Documents

- One Page Budget
- First and Second Floor Drawings

Project Change Approval is hereby granted:

2-10-12

Kit Duke, Associate Vice President of Facilities *Date*

PROJECT CHANGE APPROVAL

Name of Project: **Arctic Health CANHR Health Clinic**

Location of Project: **UAF, Fairbanks Campus**

Project Number: **2010128 AHCHC**

Date of Request: **February 9, 2012**

Total Project Cost:	**$3,657,000 (No TPC Change)**
Approval Required:	**Associate Vice President of Facilities (AVPF)**
Prior Approvals/Actions:	**Project Agreement: April 2010 (CWRA)** **Preliminary Administrative Approval: 03/31/2010 (CWRA)** **Formal Project Approval: 04/16/2010 (CWRA)** **Schematic Design Approval: 11/05/2010 (AHCHC)**

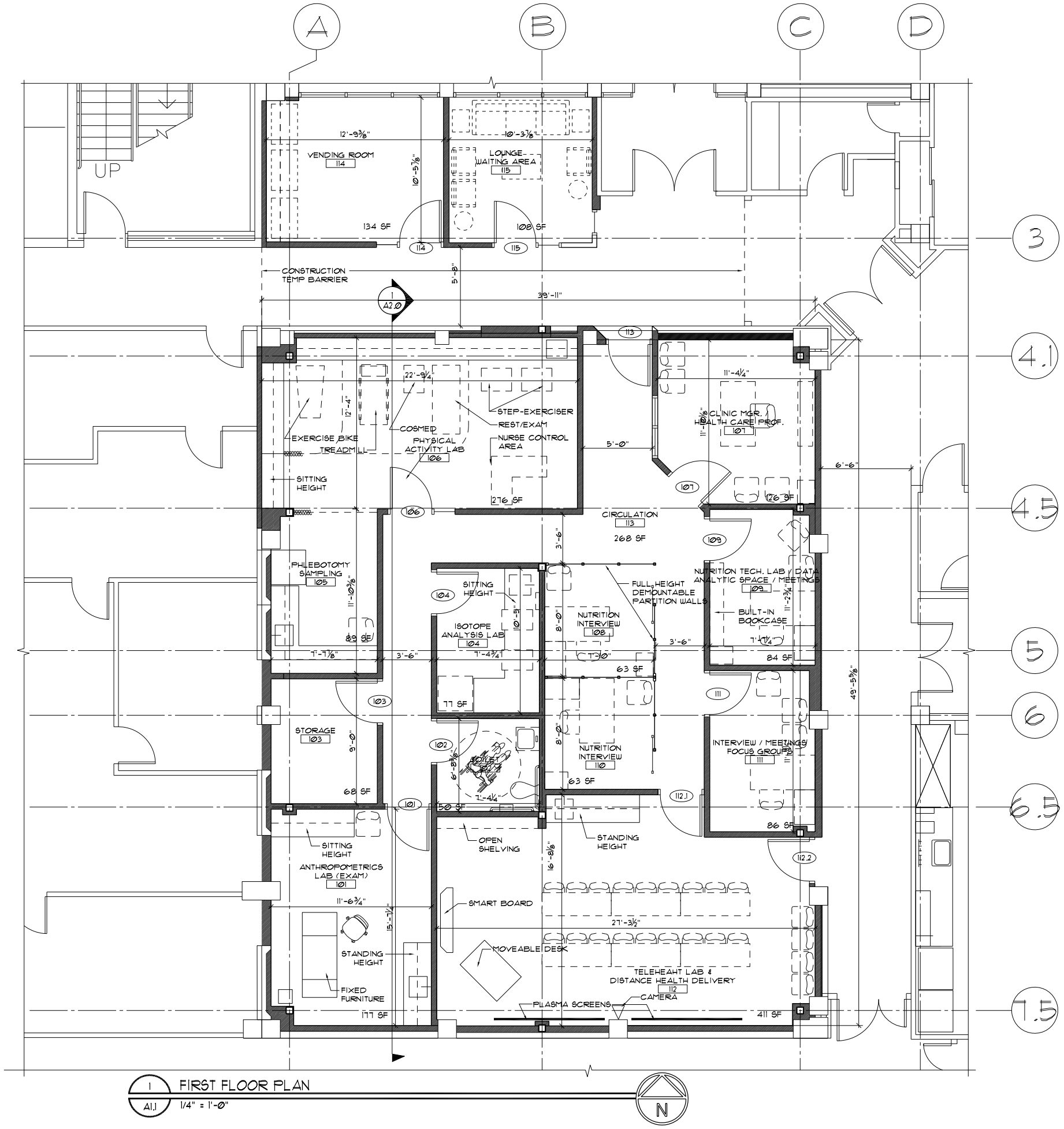
SUPPORTING DOCUMENTS

- One Page Budget
- First and Second Floor Drawings

UNIVERSITY OF ALASKA

Project Name:	Arctich Health CANHR Health Clinic		
MAU:	UAF		
Building:	Arctic Health RB	Date:	February 3, 2012
Campus:	Fairbanks	Prepared By:	Wohlford
Project #:	20101128 AHCHC	Account No.:	515222, 590048, 571289, 65761

Total GSF Affected by Project:	6000	6000
PROJECT BUDGET	SDA Budget	Change Approval Budget
A. Professional Services		
Advance Planning, Program Development	$0	$0
Consultant: Design Services	$275,000	$266,942
Consultant: Construction Phase Services	$55,000	$75,000
Consul: Extra Services (List:_____)	$0	$0
Site Survey	$0	$0
Soils Testing & Engineering	$0	$0
Special Inspections	$0	$0
Plan Review Fees / Permits	$5,000	$5,000
Other	$0	$0
Professional Services Subtotal	**$335,000**	**$346,942**
B. Construction		
General Construction Contract (s)	$2,625,000	$1,929,401
Other Contractors (List:Funds to revert back to NIH)	$5,000	$771,000
Construction Contingency	$236,700	$117,012
Construction Subtotal	**$2,866,700**	**$2,817,413**
Construction Cost per GSF	***$477.78***	***$469.57***
C. Building Completion Activity		
Equipment	$59,162	$59,162
Fixtures	$0	$0
Furnishings	$0	$0
Signage not in construction contract	$0	$0
Move-Out Cost/Temp. Reloc. Costs	$0	$0
Move-In Costs	$0	$0
Art	$0	$0
Other (List:_____)	$0	$0
OIT Support	$11,500	$11,500
Maintenance/Operation Support	$25,000	$90,000
Building Completion Activity Subtotal	**$95,662**	**$160,662**
D. Owner Activities & Administrative Cost		
Project Planning and Staff Support	$148,381	$115,156
Project Management	$198,257	$209,828
Misc Expenses: Advertising, Printing, Supplies	$13,000	$7,000
Owner Activities & Administrative Cost Subtotal	**$359,638**	**$331,983**
E. Total Project Cost	**$3,657,000**	**$3,657,000**
Total Project Cost per GSF	***$609.50***	***$609.50***
F. Total Appropriation(s)	**$3,730,000**	**$3,657,000**



1 / A1.1 FIRST FLOOR PLAN
1/4" = 1'-0"

KEYNOTES:

① xxx

LEGEND:

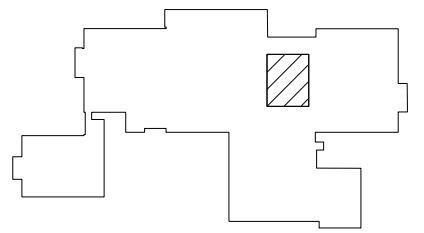
xxx

GENERAL NOTES:

1. xxx

SQUARE FOOT CALCULATIONS

ROOM NO.	SPACE	NET	GROSS
106	PHYSICAL ACTIVITY LAB	276 SF	298 SF
105	PHLEBOTOMY SAMPLING	89 SF	98 SF
103	STORAGE ROOM	68 SF	77 SF
101	ANTHROPOMETRICS LAB	177 SF	196 SF
107	CLINIC MANAGER	126 SF	141 SF
102	UNISEX TOILET	50 SF	55 SF
109	NUTRITION TECH. LAB	84 SF	95 SF
111	FOCUS GROUP MEETINGS	86 SF	99 SF
108	NUTRITION INTERVIEW	63 SF	66 SF
110	NUTRITION INTERVIEW	63 SF	67 SF
104	ISOTOPE ANALYSIS LAB	77 SF	84 SF
112	TELEHEALTH LAB	411 SF	439 SF
114	VENDING ROOM	134 SF	147 SF
115	WAITING AREA	108 SF	121 SF
113	CIRCULATION	268 SF	299 SF
FIRST FLOOR TOTAL:		2080 SF	2287 SF



KEYPLAN

NOT FOR CONSTRUCTION
SCHEMATIC DESIGN DOCUMENTS
FOR REVIEW ONLY

Revision	Date	No.

ARCTIC HEALTH
CANHR HEALTH
CLINIC

Design Alaska
Architects Engineers Surveyors
601 College Road Fairbanks, Alaska 99701
Telephone 907 452 1241

FIRST FLOOR PLAN

Date 14 JUL 10 Comm. No. 031006
In Charge EPR
Drawn By YEC
Checked By

A1.1

3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
1-1/2"=1' 3/4"=1' 1/4"=1' 1"=10' 1"=20' 1"=30'

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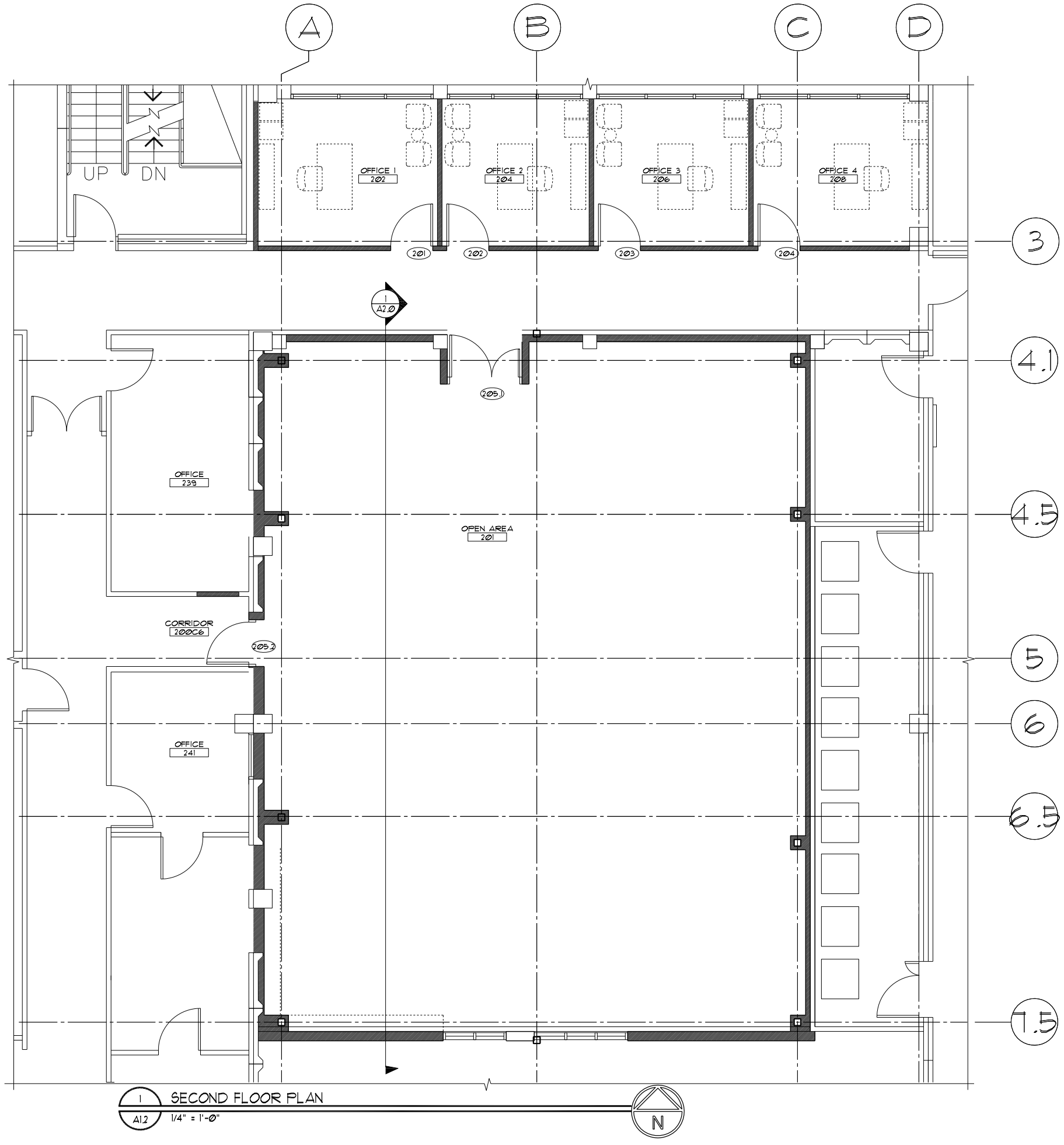


1 A1.2 SECOND FLOOR PLAN

1/4" = 1'-0"

N

KEYNOTES:

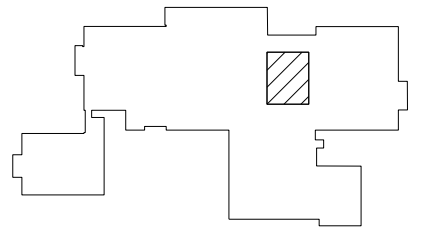
① xxx

LEGEND:

xxx

GENERAL NOTES:

1. xxx



KEYPLAN

N

NOT FOR CONSTRUCTION
SCHEMATIC DESIGN DOCUMENTS
FOR REVIEW ONLY

3" 1"=1' 1/2"=1' 3/8"=1' 1/8"=1' 0" 1"=100' 1" 1"=40' 2" 1"=60' 3"
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Revision Date No.

ARCTIC HEALTH CANHR HEALTH CLINIC

Design Alaska
Architects Engineers Surveyors
601 College Road Fairbanks, Alaska 99701
Telephone 907 452 1241

SECOND FLOOR PLAN

Date 14 JUL 10 Comm. No. 031006
In Charge EPR
Drawn By YEC
Checked By

A1.2

9/7/2010 4:55 PM
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