

**TOWN OF TONOPAH  
NYE COUNTY, NEVADA**

**TONOPAH MINING PARK  
MINI-SPLIT HEATING & AIR CONDITIONING  
UNITS**



**CONTRACT DOCUMENTS  
AND  
SPECIFICATIONS**

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## ADVERTISEMENT FOR BIDS

NOTICE IS HEREBY GIVEN that the TONOPAH TOWN BOARD, (Owner), Nye County State of Nevada, Post Office Box 151, Tonopah, Nevada 89049 will accept **SEALED BIDS** for the:

### **TONOPAH MINING PARK VISITOR CENTER MINI-SPLIT HEATING AND CONDITIONING UNITS**

located at 110 Burro Avenue, Tonopah, NV 89049, more particularly described in the **CONTRACT DOCUMENTS**, now on file at the Town of Tonopah, 140 South Main Street, Tonopah, Nevada 89049 and on the Town website. A bid packet hereinafter referred to as “**CONTRACT DOCUMENTS**” which includes all bid documents which must be submitted by all persons desiring to bid on the proposed contract may be obtained at the Town of Tonopah website [www.tonopahnevada.com/bids-and-other-contracts/](http://www.tonopahnevada.com/bids-and-other-contracts/), requested by email: at [bbraska@tonopahnevada.com](mailto:bbraska@tonopahnevada.com) or in person at 140 South Main Street, Tonopah, Nevada 89049.

**SEALED BIDS** must be received at the Town Office by UPS, FedEx or in person at 140 South Main Street, Tonopah, Nevada 89049, USPS mail to Post Office Box 151, Tonopah, Nevada 89049, **NO LATER THAN 5:00 PM, APRIL 17, 2024**, and **MUST BE** marked “**SEALED BID FOR: TONOPAH MINING PARK MINI-SPLIT HEATING AND AIR CONDITIONING UNITS** . No facsimile transmission or e-mail of any bid will be accepted. Bids must be submitted on **CONTRACT DOCUMENT** forms only. Bids will be opened and read aloud at the regular meeting of the Tonopah Town Board **6:00 PM, APRIL 17, 2024** , at the Tonopah Convention Center, 301 Brougner Avenue, Tonopah, Nevada 89049.

**THIS PROJECT MUST ADHERE TO THE NEVADA STATE HISTORIC PRESERVATION OFFICE GUIDELINES. THERE WILL BE A PRE-BID MEETING ON-SITE, WEDNESDAY, APRIL 3, 2024, at 12:00 p.m.**

The **Owner** reserves the right to reject any or all Bids, including, without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. The Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the work. Tonopah Town Board by: Don Kaminski, Chairman. Published 3/21 3/28 4/4 and 4/11/2024.

**The Town of Tonopah is an Equal Opportunity Employer and Provider**

- d) Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown, indicated or expressly required by the Bidding Documents, that Bidder has given OWNER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by OWNER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

#### **ARTICLE 5 Interpretations and Addenda**

- 5.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to OWNER in writing. Interpretations or clarifications considered necessary by OWNER in response to such questions will be issued by Addenda delivered to all parties recorded by OWNER as having received the Bidding Documents. Questions received less than five days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 5.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents as deemed advisable by the OWNER.
- 5.03 Addenda will be provided to each bidder obtaining a set of Bidding Documents.

#### **ARTICLE 6 - Bid Security**

- 6.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of Bidder's maximum Bid price in the form of a certified check or bank money order or a bid bond issued by a surety.
- 6.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the effective date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- 6.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

#### **ARTICLE 7 - Contract Times**

- 7.01 The number of days within which or the dates by which, the Work is to be substantially completed and ready for final payment, are set forth in the Agreement.

- 10.07 A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid Form. The official address of the joint venture must be provided on the Bid Form.
- 10.08 All names shall be printed in ink below the signatures.
- 10.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid Form.
- 10.10 The postal and email addresses and telephone number for communications regarding the Bid shall be shown.
- 10.11 Forms for Subcontractors. The lists required must include a description of the labor or portion of the work which each first-tier subcontractor name in the list will be provided. The Prime Contractor must list itself for any work not listed on this form.
- 10.12 A contractor whose bid is accepted shall not substitute a subcontractor for any subcontractor who is named in the bid unless the Town's authorized representative approves the substitution, and the substitution will not increase the bid.

#### **ARTICLE 11 - Submittal of Bid**

- 11.01 With each copy of the Bidding Documents, a Bidder is furnished with one separate unbound copy of the Bid Form and supplements. The unbound copy of the Bid Form is to be completed and submitted with all of the attachments outlined in the Bid Form.
- 11.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title, the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "**BID ENCLOSED**". When using the mail or other delivery system, the Bidder is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the Advertisement for Bid. Bids delivered via facsimile will not be accepted and will be returned to the Bidder. A mailed Bid shall be addressed to **OWNER** at the address listed in Form.
- 11.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

#### **ARTICLE 12 - Modification and Withdrawal of Bid**

- 12.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 12.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with **OWNER** and promptly thereafter demonstrates to the reasonable satisfaction of **OWNER** that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid or negotiated, that Bidder will be disqualified from further bidding on the Work. This provision to withdraw a Bid without forfeiting the Bid security does not apply to Bidder's error in judgment in preparing the Bid.

The **OWNER** shall review all timely protests prior to the award of contract. The **OWNER** shall not be required to hold an administrative hearing to consider any protests but may do so at its option. At the time of the **Owner's** consideration of the project award, the **OWNER** shall also consider the merits of any timely protests. The **OWNER** may either reject the protest and award the project to the lowest responsible bidder or accept the protest and award the project to the next lowest responsible bidder. Nothing in this section shall be construed as a waiver of the **Owner's** right to reject all bids.

#### **ARTICLE 16 - Contract Security and Insurance**

**16.01** The General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to OWNER, it shall be accompanied by such bonds and insurance documentation.

#### **ARTICLE 17- Signing of Agreement**

**17.01** When OWNER issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to OWNER. Within 30 days thereafter, OWNER shall deliver one fully executed counterpart of the Agreement to successful Bidder, together with printed and electronic copies of the Contract Documents of the General Conditions.

**17.02** Contractor shall conform with all Nevada State Historic Preservation Office guidelines for this project

#### **ARTICLE 18- SAM.gov Registration**

**18.01** Prior to Bid submission, all bidders are required to register with the federal government for contracts or grants. Registration is done through the US Government's System for Award Management (SAM). Please visit [sam.gov](http://sam.gov) to register.

days after the bid opening, or for such a longer period of time that Bidder may agree to in writing upon request of **OWNER**.

**CONTRACT EXECUTION**

The Bidder agrees that if this Proposal is accepted, he will, within **Fifteen (15)** calendar days, after Notice of Award, enter into Contract with the Owner and will at that time, deliver to the Owner the proof of insurance as required herein, and will, to the extent of his Proposal, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all the materials necessary to complete all work as specified or indicated in the Contract Documents.

**START OF CONSTRUCTION AND CONTRACT COMPLETION TIME**

The Bidder further agrees to begin work within ten (10) calendar days from the date agreed upon in the "Agreement", and after receipt of the Notice to Proceed and complete the **TONOPAH MINING PARK MINI SPLIT HEATING AND AIR CONDITIONING UNITS**, in all respects no later than **NINETY (90) calendar days** thereafter.

**BIDDER'S REPRESENTATIONS**

In submitting this Bid, Bidder represents that: a) Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents and hereby acknowledges receipt of the following Addenda:

Addenda # and Date: \_\_\_\_\_  
Addenda # and Date: \_\_\_\_\_  
Addenda # and Date: \_\_\_\_\_

Bidder is familiar with and is satisfied as to all the Federal, State and local Laws and Regulations that may affect cost, progress and performance of the Work.

Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on:

- 1) The cost, progress, and performance of the Work;
- 2) The means, methods, techniques, sequences, and procedures of construction to be employed by Bidder;  
and
- 3) Bidder's safety precautions and programs.

**A Corporation**

**(SEAL)**

Name of Corporation: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_ Type of: \_\_\_\_\_  
General, Professional Svc's, Limited Liability, etc.

By: \_\_\_\_\_  
Signature - Attach Evidence of Authority to Sign

Name (Printed): \_\_\_\_\_

Title: \_\_\_\_\_

Attest: \_\_\_\_\_  
Signature of Corporate Secretary

Date of Qualification to do Business in Nevada: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

**A Joint Venture**

**(SEAL)**

Name of Joint Venturer: \_\_\_\_\_

First Joint Venturer Name: \_\_\_\_\_

By: \_\_\_\_\_  
Signature of First Joint Partner - Attach Evidence of Authority to Sign

Title: \_\_\_\_\_

Second Joint Venturer Name: \_\_\_\_\_

By: \_\_\_\_\_  
Signature of Second Joint Partner - Attach Evidence of Authority to Sign

Title: \_\_\_\_\_

Each Joint Venturer must sign. The manner of signing for each individual and corporation that is a party to the Joint Venture should be in the manner indicated above.



## CONTRACTOR'S LIABILITY INSURANCE

General Conditions shall provide coverage for not less than the following amounts or greater where required by laws and regulations:

General Liability which shall include completed operations and product liability coverage and eliminate the exclusion with respect to property under the care, custody, and control of Contractor:

- a. General Aggregate \$2,000,000
- b. Products-Completed Operations Aggregate \$1,000,000
- c. Personal and Advertising Injury \$1,000,000
- d. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
- e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverage where applicable.
- f. Excess or Umbrella Liability:
  - 1) General Aggregate \$1,000,000
  - 2) Each Occurrence \$1,000,000 Automobile Liability
- g. Bodily Injury:
  - 1) Each Person \$1,000,000
  - 2) Each Accident \$1,000,000
- h. Property Damage:
  - 1) Each Accident \$1,000,000
  - 2) Combined Single Limit of \$1,000,000

The Contractual Liability coverage shall provide coverage for not less than the following amounts:

- a. Bodily Injury:
  - 1) Each Accident \$1,000,000
  - 2) Annual Aggregate \$1,000,000
- b. Property Damage:
  - 1) Each Accident \$1,000,000
  - 2) Annual Aggregate \$1,000,000

### Nevada State Industrial Insurance

Contractor shall purchase and maintain for the period of the Contract, full Nevada State Industrial Insurance coverage for all persons whom it employs or may employ in performing or furnishing any of the work under the Contract. This insurance shall be in strict accordance with the requirements of the most current and applicable Nevada State Industrial Insurance laws, including any amended laws taking affect during the term of the Contract. Before beginning work under the Contract, Contractor shall furnish Owner a Certificate of Compliance with the Nevada State Industrial Insurance Act as required by NRS Chapter 616.

**NOTICE OF AWARD**

TO:

PROJECT: **TONOPAH MINING PARK MINI-SPLIT HEATING AND AIR CONDITIONING UNITS**

The owner has considered the bid proposal submitted by you for the above referenced project. You are hereby notified that your proposal has been accepted for the **TONOPAH MINING PARK MINI-SPLIT HEATING AND AIR CONDITIONING UNITS** in the amount of:

TOTAL BASE BID \_\_\_\_\_

The Information for Bidders requires you to execute this Agreement within fifteen (15) days from the date of this notice.

If you fail to execute said Agreement and to furnish said bonds within fifteen (15) days from the date of this notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your proposal as abandoned. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 202\_\_.

OWNER: Town of Tonopah  
Nye County, Nevada

BY: \_\_\_\_\_  
Chairman

**ACCEPTANCE OF NOTICE OF AWARD**

Receipt of the above Notice of Award is hereby acknowledged this \_\_\_\_\_ day of \_\_\_\_\_, 202\_\_.

BY: \_\_\_\_\_

\_\_\_\_\_  
Title

**IN WITNESS WHEREOF**, the parties hereto have executed or caused to be executed by their duly authorized officials this Agreement in Triplicate, each of which shall be deemed an original on the date first above written.

**OWNER:      Town of Tonopah, Town Board  
Tonopah, Nye County, Nevada**

**BY:** \_\_\_\_\_  
**Chairman**

**ATTEST:** \_\_\_\_\_  
**Clerk of the Board**

**(SEAL)**

**CONTRACTOR:**

**BY:** \_\_\_\_\_  
\_\_\_\_\_  
**Title**

**ADDRESS:** \_\_\_\_\_

**EIN:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

**ATTEST:** \_\_\_\_\_

**(SEAL)**

**Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**SPECIFICATIONS**  
**UNITS AS SHOWN ATTACHED**  
**MAY BE SUBSTITUTED**  
**WITH COMPARABLE UNITS**  
**WHEN PRE-APPROVED BY OWNER**



NEVADA  
**STATE HISTORIC  
 PRESERVATION OFFICE**

Department of Conservation and Natural Resources

Steve Sisolak, Governor  
 Bradley Crowell, Director  
 Rebecca L. Palmer, Administrator, SHPO

**State of Nevada  
 Commission for Cultural Centers and Historic Preservation**

**Request for Permission to Undertake Structural or Visual Alterations**

In accordance with current Covenants (Stipulation 2) in effect on the property below,  
 Tonopah Historic Mining Park \_\_\_\_\_ (name of owner/organization) is requesting written  
 permission to undertake visual or structural alterations as described below:

**Building Name:** Power House - Visitors Center

**Building Address:** 110 Burro Avenue, Tonopah, NV 89049

**Building's Date of Construction:** 1904

**Expiration Date of Covenants:** Open Ended

**Supplementary Information:**

Please indicate if you have submitted the following--

- Written description of proposed work (*required; see second page*)
- Photographs of existing conditions (*required; please attach*)
- Sketches, plans, or architectural drawings depicting the proposed work
- Sketch or site plan of project location
- Specs of materials to be used
- Historic photographs depicting past condition or design
- Other

**Request Submitted by:**

Jeff Martin

Print name

Jeff Martin  
 Signature

**Organization** - Tonopah Historic Mining Park  
**Title** - Park Host/Tour Guide  
**Email address** - jeffmartinsr63@gmail.com or tonopahminingpark@gmail.com  
**Phone number** - 928-575-6484 Cell 775-482-9274 Visitors Center

**Date of Request:**

Please allow up to 14 business days for this form to be processed. Proposed work must not begin until this form has been reviewed and approved by the State Historic Preservation Office.

**Commission for Cultural Centers and Historic Preservation**  
**Request for Permission to Undertake Structural or Visual Alterations**

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Please submit request form and supplementary materials to the State Historic Preservation Office,  
901 S. Stewart St., Ste. 5004, Carson City, NV 89701-5248 or by email to [kabrown@shpo.nv.gov](mailto:kabrown@shpo.nv.gov).

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**Description of Proposed Work:**

Please provide a thorough written description of the proposed work, including-

- Location on building
- Approximate size of area affected
- Existing conditions
- Materials to be used
- Proposed methods (must follow the Secretary of the Interior's Standards)

*(Use as many pages as needed)*

## **DESCRIPTION OF PROPOSED WORK:**

Requesting permission to add Mini-Split Air Conditioning and Heating units to Visitor Center to make a more comfortable experience for visitors and staff. There is currently no air conditioning in the building and the existing heaters are old inefficient units.

M & S Heating and Air Conditioning evaluated the facilities and prepared a needs assessment to fulfill our needs in the Visitors Center. M & S Heating & Air Conditioning has suggested four (4) outdoor units/condensers with 6 indoor units/evaporators. Attached is a diagram of the placement suggested for each of these units.

1. Outdoor unit one (1) (photo included), will service the movie theater, the office and the west side of the gift shop.
2. Outdoor unit two (2) (photo included), will service the east side of the gift shop.
3. Units three (3) and four (4) (photo included), will service the south side of the building known as the display room.

M & S Heating and Air Conditioning technical specifications are attached.

We will have two options for mounting the outdoor units.

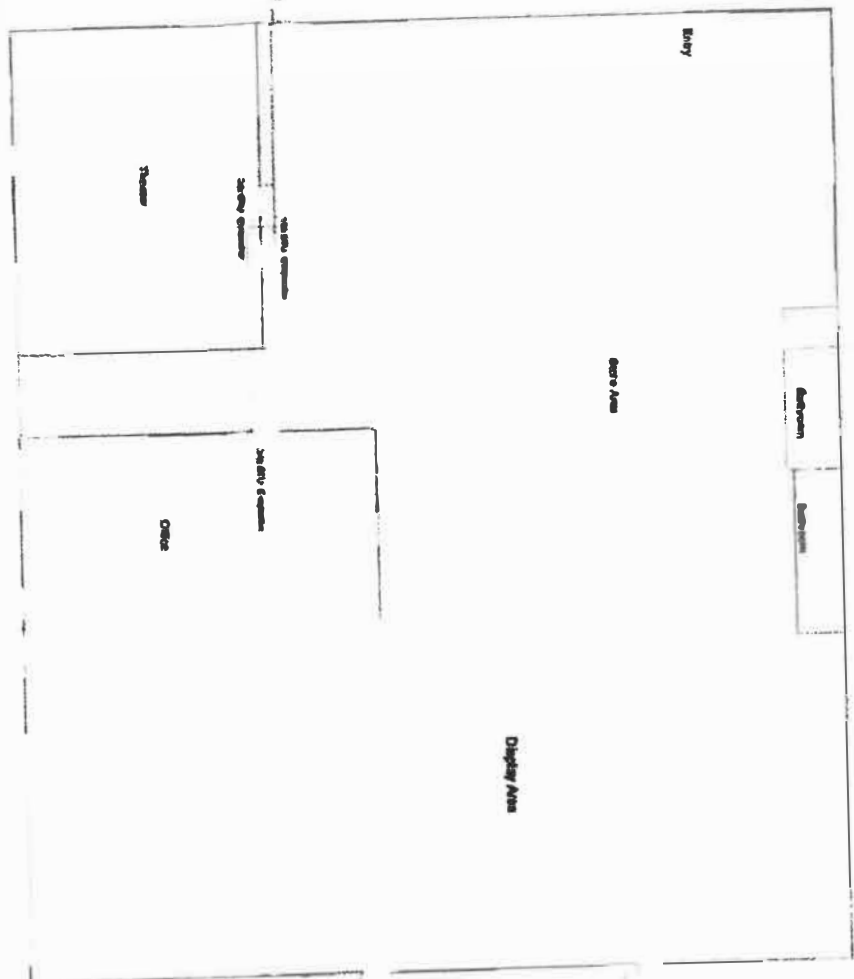
1. The units come with brackets for wall mounting. This method would be beneficial in the winter months with drifting snow. Our thoughts mounting to the wall, would be in less visible area. We also thought about possibly painting the casing of the units the same color as the building to blend in with the building.
2. Build concrete pedestals for each unit to lift the unit off the ground. We could possibly build enclosures to hide the units, depending on the manufacturer's recommendations for ventilation.

The inside unit placements are listed on the attached diagram and will have minimal impact on the inside of the building. Additional electrical conduit will be required on the outside of the building as well. We plan to paint the conduit to blend in with the building.

We would very much like to discuss these options with you to get your guidance and recommendations.

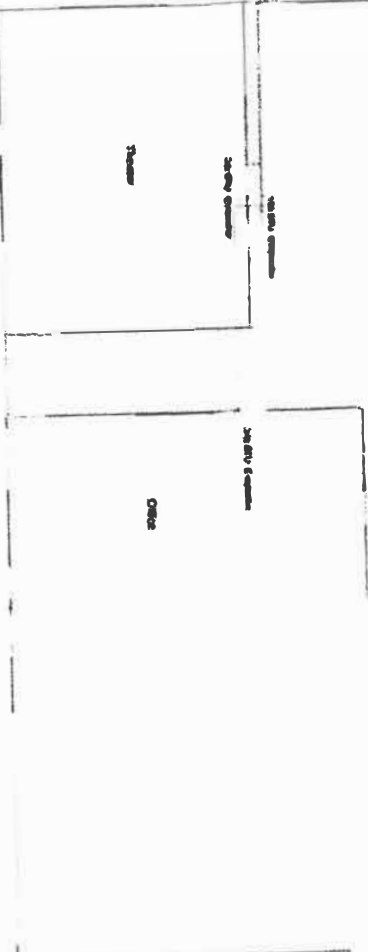
Thank you in advance for your consideration.

**OUTRIGGER UNITS 2 - EASTSIDE**  
 20 FT 0 IN OVERALL



**OUTRIGGER UNITS 2 & 4 - SOUTH SIDE**  
 20 FT 0 IN OVERALL

**OUTRIGGER UNIT #1 - NORTH SIDE**  
 40 FT 0 IN OVERALL



**EQUIPMENT / EQUIPMENT**

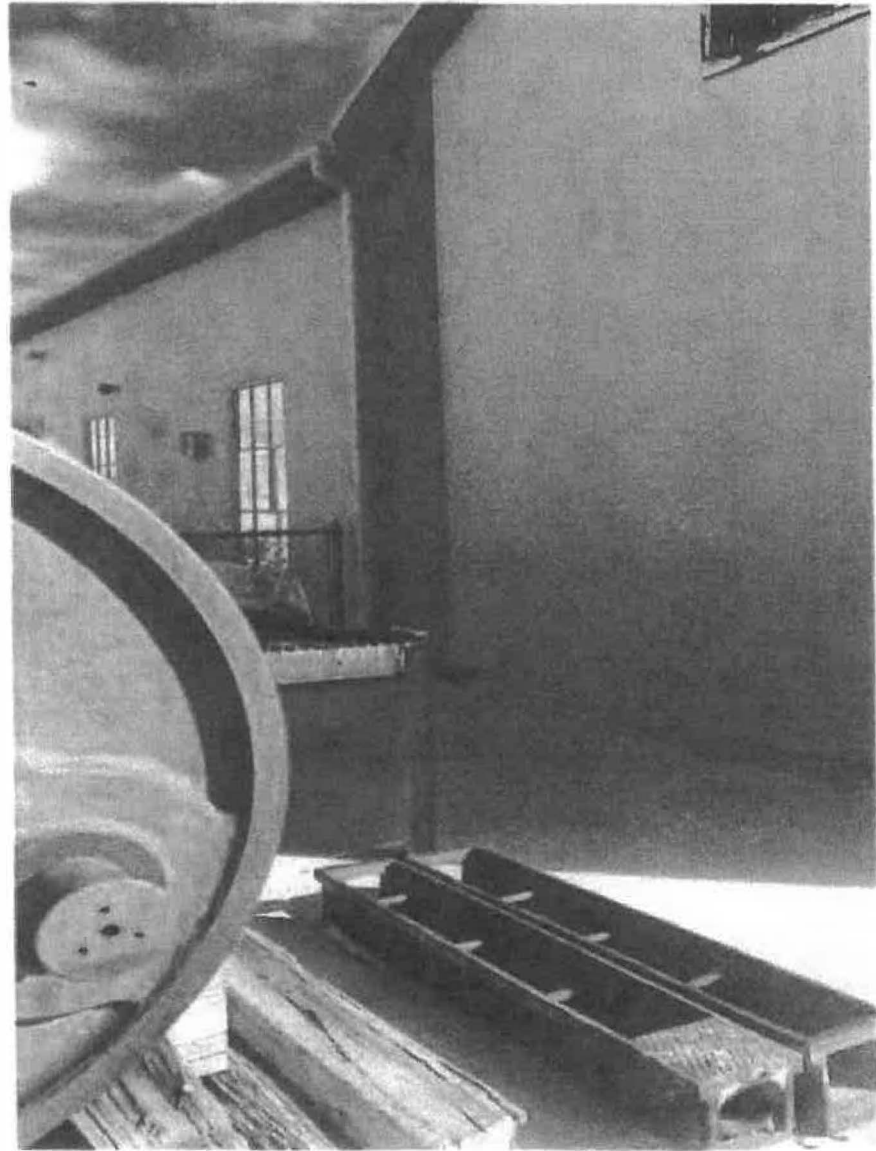
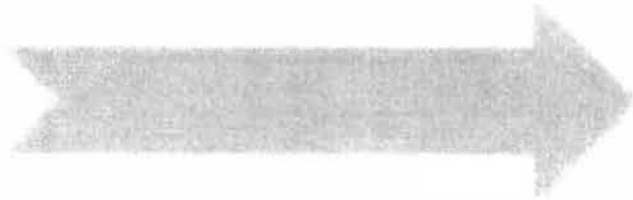
OUT 2 - 10 FT x 10 FT x 10 FT  
 1000 GAL FUEL TANKS, 200 GAL  
 COMPRESSOR, FUEL 30 GAL  
 OUT 3 - 10 FT x 10 FT x 10 FT  
 1000 GAL FUEL TANKS, 200 GAL  
 COMPRESSOR, FUEL 30 GAL  
 OUT 1 - 10 FT x 10 FT x 10 FT  
 1000 GAL FUEL TANKS, 200 GAL  
 COMPRESSOR, FUEL 30 GAL  
 OUT 1 - 10 FT x 10 FT x 10 FT  
 1000 GAL FUEL TANKS, 200 GAL  
 COMPRESSOR, FUEL 30 GAL  
 OUT 2 - 10 FT x 10 FT x 10 FT  
 1000 GAL FUEL TANKS, 200 GAL  
 COMPRESSOR, FUEL 30 GAL  
 OUT 3 - 10 FT x 10 FT x 10 FT  
 1000 GAL FUEL TANKS, 200 GAL  
 COMPRESSOR, FUEL 30 GAL

Oneppell Historic Mining Park  
 110 Burno Ave.  
 Oneppell, NY, 13624

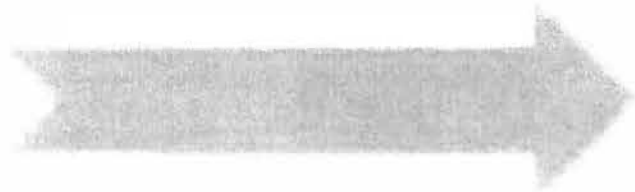
OTHO1224  
 Sheet 101



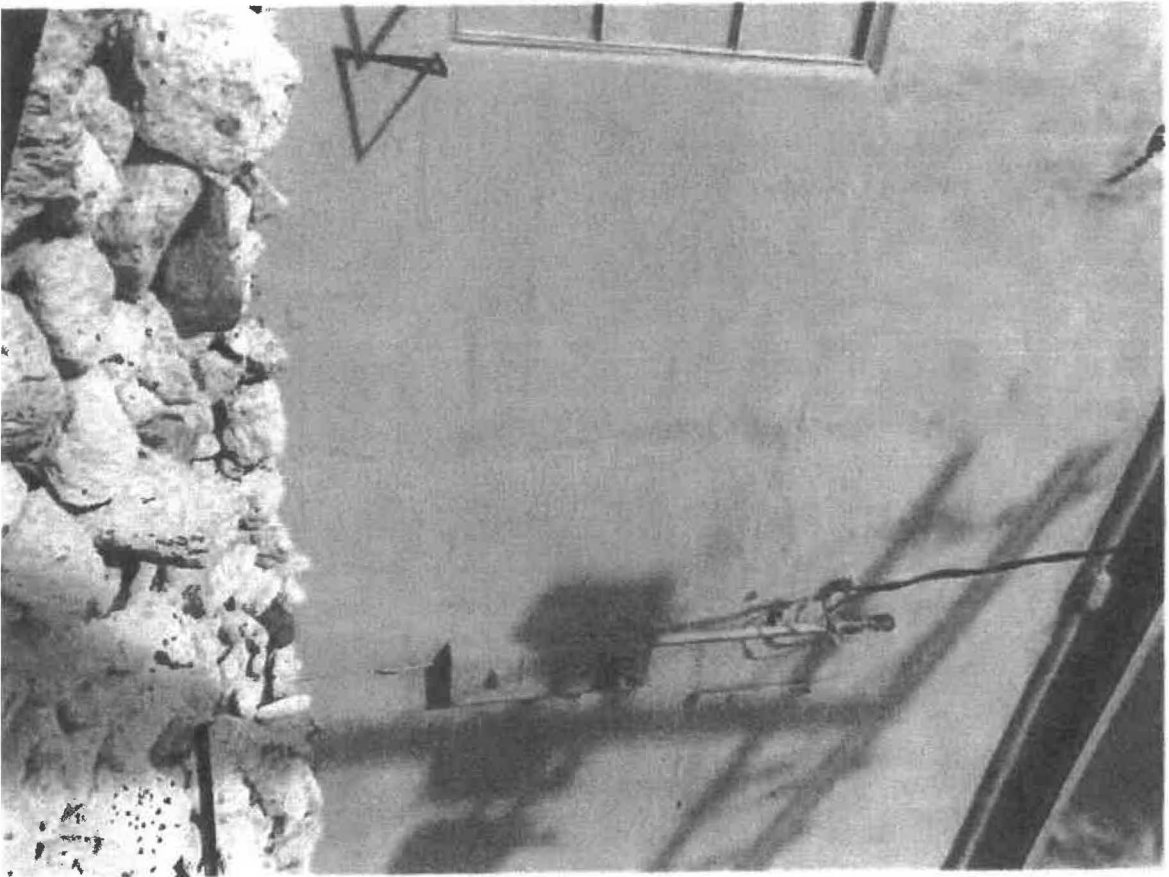
**Outdoor Unit # 1 Placement  
On the West Side of the Visitors Center**



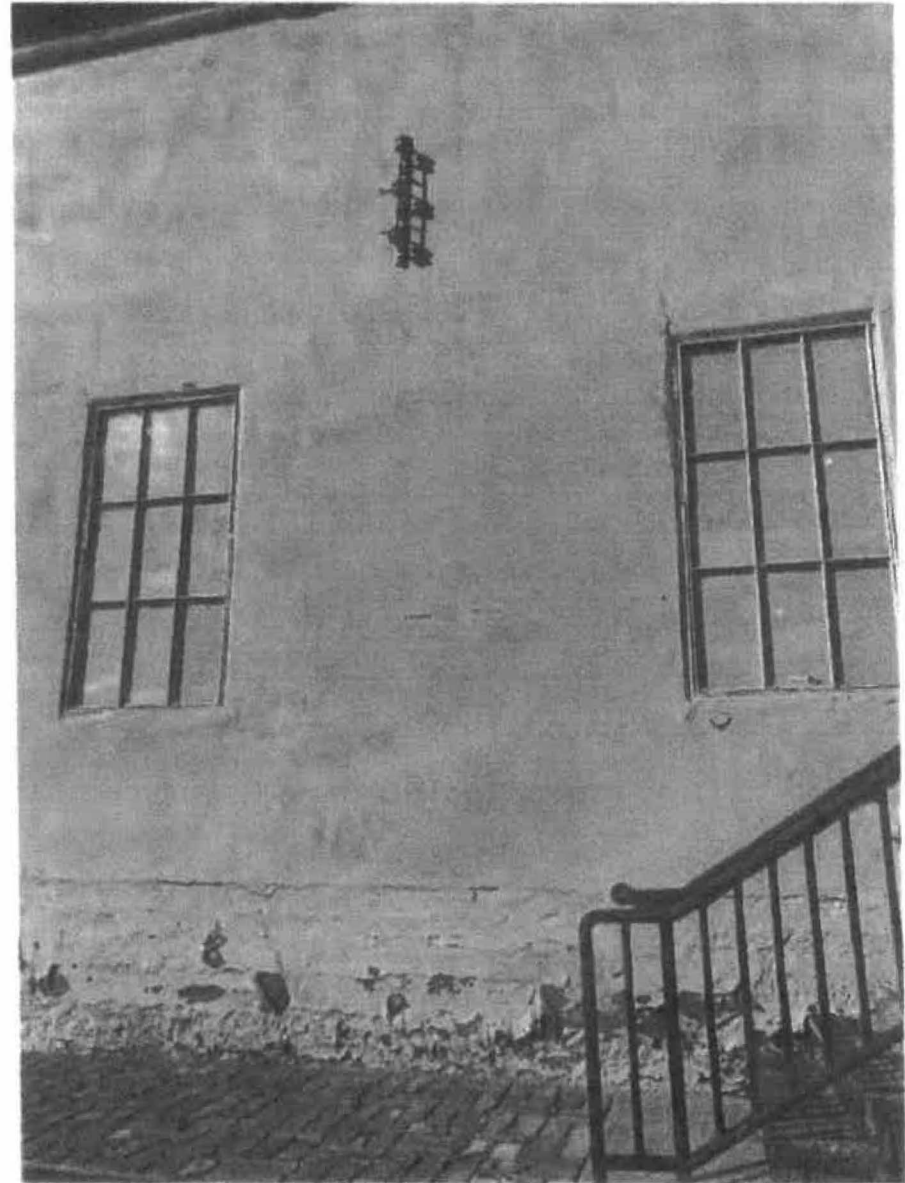
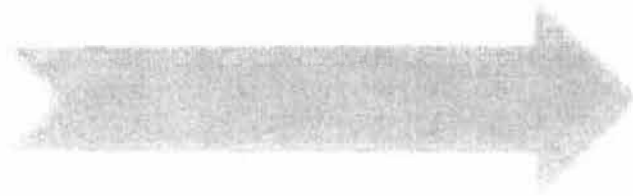
**Outdoor Unit # 2 Placement  
On the East Side of the Visitors Center**



**Outdoor Unit # 3 Placement  
On the South Side of the Visitors Center**



**Outdoor Unit # 4 Placement  
On the South Side of the Visitors Center**



**PRIMARY**

DETAILS

Job Name: Tanopah mining Location: 110 Burns Ave Tanopah  
 Purchaser: \_\_\_\_\_ Order Number: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Submitted to: Joe Westerland For: \_\_\_\_\_ Ref: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_ Approved: \_\_\_\_\_ Construction: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Unit Designation: \_\_\_\_\_ Scheduled: \_\_\_\_\_ Model #: \_\_\_\_\_

GENERAL DATA

PRODUCT

**SINGLE SPLIT Wall Mount 36k Btu PRIMARY INVERTER SERIES**

See table (1) for Pump type)  
 1. See Outdoor unit for indoor unit of similar capacity  
 2. Able to connect with Building Management System (BMS)

Model	Capacity (Rated)	Capacity (BHP-MAX)	Input	Current	Energy	SEER2	SEER5
<b>IDU</b>	36000	12000-36000	W	3428	15.70	16.50	18
<b>ODU</b>	36000	12000-36000	W	2917	26.7	28.3	3
	Capacity (Rated) at 97°F						
	28000						
<b>REQUIREMENTS DATA</b>	Power Supply	Voltage	208/230/1-000				
	MAX. AMPACITY	A	28				
	MAX. TD FUSE BREAKER	A	45				
	Cable between IDU & ODU	Max. Amp	3x10' 4-18				
			51-80 (10-30)				
	Remote Control Adjustable Temperature Range	°FC					
<b>Indoor Fan</b>	Control	W	Y				
	Sound (Max) at 1m	dB(A)	1154/1000/801				
	Outdoor Sound Pressure Level (at 1m)	dB(A)	52/48/44				
	Indoor Air Flow (at 1m)	CFM (m³/s)	1050/1200/1300 (1800/2000/2300)				
<b>Outdoor Fan Motor</b>	Oil		1				
	Cooling Temperature Range	°FC	5-118 (45-40)				
	Heating Temperature Range	°FC	-7.5 (-20.3)				
	Speed (Hz)	Hz	830				
	Outdoor Sound Pressure Level	dB(A)	61				
	Outdoor Air Flow	CFM (m³/s)	2418.2 (600)				
<b>Compressor</b>	Type		ROTARY				
	Capacity	BTU/h	3730				
	Oil Type		POE VG74				
	Oil Charge	oz. (kg)	33.8 (1000)				
<b>Refrigerant</b>	Type		R-410A				
	Refrigerant Charge	oz. (kg)	111.2 (3.16)				
	Factory Precharge	FL	25				
	Additional Charge per Each FL	oz.	1.23				
<b>Piping</b>	Liquid Line OD	In (mm)	3/8" (9.52)				
	Suction Line OD	In (mm)	3/4" (19.05)				
	Max. Pipe Length	FL (m)	164 (540)				
	Max. Difference in Level	FL (m)	80 (263)				
<b>Drainage</b>	Water Pipe Diameter	In (mm)	1/2" (12.7)				
	Drainage Pressure (PSI)	PSI (kPa)	55/210 (3.8/14.5)				
<b>Mounting</b>	Mounting Height	In (mm)	54 (1376) (1.52)				
	Mounting Hole	In (mm)	41 (1041) (1.04)				
	Net Weight	kg (lb)	37.8 (83.5)				
	Shipping Weight	kg (lb)	61.7 (136)				
<b>Outdoor Unit</b>	Dimensions (Height)	In (mm)	37.3 (944) (36" (914))				
	Packing Width (D)	In (mm)	43.3 (1107) (41" (1041))				
	Net Weight	kg (lb)	102 (225)				
	Shipping Weight	kg (lb)	214.5 (473)				
<b>Qty per 20' (6.1m) / 30' (9.1m) / 40' (12.2m) / 50' (15.2m) / 60' (18.3m) / 70' (21.3m) / 80' (24.4m) / 90' (27.4m) / 100' (30.5m)</b>			2/3/4/5/6/7/8/9/10				

IMAGE



MCRB31NEGH (Standard)

HCWA31NEHH (Optional)

Some Optional Accessories

Part number	Description
MBA21NEMH	3/4" MS/TP Adapter
MCA23NEMH	H-Link adapter
MOB21NEMH	Wired controller Group control adapter
MFB21NEMH	Wi-Fi controller (compatible for Direct Wireless Controller Option)

Standard operating conditions:  
 Cooling—Indoor 24.0°C DB / 66.2°F WB (25°C DB / 77°C WB) & Outdoor 35.0°C DB / 75.0°F WB (35°C DB / 25°C WB)  
 Heating—Indoor 6.5°C DB / 43.7°F WB (10°C DB / 50°C WB) & Outdoor 34.0°C DB / 93.2°F WB (7°C DB / 45°C WB)

# Right J® Mobile Report

Job:  
Date: 2/5/2024  
By:

AL

## Project Information

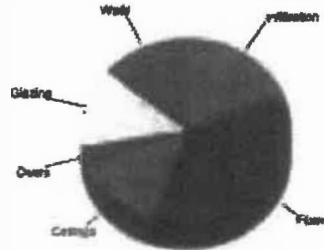
For: 110 Burro Ave, Tonopah, NV 89049

## Design Conditions

<b>Location:</b> Tonopah AP, NV, US Elevation: 5433 ft Latitude: 38°N		<b>Indoor:</b> Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	<b>Heating</b> 70 56 30 29.0	<b>Cooling</b> 75 18 50 -42.2
<b>Outdoor:</b> Drybulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	<b>Heating</b> 14 - - 15.0	<b>Cooling</b> 93 33 (H) 59 7.5	<b>Infiltration:</b> Method Construction quality Fireplaces	Simplified Average 0

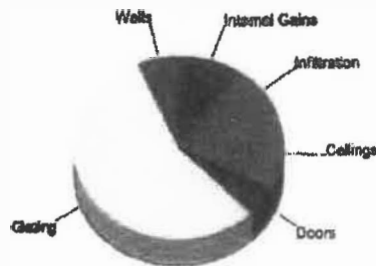
## Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.6	8072	13.7
Glazing	31.9	8193	13.9
Doors	21.8	2179	3.7
Ceilings	1.6	8156	13.8
Floors	4.3	21750	36.8
Infiltration	4.1	10637	18.0
Ducts		0	0
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
<b>Total</b>		<b>58985</b>	<b>100.0</b>



## Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.6	1240	6.4
Glazing	42.6	10925	56.0
Doors	9.0	899	4.6
Ceilings	0.5	2709	13.9
Floors	0	0	0
Infiltration	0.7	1832	9.4
Ducts		0	0
Ventilation		0	0
Internal gains		1890	9.7
Blower		0	0
Adjustments		0	0
<b>Total</b>		<b>19494</b>	<b>100.0</b>



Latent Cooling Load = 0 Btuh  
Overall U-value = 0.068 Btuh/ft²·°F, Window/Floor Area = 5.1%

Data entries checked.

# Project Summary

## Entire House

Job:  
Date: 2/5/2024  
By:

### Project Information

For:

Notes:

### Design Information

Weather: Tonopah AP, NV, US

#### Winter Design Conditions

Outside db 14 °F  
Inside db 70 °F  
Design TD 56 °F

#### Summer Design Conditions

Outside db 93 °F  
Inside db 75 °F  
Design TD 18 °F  
Daily range H  
Relative humidity 50 %  
Moisture difference -42 gr/lb

#### Heating Summary

Structure 58986 Btuh  
Ducts 0 Btuh  
Central vent (0 cfm)  
(none) 0 Btuh  
Humidification 0 Btuh  
Piping 0 Btuh  
Equipment load 58986 Btuh

#### Sensible Cooling Equipment Load Sizing

Structure 19494 Btuh  
Ducts 0 Btuh  
Central vent (0 cfm)  
(none) 0 Btuh  
Blower 0 Btuh  
Use manufacturer's data y  
Rate/swing multiplier 1.00  
Equipment sensible load 19494 Btuh

#### Infiltration

Method Simplified  
Construction quality Average  
Fireplaces 0

#### Latent Cooling Equipment Load Sizing

Structure -2054 Btuh  
Ducts 0 Btuh  
Central vent (0 cfm)  
(none) 0 Btuh  
Equipment latent load 0 Btuh  
Equipment Total Load (Sen+Lat) 19494 Btuh  
Req. total capacity at 0.70 SHR 2.3 ton

	Heating	Cooling
Area (ft <sup>2</sup> )	5022	5022
Volume (ft <sup>3</sup> )	45198	45198
Air changes/hour	0.28	0.15
Equiv. AVF (cfm)	211	113

#### Heating Equipment Summary

Make n/a  
Trade n/a  
Model n/a  
AHRI ref n/a  
Efficiency n/a  
Heating input 0 Btuh  
Heating output 0 Btuh  
Temperature rise 0 °F  
Actual air flow 1082 cfm  
Air flow factor 0.018 cfm/Btuh  
Static pressure 0 in H2O  
Space thermostat

#### Cooling Equipment Summary

Make  
Trade  
Cond  
Coil  
AHRI ref  
Efficiency 0 SEER  
Sensible cooling 0 Btuh  
Latent cooling 0 Btuh  
Total cooling 0 Btuh  
Actual air flow 1082 cfm  
Air flow factor 0.056 cfm/Btuh  
Static pressure 0 in H2O  
Load sensible heat ratio 1.00

*Bold/italic values have been manually overridden*

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



wrightsoft

Right-Soft® Universal 2023 23.0.05 Right JB Mobile

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Page 1

**Right-J® Worksheet**  
**Entire House**

Job:  
 Date: 2/5/2024  
 By:

AL

1 Room name				Entire House				First Floor							
2 Exposed wall				286.0 ft				286.0 ft							
3 Room height				9.0 ft				9.0 ft							
4 Room dimensions				5022.0 ft²				81.0 x 62.0 ft							
5 Room area				5022.0 ft²				5022.0 ft²							
6	Ty	Construction number	U-value (Btu/ft²·F)	Or	HTM (Btu/ft²)		Area (ft²) or perimeter (ft)		Load (Btu/h)		Area (ft²) or perimeter (ft)		Load (Btu/h)		
					Heat	Cool	Gross	NP/S	Heat	Cool	Gross	NP/S	Heat	Cool	
6	W	13A-12.5ocs	0.065	n	3.84	0.86	729	638	2313	355	729	638	2313	355	
	G	1D-c2ow	0.570	n	31.82	21.27	73	0	2314	1542	73	0	2314	1542	
	D	11D0	0.360	n	21.84	9.01	21	21	459	189	21	21	459	189	
	11	W	13A-12.5ocs	0.065	s	3.84	0.86	558	481	1751	289	558	481	1751	289
		G	1D-c2ow	0.570	s	31.82	63.33	58	0	1782	3538	58	0	1782	3538
		D	11D0	0.360	s	21.84	9.01	21	21	459	189	21	21	459	189
	W	G	13A-12.5ocs	0.065	s	3.84	0.86	729	636	2313	355	729	636	2313	355
		D	1D-c2ow	0.570	s	31.82	31.88	73	0	2314	2311	73	0	2314	2311
		D	11D0	0.360	s	21.84	9.01	21	21	459	189	21	21	459	189
	W	G	13A-12.5ocs	0.065	w	3.84	0.86	568	465	1894	289	568	465	1894	289
		D	1D-c2ow	0.570	w	31.82	63.33	58	0	1782	3538	58	0	1782	3538
D		11D0	0.360	w	21.84	9.01	37	37	803	331	37	37	803	331	
C		17A-31xd	0.029	-	1.82	0.84	5022	5022	8156	2709	5022	5022	8156	2709	
F		22A-tsh	1.368	-	76.05	0.00	5022	288	21750	0	5022	288	21750	0	
6	c) AED excursion									0			0		
Envelope leakage								48349	15773			48349	15773		
12	a) Infiltration							10637	1632			10637	1632		
b) Room ventilation								0	0			0	0		
13	Internal gains:		Occupants @	230	3			600	3			600	3		
		Appliances/other						1200				1200			
Subtotal (lines 6 to 13)								58985	19494			58985	19494		
Less external load								0	0			0	0		
Less transfer								0	0			0	0		
Redistribution								0	0			0	0		
14	Subtotal							58985	19494			58985	19494		
15	Duct loads						0%	0%	0	0	-0%	0%	0	0	
Total room load								58985	19494			58985	19494		
Air required (cfm)								1082	1082			1082	1082		

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



# Component Constructions

## Entire House

Job:  
Date: 2/5/2024  
By:

AL

### Project Information

For: 110 Burro Ave, Tonopah, NV 89049

### Design Conditions

<b>Location:</b> Tonopah AP, NV, US Elevation: 5433 ft Latitude: 38°N			<b>Indoor:</b> Indoor temperature (°F) 70 Design TD (°F) 56 Relative humidity (%) 30 Moisture difference (gr/lb) 29.0	<b>Heating</b> 70 56 30 29.0	<b>Cooling</b> 75 18 50 -42.2
<b>Outdoor:</b> Dry bulb (°F) 14 Daily range (°F) - Wet bulb (°F) - Wind speed (mph) 15.0	<b>Heating</b> 14 - -	<b>Cooling</b> 93 33 (H) 59 7.5	<b>Infiltration:</b> Method Simplified Construction quality Average Fireplaces 0		

### Construction descriptions

	Or	Area ft <sup>2</sup>	U-value Btu/h·ft <sup>2</sup> ·°F	Insul R ft <sup>2</sup> ·h/Btu	Htg HTM Btu/h·°F	Loss Ctg Btu/h·°F	Cig HTM Btu/h·°F	Gain Btu/h
<b>Walls</b>								
13A-12.5oc: Blk wall, r-12 ext bd ins, 6" thk, 1/2" gypsum board int frsh	n	636	0.065	0	3.64	2313	0.56	365
	e	481	0.065	0	3.64	1751	0.56	289
	s	636	0.065	0	3.64	2313	0.56	355
	w	485	0.065	0	3.64	1694	0.56	280
	all	2218	0.065	0	3.64	8072	0.56	1240
<b>Partitions</b> (none)								
<b>Windows</b>								
1D-c2ow: 2 glazing, cr outr, air gas, wd frm mat, cr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht	n	73	0.570	0	31.9	2314	21.3	1542
	e	56	0.570	0	31.9	1782	63.3	3536
	s	73	0.570	0	31.9	2314	31.9	2311
	w	56	0.570	0	31.9	1782	63.3	3536
	all	257	0.570	0	31.9	8193	42.6	10925
<b>Doors</b>								
11D0: Door, wd sc type	n	21	0.390	0	21.8	459	9.01	169
	e	21	0.390	0	21.8	459	9.01	169
	s	21	0.390	0	21.8	459	9.01	169
	w	37	0.390	0	21.8	803	9.01	331
	all	100	0.390	0	21.8	2179	9.01	899
<b>Ceilings</b>								
17A-31xd: Flat ceiling, tar and gravel roof mat, wd deck, r-31 deck ins, 1/2" gypsum board int frsh, 1.5" thkns		5022	0.029	31.0	1.62	8156	0.54	2709
<b>Floors</b>								
22A-1ph: Bg floor, heavy damp soil, on grade depth		286	1.358	0	76.0	21750	0	0



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Right-Soft® Universal 2023 23.0.05 Right JO Mobile

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Page 1

# AED Assessment Entire House

Job:  
Date: 2/5/2024  
By:

## Project Information

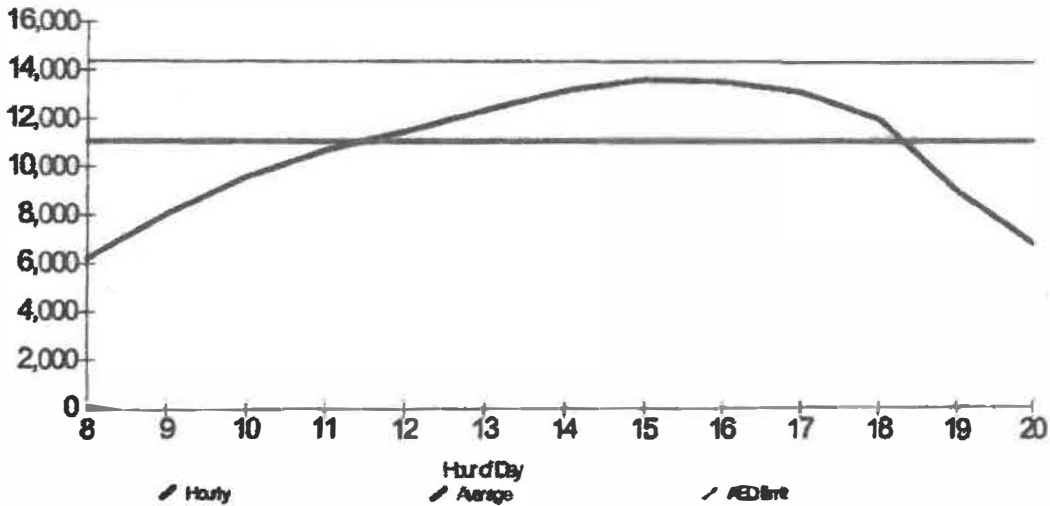
For: 110 Burro Ave, Tonopah, NV 89049

## Design Conditions

Location:		Indoor:		Heating	Cooling
Tonopah AP, NV, US		Indoor temperature (°F)		70	75
Elevation: 5433 ft		Design TD (°F)		56	18
Latitude: 38°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		29.0	-42.2
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	14	93			
Daily range (°F)	-	33 (H)			
Wet bulb (°F)	-	59			
Wind speed (mph)	15.0	7.5			

## Test for Adequate Exposure Diversity

### Hourly Glazing Load



Maximum hourly glazing load exceeds average by 23.2%.

House has adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 0 Btuh



First Floor

First Floor

**Job #:**  
**Performed for:**  
City of Tonopah  
110 Burr Ave  
Tonopah, NV 89049

AL

Scale: 1 : 135

Page 1  
Right-Suite® Universal 2023  
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Proposal prepared by:



Bill To:



2/5/2024

Thank you for contacting us to help with your comfort needs. Our dedication to exceeding the expectations of our customers is second to none, and we look forward to the opportunity to demonstrate this to you.

Based on the comfort assessment, home survey, load and energy analysis, and inspection of your existing equipment that we have performed, here are three HVAC system recommendations for you to consider. While each of these systems meets your core needs, they range in price and features as we discussed. Each of these options includes installation and warranty.

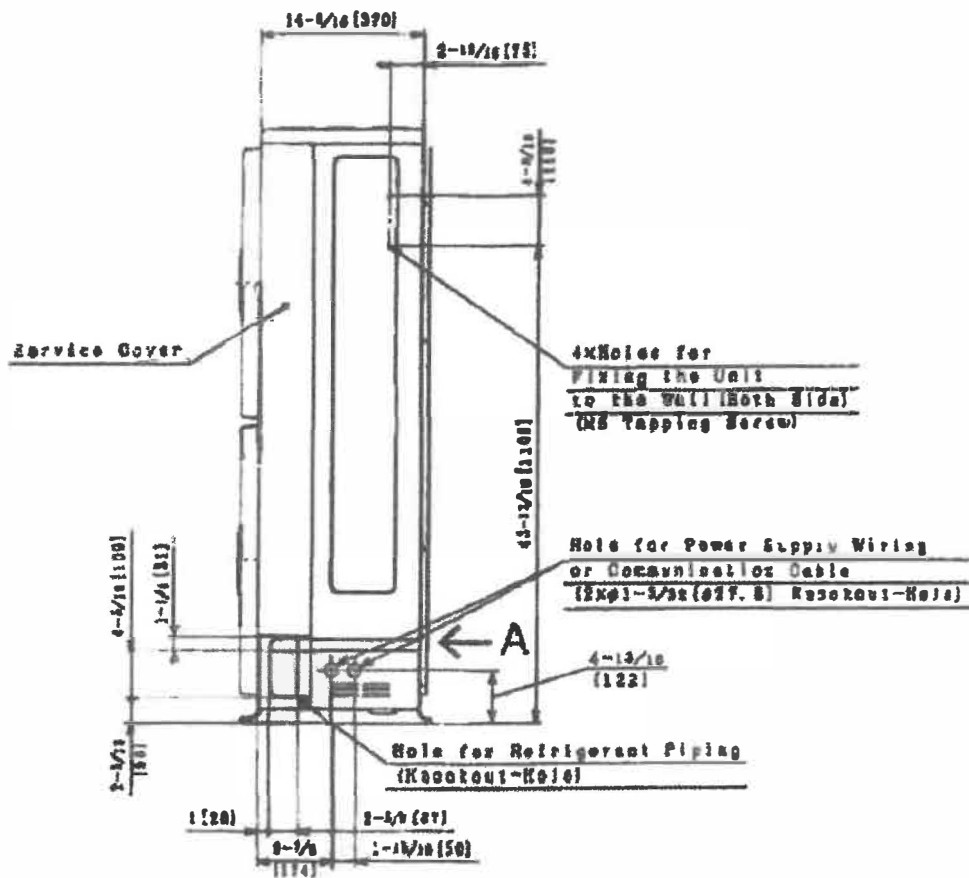
Circle your choice	Best	Better	Good
Outdoor Model Outdoor Efficiency Indoor Model Indoor Efficiency Coil Model AHRI Reference #  Annual Utility Savings Mfr Bonus Federal Rebate Local Rebate  Cost to repair / maintain Installation quote Net Investment (less rebates)  Payback Period (years) Return on Investment (ROI)			

Please feel free to contact us with any questions regarding this proposal. We look forward to hearing from you soon. In order to be added to our installation schedule please indicate your choice of systems with your initials in the last row above and sign the proposal below.

Thank you,

Homeowner Authorized Signature \_\_\_\_\_

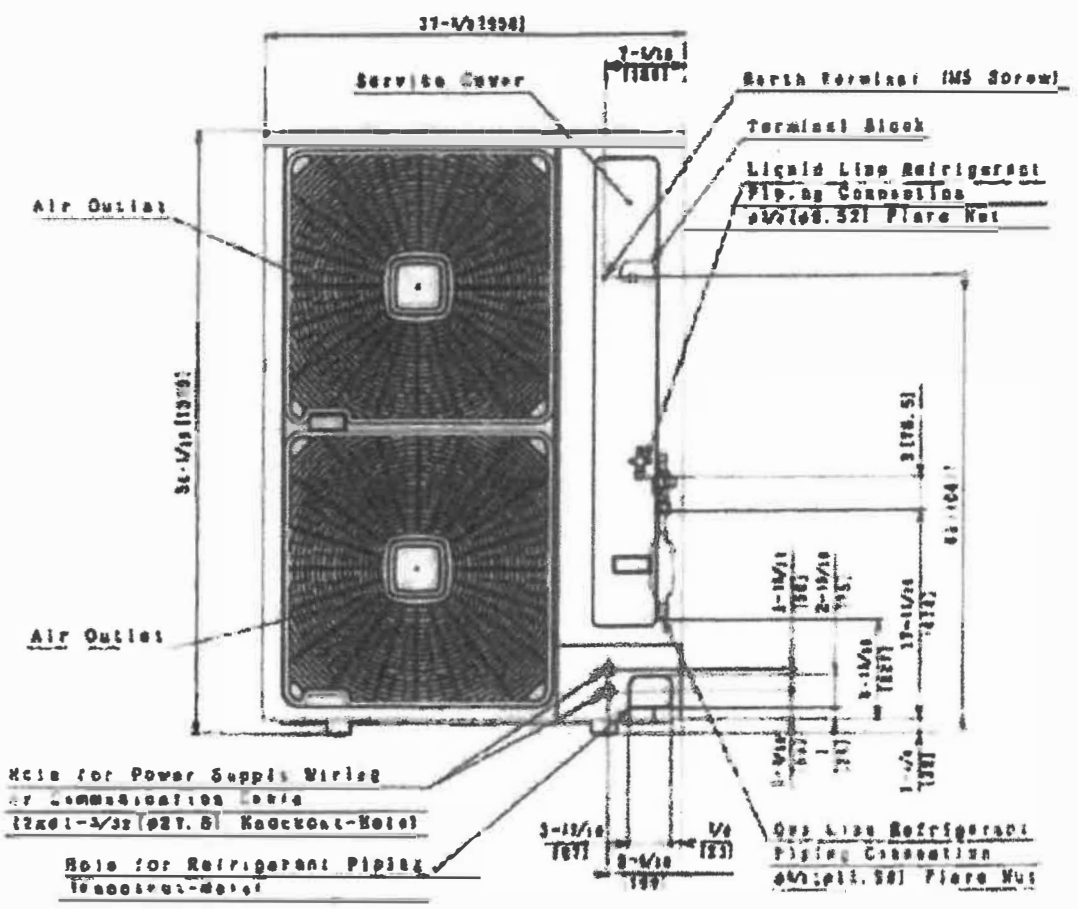
Date \_\_\_\_\_



**NOTES:**

1. There are stop valves in the cabinet.
2. When connecting field refrigerant piping from the bottom side of the unit, provide the space marked with  $\varnothing$  for superstructures such as foundation to avoid interference.
3. The dimension marked with  $\varnothing$  indicates the mounting pitch dimension for anchor bolts.





**NOTES:**

\*1. Rating conditions are based on the AHRI testing standard. See [www.ahri.net.org](http://www.ahri.net.org) for more information:

**Cooling**

Indoor Air Inlet Temperature: 80°F (26.7°C) DB  
67°F (19.4°C) WB

Outdoor Air Inlet Temperature: 95°F (35.0°C) DB

**Heating**

Indoor Air Inlet Temperature: 70°F (21.1°C) DB

Outdoor Air Inlet Temperature: 47°F (8.3°C) DB

43°F (5.1°C) WB

Piping Length: 24ft. 7-3/16in. (7.5m)

Piping Lift: 0ft. (0m)

\*2. For more details, please refer to Engineering manual "Operation range" section.

\*3. Measurement Point: 3.3ft. (1m) from the air outlet side, 4.9ft. (1.5m) from floor level.

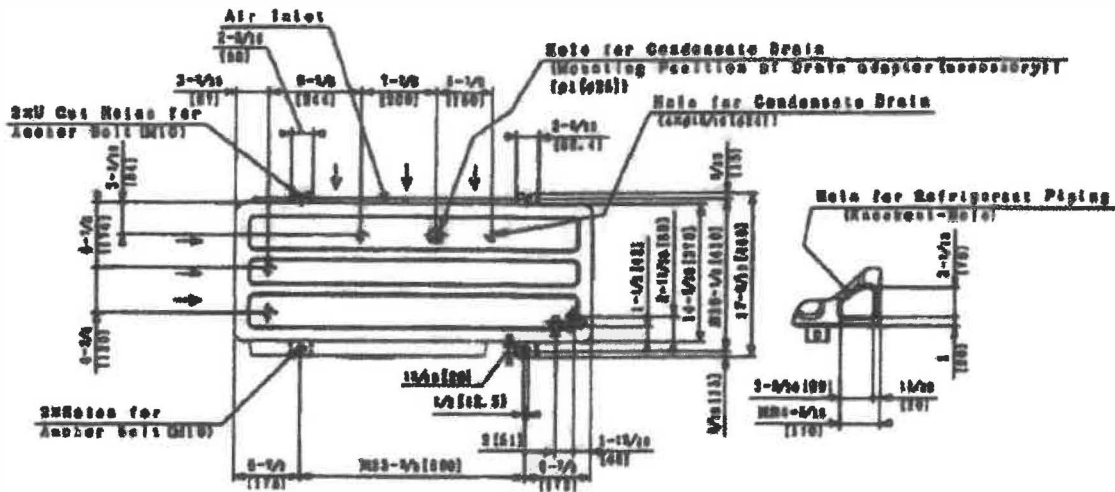
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

The sound of the air inlet side is 3dB higher than that of the air outlet side.

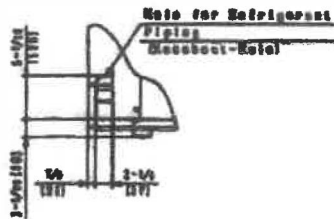
## System Dimensions

48,000 BTU/H Mini VRF Outdoor Unit

Model (H,Y,C) VAHP048B21S



• **Side view**



**Drain Water**

Drain water is spread during heating operation or defrost operation.  
Choose a place where wall drainage is available.  
Or provide a groove for drain.  
Do not provide an upward plug from the unit to avoid reverse flow of the drain.  
When dripping drain water is not permissible, provide a catch drain pan under the outdoor unit, to collect drain water securely.

## Submittal Data Sheet

**(H, Y, C) VAHP048B21S**

**48,000 Btu/h Mini VRF Outdoor Unit**

Job Name: <u>Tonopah Mining</u>	Location: <u>10 BURRO AVE TONOPAH</u>
Purchaser: [REDACTED]	Order No:
Engineer: [REDACTED]	GC:
Submitted To: [REDACTED]	Approval:
Submitted By: [REDACTED]	Date:
Unit Designation:	Schedule/Model No:

### FEATURES

- Cooling up to 118°F and heating down to -4°F.
- One outdoor unit for up to 8 indoor units
- Ideal choice for building with zero lot lines or zoning restrictions
- Flexible – Numerous systems configurations multiple-sized outdoor units and multiple options of indoor unit types and capacities
- Adaptable – Up to 984 ft. total pipe length
- Versatile – Up to 164ft. vertical distance between outdoor unit and indoor units
- Quiet operations – as low as 48 dB(A) sound level for outdoor units and 28 dB(A) for indoor units

Model		Model		Model
Power Supply		Capacity (Nominal) *1		208/230V 1PH 60Hz
Capacity (Nominal) *1		Cooling	Capacity (Nominal)	48,000 (14.1)
		Power Input	kW	3.78
		Current Input	A (208/230V)	18.8 / 16.5
		Capacity (Nominal) *1	SLA / Btu/h	51,000 (18.0)
		Power Input	kW	3.99
		Current Input	A (208/230V)	19.8 / 17.7
Efficiency Ratings *1		Rated Capacity		Btu/h
Non-Ducted / Ducted		EER		48,000 / 48,000
		SEER		16.70 / 13.30
		SEER		24.40 / 18.43
		Rated Capacity		Btu/h
		COP		54,000 / 54,000
		HSPF		4.86 / 3.86
		HSPF		11.70 / 11.80
Cooling Operating Range *2		Indoor	°F WB (°C WB)	
		Outdoor	°F DB (°C DB)	
		Indoor	°F CB (°C DB)	
		Outdoor	°F WB (°C WB)	
Heating Operating Range *2		Indoor	°F WB (°C WB)	
		Outdoor	°F WB (°C WB)	
Cabinet Color (Mixed Color)		L0VE S03		
Outer Dimensions		Height	in (mm)	54-4/16 (1380)
		Width	in (mm)	37-3/8 (950)
		Depth	in (mm)	14-3/16 (365)
Package Dimensions		Height	in (mm)	58-4/16 (1483)
		Width	in (mm)	40-3/8 (1029)
		Depth	in (mm)	18-1/8 (460)
Weight		Net	lbs (kg)	310 (141)
		Gross	lbs (kg)	367 (167)
Connection Ratio		Total Indoor Unit Capacity	%	80-130
		Max. Indoor unit/system		8
Heat Exchanger		Type	Multi-Pass Cross-Flowed Tube	
		Material	Cu-Ni (Anti-corrosion)	
Compressor		Type	R410A / R32	
		Motor Phase / Pol	- / -	
		Start Method	Inverter	
		Operation Range	S	
		Refrigerant Oil Type	POE	
Crank Case Heater		Type	W-City	
		Quantity	3	
Fan		Motor Output (Peak)	WHPeak	
		Air Flow Rate	cfm (m³/min)	
		Drive	Direct Drive	
Overhaul		Min. Circuit Amps	A	
		Max. Overcurrent Protective Device	A	
Sound Pressure Level *3		Cooling (35/24-55)	dB(A)	
		Heating	dB(A)	
		Cycle	High temperature switch at 801psi (4.12MPa)	
Protection device		Compressor	Over-current protection Over-heat protection Current limiter (30A)	
		Fan Motor	Over-current protection Over-heat protection Short-circuit breaker (5A)	
		PCB (Control Circuit)	Fuse on PCB (5A)	
Refrigerant		Type	R410A	
		Charge amount	lbs (kg)	
		Charge amount	oz (L)	
Refrigerant Oil		Charge amount	oz (L)	
Drain Method		Return of Refrigerant Cycle		
Main Refrigerant Piping		Gas Line	in (mm)	3/8 (9.5)
		Liquid Line	in (mm)	3/8 (9.5)



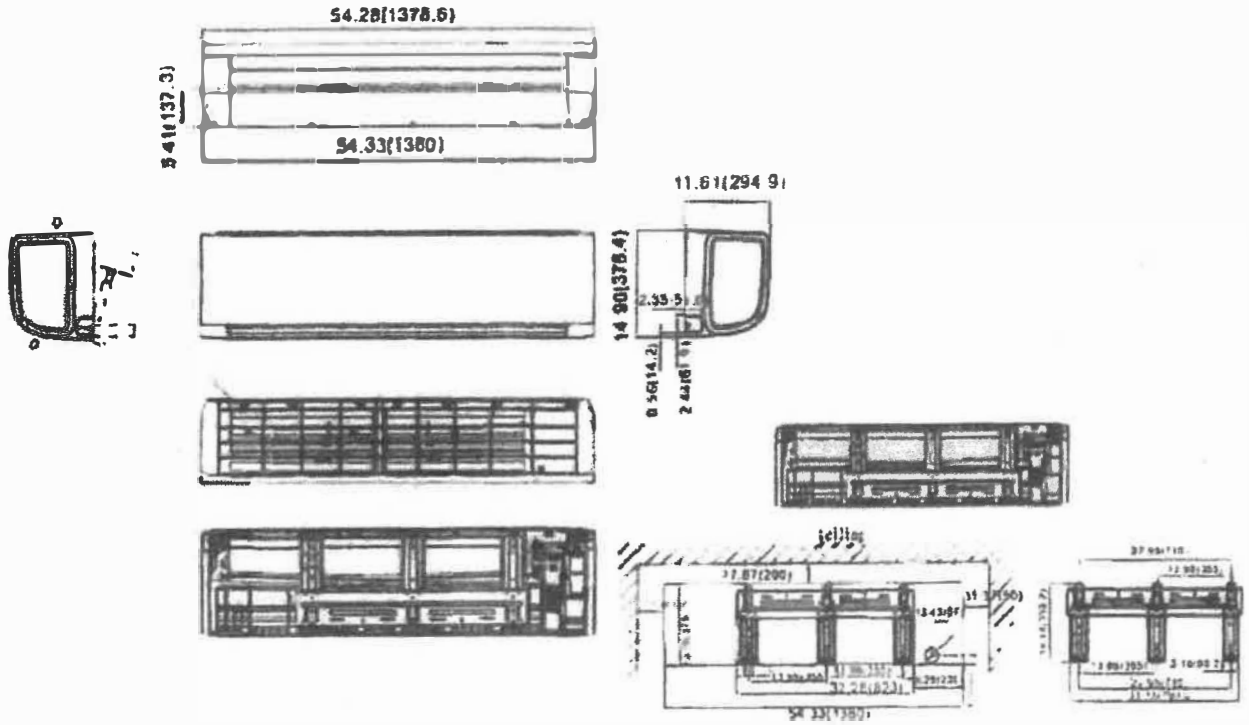
Unit: in (mm)

HITACHI

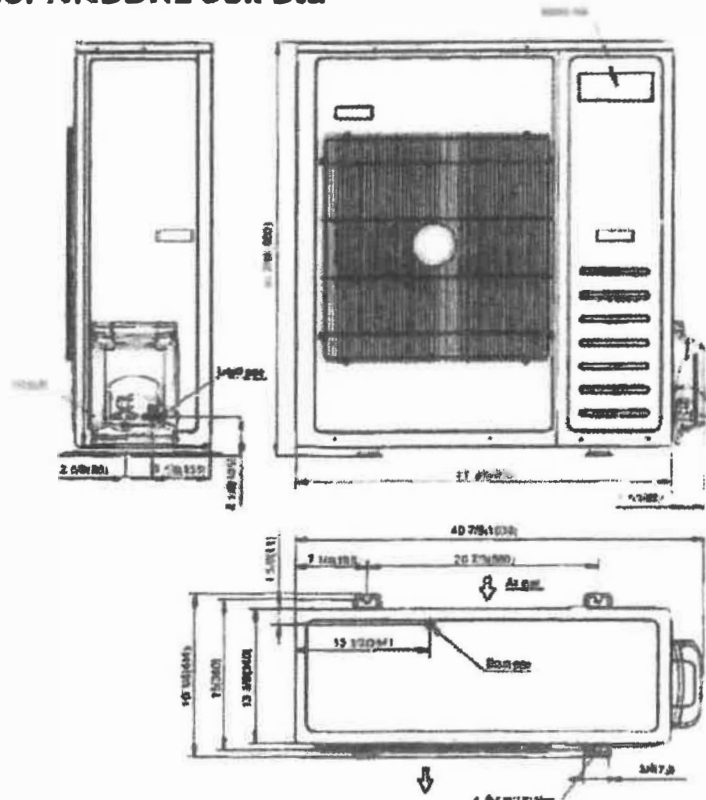
**IDU: RPK-4.0PNN1DH 36k Btu**

4.0HP  
(36K)

Unit: in.(mm)



**ODU: RAS-4.0PNNBDH1 36k Btu**



**PRIMARY**

DETAILS

Job Name: TORONTO MINING

110 Bldg. 100 AOE Toronto

Purchaser: [Redacted]  
 Engineer: [Redacted]  
 Submitted to: [Redacted]  
 Submitted by: [Redacted]  
 UFI Designation: [Redacted]  
 SERIAL DATA: [Redacted]

Order Number:  
 For: [Redacted] Ref:  
 Construction:  
 Date:  
 Model:

**SINGLE SPLIT Wall Mount 36k Btu PRIMARY INVERTER SERIES**

Solution (Heat Pump type)  
 1. Single Outdoor unit for indoor split system capacity  
 2. Able to connect with Building Heating control system (BMS)

**IDU**

**RPK-4.0PNN1DH**

**RAB-4.0PNNBDH1**

**ODU**

Category	Item	Unit	Value
Cooling	Capacity (Rated)	Btu/h	36000
	Capacity (MIN-MAX)	Btu/h	12000-36000
	Input	W	3420
	Current	A	15.70
	EER	Watt/Wh	10.80
	SEER	Watt/Wh	10
Heating	Capacity (47°F)	Btu/h	36000
	Capacity (MIN-MAX)	Btu/h	12000-36000
	Input	W	3017
	Current	A	13.1
	COP	Watt/Wh	10.3
	COP	Watt/Wh	3
	HSPF	Watt/Wh	6
	Capacity Heating (Rated) at 17°F	Btu/h	20000
ELECTRICAL DATA	Power Supply	Voltage	200-230V/50
	WIRING	A	20
	MAX. TO FUSE/BREAKER	A	45
	Cable between IDU & ODU	Max AWG	3+10' 4+16' 61-80 (16-20)

Item	Unit	Value	
Remote Control Adjustable Temperature Range	°F (°C)	61-80 (16-20)	
Indoor Fan Motor	On	1	
	Speed	W	0.3
	Speed (Max/Min)	min	1164/1000/851
	Indoor Sound Pressure Level (10'@1m)	dB(A)	52 (54)
Outdoor Fan Motor	Indoor Air Flow Rate @ 75°F (27°C)	CFM (m³/min)	1050/1200 (1400/1600 (1350))
	On	1	

Item	Unit	Value	
Cooling Temperature Range	°F (°C)	5-110 (-15-45)	
	Heating Temperature Range	°F (°C)	-4-75 (-20-24)
	Speed (1)	min	50
	Outdoor Sound Pressure Level (10'@1m)	dB(A)	61
Compressor	Capacity	CFM (m³/min)	341.2 (1000)
	Oil Type	Oil Type	MOYARLY
Refrigerant	Oil Charge	oz. (g)	10.2 (287.4)
	Year	Year	2010

Item	Unit	Value	
Piping	Liquid Line OD	in (mm)	3/8" (9.52)
	Vapor Line OD	in (mm)	3/8" (9.52)
	Max. Pipe Length	ft. (m)	100 (30)
Drainage Water	Flow Diameter	in (mm)	1-1/4" (31.75)
	Design Pressure (PSI)	PSI (kPa)	150 (1034.2)

Item	Unit	Value	
Indoor Unit	Dimension (HxWxD)	in (mm)	54.3x14.7x11.1 (1381x373x281)
	Packing Unit (HxWxD)	in (mm)	50.0x18.0x10.0 (1270x457x254)
	Net Weight	lbs (kg)	81.8 (37.1)
	Shipping Weight	lbs (kg)	81.8 (37.1)
Outdoor Unit	Dimension (HxWxD)	in (mm)	37.3x14.7x11.1 (948x373x281)
	Packing Unit (HxWxD)	in (mm)	43.3x14.7x11.1 (1100x373x281)
	Net Weight	lbs (kg)	75.2 (34.1)
	Shipping Weight	lbs (kg)	75.2 (34.1)

Item	Unit	Value
Qty per 28' (8.5m) MOYHQ Outdoor Unit (Indoor Unit)	Set	2/5/3/10/8 (140/200/240)



HRB31NEG (Standard)      HCWA21NEHH (Optional)

Some Optional Accessories

Part number	Description
KBAA21AEV1	BMS Modbus Adapter
HOAG21E1	H-link adaptor
HOBA21E1	Wired controller Group control adaptor
HRBA21E1DH	IRRC receiver (Exclusively for Detached Whole House Control Unit)

Manufacturing conditions:  
 Cooling - Indoor: 82°F DB / 64.7°F WB (27°C DB / 18°C WB) & Outdoor: 95°F DB / 75.2°F WB (35°C DB / 24°C WB)  
 Heating - Indoor: 68°F DB / 59°F WB (20°C DB / 15°C WB) & Outdoor: 44°F DB / 42.8°F WB (6°C DB / 6°C WB)