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STEAM SERVICE AGREEMENT

THIS AGREEMENT, entered into this _____ day of _____, 1979, between CENTRAL HEATING COMPANY, a Minnesota corporation ("Central") and _____ City of Minneapolis _____ ("Customer"),

RECITALS:

A. Central is engaged in the business of producing and selling steam and chilled water on a select basis.

B. Customer is the owner of the Loring Municipal Parking Ramp building ("Building") located at Nicollet Avenue & Grant Street in Minneapolis, Minnesota;

C. Customer wishes to purchase from Central its total steam requirements for heating the building and for other building uses.

NOW, THEREFORE, it is agreed as follows:

1. This Agreement shall extend for a term commencing on the 1 day of January, 1981 to and including the 31 day of December, 2000.

2. Central shall sell and customer shall purchase steam for use by customer within the Building. Customer agrees that it shall not sub contract for the sale of steam to other buildings without the express written consent of Central.

3. Customer represents to Central that the building design peak of 1200 pounds of steam per hour ("Demand") is the maximum winter peak load required by customer and customer agrees to pay a demand rate based upon the foregoing Demand requirements, subject to the following provisions:

A. The above Demand shall be the Demand during the first three years of the contract, except as may be required of Customer by paragraph 4 below. Customer

shall pay Central for all steam in accordance with the monthly steam rates set forth in the rate schedule attached hereto marked "Exhibit I" and made a part hereof and as modified by paragraph 4 below.

B. At the conclusion of the first three years of the contract, if customer's actual demand proves higher than the original Demand, then a new Demand shall be established based upon customer's experience during the third year of the contract, extrapolated to a design temperature of -20° F. Demand will be established based upon the customer's peak one hour load and not upon the customer's instantaneous peaks. Similarly, if at the conclusion of the first three years of the contract, customer's actual demand proves lower than the original Demand, a new Demand shall be established based upon experience during the third year of the contract, extrapolated to a design temperature of -20° F. Again, Demand will be established based upon the customer's peak one hour load and not on customer's instantaneous peaks. In no case, however, shall a new Demand be less than 90% of the original contract Demand.

C. If the customer, after the first three years of the contract, institutes energy conservation procedures which reduce Demand, and wishes a contract demand reduction, customer agrees to request such reduction from Central in writing. Upon receipt of such request, Central will, during the next twelve months, study customer's demand requirements based upon actual load experience extrapolated to -20° F and one year from the date of request will reestablish customer's Demand to a mutually agreeable figure, but in no event less than 90% of the original contract Demand.

4. Except in the case of an accident or breakdown of equipment, if, during any one hour period customer takes from Central, without Central's prior consent, steam in excess of Demand, then, for the next twelve months, customer shall pay for the excess steam demand as if it were included in customer's Demand stated above. After the first three years, in the event customer's actual demand exceeds contract demand for three consecutive years, then the customer's contract demand may be reestablished at the conclusion of the third year on the basis of the lowest demand increase extrapolated to minus 20° F.

5. At no time shall Central be obligated to furnish customer quantities of steam in excess of Demand. Central shall at no time be responsible for failure to provide steam to customer due to causes beyond its control.

6. The Conditions of Service and Customer's Instructions attached hereto marked "Exhibit II" are included as a part of this contract. The monthly steam rates for which the customer is responsible shall include the applicable demand, consumption, and lost water rates as shown on the current rate schedule together with the "escalation" charge outlined in paragraph 6A.

6.A. The monthly consumption rates set forth in the rate schedule (which include Base Operating Costs of \$.798) shall be increased or decreased as follows:

- (i) Prior to the commencement of the term of this agreement, and on or after the first day of each calendar year thereafter during the entire term of this agreement, Central shall prepare an estimate of operating costs (Estimated Operating Costs) per thousand pounds of steam sold which Central will incur in furnishing steam to its customers during the following calendar year. If the Estimated Operating

Costs per thousand pounds of steam sold is more or less than \$.798 per thousand pounds of steam sold, the difference between the estimated cost and \$.798 per M pounds (base operating costs) shall be paid by customers or credited to the customers account in the form of an "escalation" charge or credit.

(ii) On or about May 1 of the calendar year immediately following the commencement of the term of this agreement, and on or about May 1 of each year thereafter during the term of this agreement, Central shall prepare a statement of actual operating costs (Actual Operating Costs) per thousand pounds of steam sold which Central incurred in furnishing steam to its customers during the immediately preceding calendar year. The Actual Operating Costs for the immediately preceding calendar year shall be compared to the Estimated Operating Costs earlier prepared for that same year, the difference between the two figures multiplied times the customer's total consumption for the year will produce an additional charge or credit. Any amount owing by Central to Customer shall be either returned or credited and any sum owing by Customer to Central shall be immediately paid by Customer to Central within 30 days of billing therefor.

(iii) Operating costs hereunder shall be those costs which Central shall incur in furnishing steam to Customer and which are partially defined as follows: wages, payroll tax and fringe benefit charges for labor, maintenance, fuel, electric power, water, utilities, water treatment, hazard insurance, corporate service and management fees, real estate taxes, personal property taxes, street use taxes, and other legally imposed Federal, State or Local taxes, levies, or fees, (but not including federal or state income taxes or federal or state gross profits taxes) and other general miscellaneous charges but with such changes, deletions or additions to the foregoing made necessary by reasons of changes in technology, equipment, fuels and/or business techniques which are generally applied by Central uniformly to its business and/or to its customers. Operating costs may also be increased by the amortization of special equipment necessitated by government regulations which, when combined with other operating costs, will result in a lower cost to the customer than if the special equipment were not installed.

(iv) Central, in estimating and determining operating costs, shall use reasonable methods of computation and allocation of costs, and customer shall be bound thereby. Notwithstanding the fact that Customer shall be bound by the method of accounting used by Central in accordance with the preceding sentence, Customer shall have the right at its sole cost and expense to

examine the books and records of Central for the purpose of determining that the Actual Operating Costs charged or credited to Customer are correct. This right of examination of the books of Central shall under no circumstances give Customer the right to withhold payment of any billings made by Central to Customer in accordance with this agreement and Customer's sole remedy, in the event Customer's audit proves an error by Central, shall be to receive a credit for any over payments made by Customer to Central and to recover the audit costs incurred by Customer as hereinafter provided. Customer shall, within 180 days of the billing of Actual Operating Costs to Customer, give notice and commence an audit of Central's books at its sole cost and expense. Central agrees to make its books and records available for this purpose. In the event that Customer's audit determines that Central has made an error in the calculation of Actual Operating Costs of 2% or more, the cost of the audit incurred by Customer shall be paid by Central, otherwise the same to be paid by Customer. In the event that Customer, after completing its audit, shall give further notice that it disagrees with the Actual Operating Costs billed to it by Central, Central and Customer agree that their respective certified public accounting firms shall be requested to meet and attempt to arbitrate the difference in calculation or opinion. In the event that agreement cannot be reached, the parties agree to submit the dispute to arbitration pursuant to the rules of the American Arbitration Association upon the condition that the arbiters shall be individuals acquainted either by business experience or accounting practice in the operation and cost accounting relating to steam production and sale. During the entire period of the foregoing, Customer shall in no event withhold any payments whatsoever billed to it by Central.

B. The monthly rates (Demand and Consumption) set forth in the rate schedule (Exhibit I) shall also be increased or decreased pursuant to a "cost of living ratio" as follows:

- (i) As of the first day of January, 1982, and as of the first day of January of every fifth year thereafter, the rate schedules shall be modified by a "cost of living ratio".

The "cost of living ratio" for a typical five year escalation period shall be determined by taking the National Index of the Consumer Price Index for All Urban Consumers (CPI)

issued as of the third quarter of 1981 (or the nearest quarter thereto) and dividing it by the comparable CPI index number as of the comparable quarter five years prior to 1981, to-wit: 1976. The number so determined shall be known as the "cost of living ratio".

Every fifth year, a new "cost of living ratio" shall be determined using the appropriate CPI indexes for the five year period just passed, and using the indices for the same quarter of each year. In the event that the Bureau of Labor Statistics ceases to publish the CPI, then the parties hereto agree that any revised or replacement cost of living index shall be used and applied in such a manner as to result in an equitable adjustment to the "cost of living ratio" as though the CPI had been continued unchanged.

- (ii) The demand rate, consumption rate and the lost water rate shall be increased by an amount not to exceed the cost of living ratio which will be in effect for the remainder of the contract or until a subsequent CPI adjustment, all as follows:
 - a. The demand rate shall be multiplied by the cost of living ratio and the new number shall serve as the new demand rate charge in each demand category.
 - b. The lost water rate shall be multiplied by the "cost of living ratio" and the new number shall serve as the new lost water rate.
 - c. The consumption rate shall first have subtracted from it \$.798 per thousand pounds of steam and the remainder shall be multiplied by the "cost of living ratio". To the number resulting, add \$.798 per thousand pounds of steam to determine the consumption rate to be utilized in the revised rate schedule.
- (iii) It is the intention of the parties that the CPI increase does not apply to, and shall not be multiplied against, the increase in consumption rates which arise pursuant to paragraph 6A above and are in excess of those set forth in the rate schedule attached hereto as Exhibit I.

7. Central may amend the Conditions of Service and Customer's Instructions by adopting other or additional conditions which are reasonably necessary for the proper and safe operation of Central's system. All amendments to the Conditions of Service and Customer's Instructions shall

become a part of this Agreement, and Customer shall be bound thereby upon receipt by Customer of a copy thereof.

8. Central will use all reasonable efforts to secure all necessary permits, easements and licenses over private and public property, and Customer agrees to cooperate and assist Central with the foregoing. Customer agrees to allow the running of service lines within his property to the first shut off valve and in the public right-of-way adjacent to his property in order to accomplish the purpose of this agreement.

9. The parties agree that Central shall have the right, but not the duty, to inspect the connection of Central's steam service to customer's equipment for the purpose of determining that Central's equipment and piping will not be damaged or otherwise rendered ineffective because of the operation of Customer's equipment. Central's limited right, as aforesaid, shall in no way impose a duty or a liability on Central in connection with the lawful, safe or proper operation of Customer's equipment and Customer represents to Central that it is not relying upon Central's expertise or knowledge in the sale of steam in connection with the design or operation of Customer's equipment or the use of the steam within the Building.

10. Customer agrees to be responsible for any loss, damage or claim arising out of a happening within the Building, whether for personal injury, death, property damage or otherwise, arising out of, or incidental to, furnishing of the steam by Central under this agreement, and Customer agrees to hold Central, its directors, officers, agent and employees harmless from any loss, damage or claim arising under this agreement or the performance of this agreement, except in the following cases:

- (a) Malfunction, failure or breakdown of Central's equipment not caused by negligence of, or misuse by Customers, its tenants, employees or invitees.
- (b) Negligence of Central, its officers, employees or agents (other than negligence which results in failure to provide the steam).

Customer agrees to pay Central for any repairs to, or loss of Central's property in, the Building, when such repairs are necessitated, or loss occasioned, by negligence on the part of customer, its tenants, employees or invitees, or by its failure to comply with the aforementioned Conditions of service and Customer's Instructions and any supplements and amendments thereto.

11. Central may terminate this Agreement, discontinue the service, enter the Building and remove all of Central's equipment, which usually consists of a steam meter and condensate meter, installed thereon, upon the happening of any one of the following events:

- (a) Failure of Customer to pay in full, within 30 days of billing, the charges by Central for steam furnished by Central pursuant to this Agreement.
- (b) Failure of Customer to construct, maintain and operate its equipment as required in the Conditions of Service and Customer's Instruction and any supplements and amendments thereto.
- (c) Destruction, or a taking by eminent domain proceedings, of the facilities from which Central produces the steam, or such damage to, or taking by eminent domain proceedings of such a part of such facilities, that the steam cannot be furnished by Central substantially as required under the provisions of this Agreement and Central elects not to rebuild or restore the facilities. Central agrees to promptly give notice to Customer of any known destruction or any known or anticipated taking by eminent domain proceedings which may result in a termination of this Agreement under this subparagraph (c).
- (d) The withdrawal of any governmental authority essential for the furnishing by Central of the steam substantially as required under the provisions of this Agreement or the enforcement of any governmental authority of any rule or regulation which prevents Central from furnishing steam substantially as required under the provisions of this Agreement.

- (e) Customer defaults in any of its obligations or agreements under this Agreement not specifically covered above in this paragraph 11.
- (f) Proceedings are commenced by Customer for the purpose of subjecting the assets of Customer to any law relating to bankruptcy or insolvency or for an appointment of a receiver of Customer or of any of Customer's assets, or Customer makes a general assignment of Customer's assets for the benefit of creditors.

Central agrees to give Customer 30 days written notice prior to the exercise of its right to terminate this agreement under this paragraph, and, in addition to said 30 day period, Customer shall have, with respect to subparagraph (b) only, that number of additional days which is equal in number to the number of days which Customer is prevented from eliminating the happening solely by reasons of causes beyond its reasonable control. Customer agrees to indemnify Central against all damages which Central may incur by reason of termination under this paragraph 11 (a), (b) and (e) and also against all attorney fees and expenses incurred in enforcing any of the provisions of this Agreement. If Central terminates ~~this Agreement for cause under this paragraph 11, Customer shall immediately pay, in cash, to Central, Central's unamortized cost of that portion of its production and distribution system enumerated on Exhibit III attached hereto and made a part hereof.~~ ^{flex}

12. Central shall use all reasonable diligence in furnishing uninterrupted service under this agreement. If steam is interrupted as a result of circumstances beyond the reasonable control of either party hereto, payment for the steam shall be adjusted, based on a proportion of the period and the degree in which the steam is reduced. Both parties shall be prompt and diligent in removing and overcoming the cause of the interruption, and nothing contained herein shall be construed as permitting Central to refuse to deliver, or Customer to refuse to receive, steam, after the cause of

interruption has been removed. The refusal of Customer to accept steam for any cause other than as stated in this Paragraph 12 shall not relieve Customer of its obligations to pay for steam in accordance with the provisions of this Agreement and the aforementioned Conditions of Service and Customer's Instructions. Except for the gross negligency of Central, Central shall not be liable to Customer for any loss, damage or claim thereof, arising out of an interruption of steam, and Customer shall indemnify Central and hold it harmless from any such loss, damage or claim thereof to any occupants of the Building resulting from interruption of steam.

13. All equipment placed in the Building by Central for the purpose of furnishing Services hereunder, which normally consist of a steam meter and a condensate return meter, shall be and remain the property of Central, and Customer shall exercise reasonable care to protect such equipment from loss or damage.

14. All notices, demands or requests provided for or permitted to be given pursuant to this Agreement must be in writing and delivered in person or mailed, postage prepaid, by registered and certified mail, addressed as follows:

To Central:	Minneapolis Energy Center Ken Linwick, President 733 Marquette Avenue Room 401 Minneapolis, MN 55402
with a copy to:	2900 IDS Center Minneapolis, MN 55402 ATTN: Joseph Grinnell
with a copy to:	Minnesota Gas Company 733 Marquette Avenue Minneapolis, MN 55402 ATTN: John Fleer
To Customer:	Director of Traffic Engineering Room 211 - Court House Minneapolis, Minnesota 55415 Attn: David R. Koski

or to such other address with respect to either party hereto as such party shall notify the other in writing as above provided. Any notice so given, if mailed, shall be deemed received the second day after it is deposited in the United States mail.

15. This Agreement shall be binding upon and inure to the benefit of the successors and assigns of the parties hereto. Each party hereto may assign this Agreement, provided however, in no event shall an assignment of this Agreement relieve the Assignor of its obligations hereunder. If, however, Customer conveys the fee title to the Building to a third party who, in the reasonable judgment of Central, is financially able to keep and perform promptly all of the Customer's obligations under this Agreement, and if such third party executed a written agreement, in form and substance acceptable to Central, wherein such third party assumes and agrees to keep and perform promptly, all of the Customer's obligations under this Agreement, then Central will relieve Customer of all its obligations under this Agreement not having theretofore accrued.

16. Central will use reasonable efforts (a) to keep the facilities from which it produces steam in good and operable condition and to provide steam, (b) to keep such facilities and distribution lines operating in accordance with applicable rules, regulations, laws and ordinances and (c) to obtain licenses, permits and other governmental authorizations which are essential to the furnishing by it of steam as required under the provisions of this Agreement, and (d) to contest, within reasonable limits, any applicable rule, regulation, law or ordinance which would prevent Central from providing steam to Customer.

17. If for any reason other than negligence of, or breach of contract by, Customer, Central is prevented from furnishing to Customer all its requirements of steam, Customer will be furnished a pro rata share of the steam which is available as such Demand relates to the then total contractual demand of all customers of Central.

18. In the event of the happening of any of the following:

- (a) failure for a period of at least 180 consecutive days by Central to provide all of Customer's requirements for steam as herein provided;
- (b) failure by Central to provide substantially all of Customer's requirements for steam as herein provided for any 180 days in any 360 day period;
- (c) proceedings are commenced against Central, and not discharged within sixty (60) days thereafter, for the purpose of subjecting the assets of Central to any law relating to bankruptcy or insolvency or for an appointment of a receiver of Central or of any of Central's assets;
- (d) proceedings are commenced by Central for the purpose of subjecting the assets of Central to any law relating to bankruptcy or insolvency or for an appointment of a receiver of Central or of any of Central's assets, or Central makes a general assignment of Central's assets for the benefit of creditors;
- (e) the Building is destroyed or is so damaged as to make the same entirely unusable, and the Building is not substantially restored and/or rebuilt within 18 months after the date of damage or destruction (and provided that customer shall forthwith pay to Central, with the giving of the notice hereinafter provided, Central's unamortized cost of that portion of its production and distribution system enumerated on Exhibit III attached hereto),

and such happening continues for at least thirty (30) days after written notice thereof is given by Customer to Central setting forth the nature of the happening, Customer may terminate this Agreement. If Customer terminates this Agreement pursuant to this Paragraph 18, Central may enter the Building and remove all or any part of its equipment installed therein. During the period of time that the

building is destroyed or so damaged as to make the same entirely unusable, Central agrees to waive the demand charge, whether or not customer elects to terminate this agreement in accordance with the foregoing provisions.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

CENTRAL HEATING COMPANY

By *H. A. Linnell, President*
Minneapolis Energy Center
Its *Agent*

And _____
Its _____

CITY OF MINNEAPOLIS

By *[Signature]*
Its Mayor

And *[Signature]*
Its City Clerk

And *Mary DesRoches*
Its Comptroller-Treasurer

APPROVED AS TO LEGALITY
DATE 5/29/80
Mark Flahavan
ASST. CITY ATTORNEY

REC'D COMPT. TREAS. JUN 24 1980

EXHIBIT NO. I
CENTRAL HEATING COMPANY
STEAM RATE SCHEDULE
EFFECTIVE 12/31/76

A. Monthly Steam Rates:

1. Demand Rate:

\$254.16 per month for the first 1,000 pounds of demand or any portion thereof
\$218.86 per month per 1,000 pounds per hour for the next 9,000 pounds
per hour of demand
\$204.74 per month per 1,000 pounds per hour for the next 15,000 pounds
per hour of demand
\$190.62 per month per 1,000 pounds per hour for the next 25,000 pounds
per hour of demand
\$183.56 per month per 1,000 pounds per hour for all over 50,000 pounds
per hour of demand

2. Consumption Rate:

\$ 1.59	per 1,000 pounds for the first	500,000 pounds of steam per month
\$ 1.24	per 1,000 pounds for the next	1,000,000 pounds of steam per month
\$ 1.17	per 1,000 pounds for the next	3,500,000 pounds of steam per month
\$ 1.10	per 1,000 pounds for the next	10,000,000 pounds of steam per month
\$ 1.03	per 1,000 pounds for all over	15,000,000 pounds of steam per month

3. Lost Water Rate:

Steam condensate \$4.24 per 1,000 gallons

CONDITIONS OF SERVICE AND CUSTOMER'S INSTRUCTIONS

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CONDITIONS OF SERVICE AND CUSTOMER'S INSTRUCTIONS

Section 1. Nature, Availability and Requirements Relating to Use of Service

- 1.01 In General: Central's plant facilities as described below are and will be constructed, maintained and operated on lands owned or occupied in accordance with properly granted use permits, and shall furnish a private (as distinguished from public) Service to Customer-Subscribers. Accordingly, Central reserves the right to refuse to enter into Service Agreements with any party or parties requesting Service for any reason or reasons deemed by Central to be sufficient.
- 1.02 Steam Plant: Central will render heating Service from a central steam plant and a distribution system providing a primary supply of saturated steam at a maximum pressure of 250 psig to its Customer. Condensate will be pumped from the premises by the Customer to the point of return on Central's system (See Sketch #2 attached hereto). No Customer may tap into or otherwise interfere with the flow of such condensate.
- 1.03 Steam Service: Steam Service may be purchased from Central for all heating purposes by the use of Customer-owned equipment which is connected or can be connected to Central's steam distributions system after Central and Customer have executed a written Service Agreement.
- 1.04 Cooling Service: Chilled water Service may be purchased from Central for the cooling requirements of buildings which are connected or can be connected to Central's chilled water distribution system when the Customer and Central have executed a Service Agreement. No Customer may tap into, use or otherwise interfere with chilled or return water in any way. Customer must provide pumping for Building water flow.

Section 2. Meters

- 2.01 Central will furnish and maintain metering equipment best suited to the Service requirements. Customer will furnish, install and maintain such meter regulating valves or pumps required to change inlet and return pressures or flows.
- 2.02 Customer will provide, without charge, adequate space on its premises for the housing of and access to such measuring equipment and appurtenances. Customer shall install, at its expense, metering equipment (runs, meters and associated equipment) furnished by Central.

Section 3. Metering and Billing

- 3.01 Measurement of Steam Service: Metering of the Customer's usage of steam (supply and return of condensate) will be determined by use of Central's flow meters which will record the Customer's usage. Customer shall return 95% or more of condensate volume per month to Central. Central may penalize Customer for returning less than the indicated 95% of condensate at a rate set forth in Section A.3. of the Rate Schedule attached to and made a part of the executed Service Agreement.
- 3.02 Measurement of Chilled Water Service: Metering of the Customer's usage of chilled water supply and return will utilize a device which measures and records chilled water flow and water temperature difference and converts this relationship to tons. Central will supply the initial fill of treated water for the Customer's system. Any additional requirements beyond normal make up will be charged at the rate set forth in Section B.3. of the aforementioned Rate Schedule.
- 3.03 Meter Reading and Billing Period: The regular meter reading and billing period shall be a calendar month. Central reserves the right to read meters and render bills at any other intervals of time.
- 3.04 Bills Based Upon Estimated Usage of Service: When a meter fails to register the quantity of steam and/or chilled water consumed, Central will change the meter and render a bill for the period of non-registration based on either of the following methods:
- (1) Estimates of the steam and/or chilled water, as the case may be, consumed on the basis of past usage during a similar period and under similar conditions; or
 - (2) Estimation of the steam and/or chilled water, as the case may be, consumed on the basis of usage registered by the new meter during a subsequent period.
- 3.05 Estimated Bills: Central may, at its option, estimate the billing. Over or under charges shall be compensated for at the next monthly billing. Any estimated billing will be so designated.
- 3.06 Payment of Bills: Bills of Central for Services are due on presentation and payable within fifteen (15) days thereafter.

Section 4. Billing Procedure - Additional Meters

- 4.01 Should Central, in the exercise of its reserved rights under Section 5.02 hereof provide Customer with one or more additional delivery points, the Services rendered at each such point shall be separately metered and billed unless otherwise agreed to by the parties in writing.

Section 5. Central's Service Lines

- 5.01 Central will install its service lines to a location at the outside wall of the basement or foundation of Customer's building, determined by Central to be convenient and practicable, and will extend such service lines through a sleeve provided and installed by the Customer in such basement wall or foundation to a point immediately inside the wall. The point to which Central so extends its service lines shall constitute the point of delivery of Service (See attached sketches).
- 5.02 Steam Service will be normally supplied to the Customer's building through a single supply line and a single return line. Chilled water Service will be normally supplied to the Customer's building through a single supply line and a single return line. For reasons of Central's economy, conditions on Central's distributions system, improvement of service conditions, or volume of the Customer's requirements, Central may at its option install more than one service line for steam Service, or chilled water Service, or both.
- 5.03 Central reserves the right to determine the location of any service line, and to avoid misunderstanding, Customer, before starting work, shall consult Central as to the exact location of the point of service termination (or point of delivery). Any change requested by the Customer in the point of delivery of Service or location of Central's Service facilities, provided such change is approved by Central, will be made at the expense of Customer, who shall reimburse Central for the actual cost of such change.

Section 6. Central's Property

- 6.01 The service lines, meters and service equipment furnished by Central shall remain the property of Central.
- 6.02 The service stop valves and meter stop valves shall be operated only by authorized personnel of Central, except that the service stop valves and meter stop valves may be closed by Customer in an emergency, but in no event shall they be opened by Customer after shutoff. Central shall be notified immediately of such shutoff.
- 6.03 No person, except a duly authorized employee of Central, shall be permitted to break or replace a Central seal or lock, or to alter or interfere with the operation of meters or its connections, regulators or any other item of service equipment furnished by Central.

Section 7. Customer's Property

- 7.01 Customer will furnish, install and maintain, where required, on the Service side of the meter, such pumps and regulating devices as are necessary to maintain pressure and flow conditions required by Customer's equipment and return at distribution operating pressure conditions (See attached sketches). Customer shall also furnish, install, and maintain all facilities required for its utilization of Services as shown on attached sketches.
- 7.02 Customer shall provide (without cost to Central) suitable space for the installation, inspection, protection and maintenance of Central's meters, and other necessary service equipment within Customer's premises, at a location acceptable to Central and as near the point of delivery as practicable. Where electricity or instrument air is required for the operation of Central's meters or meter regulating valves, Customer shall furnish, install wiring, piping and equipment necessary to provide such Service. Electricity and/or instrument air required for the operation of Central's meters shall be furnished by Customer.
- 7.03 Except as otherwise provided herein, all repairs to Customer's piping and equipment shall be made by the Customer. Customer shall give immediate notice to Central of any leakage or escape of steam or chilled water.
- 7.04 Central shall not be required to supply steam or chilled water Services until Customer's installation shall have been approved by all local authorities having jurisdiction over the same. If at any time a local authority of Central deems Customer's plant or equipment to be unsafe, Central reserves the right to withhold or discontinue Services until the necessary corrective measures have been taken by Customer, and the local authority and Central determine the Customer's plant or equipment to be in safe condition.

Section 8. Access to Premises.

- 8.01 Central's duly authorized representatives shall have the right of access to all of Central's property on the premises of Customer and on all other premises, with respect to which Customer has secured easements, at all reasonable times, for the purpose of installing service lines, inspecting, protecting, maintaining, and replacing, where necessary, its service lines, meters and service equipment, removing its property, or any other proper purpose.

Section 9. Standard Specifications for Steam Service

The following design requirements are necessary to insure compatibility between Customer's and Central's system:

- 9.01 Central will supply this Service in accordance with Section 5.01 hereof. Central will provide service shut-off valves. All other equipment and installation will be provided by customer, with the exception that Central will furnish the meter primary flow element, or the meter body, and the meter proper, for installation by customer. The customer shall provide at the location determined for the meter a 120 volt, 60 cycle, single phase outlet and a 20 psi clean, dry air supply if required.
- 9.02 Central will supply steam at a primary pressure and quantity adequate to meet the contracted Building Design Peak load. Customer shall supply a pressure reducing station generally in accord with the typical piping schemes shown on Sketch #2, to reduce this pressure down to the using pressure. The meter, or meters, shall be installed in a location as indicated on the attached Sketch #2.
- 9.03 Customer's service connection and pressure reducing station shall be designed for operation at a maximum of 250 psig steam.
- 9.04 The pressure regulating valves shall be pilot operated type similar to Fisher Governor, or equal.
- 9.05 Double reduction of the initial pressure is desirable. Customer's plans and the "as built" drawings should show the double reduction arrangement with pilot operated valves and pressure relief valve on the low pressure side for safety.
- 9.06 Where it is not practical to provide the relief valve and exhaust pipe because of the long distance to roof, etc., a double reduction arrangement with a safety control pilot will permit the primary reducing valve to take over and maintain the low side pressure in the event the secondary controller fails to hold the pressure within the predetermined setting of the safety control pilot.
- 9.07 Plans for intermediate pressure metering, may be considered by Central.
- 9.08 Condensate shall be returned to the central heat plant.
- 9.09 A high pressure drip shall be discharged to Customer's condensate receiver through a flash tank. The steam side of the flash tank may be piped to the low pressure side of the secondary regulators. Sketch #2 shows suggested flash tank assembly.
- 9.10 All steam and condensate piping and valves within the building walls shall be insulated by Customer, even though the valve or piping was installed by Central.
- 9.11 The discharge pressure of the Customer's condensate pump or pumps shall be determined only after review of Customer's plans showing location of said pump. A balancing cock and downstream pressure gauge shall be installed in the condensate pump discharge main.

- 9.12 Prior to final connection to Central's mains, Customer shall properly clean and flush its steam and condensate system and shall make certain there are no leaks in its system at the maximum operating pressure.

Section 10. Standard Specifications for Chilled Water Service

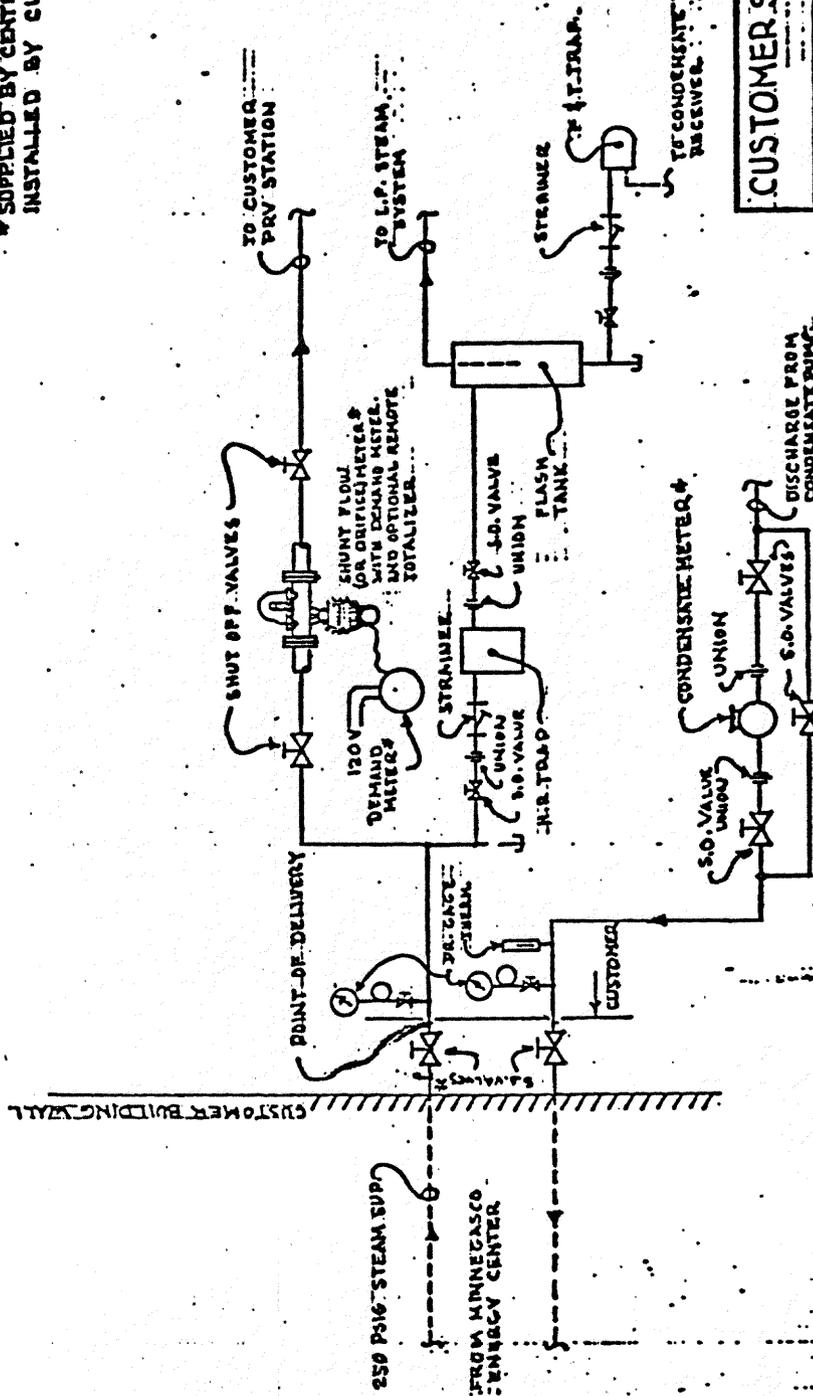
The following design requirements are necessary to insure compatibility between Customer's and Central's system:

- 10.01 Central will supply service in accordance with Section 5.01. Central will provide service shut-off valves. All other equipment and installation will be provided by Customer, with the exception that Central will furnish the meter primary flow element, separable thermometer wells, and the meter proper, for installation by Customer. Customer shall provide at the location determined for the meter a 120 volt, 60 cycle, single phase outlet, and a 20 psi clean, dry air supply if required.
- 10.02 The temperature control indicated for the control valves shown in Sketch #1 shall be provided by Customer.
- 10.03 The maximum combined running head on the chilled water system will be maintained at 340 feet (City Datum 0.0 = USC & G.S.) at the central chilled water plant discharge. Friction head loss in the primary supply and return system will vary from zero to 180.0 feet at ultimate peak flow. The maximum residual static head shall be 230 feet, City Datum. Customer connections shall not exert static pressure head in excess of 230 feet. Customer shall install approved devices to reduce such excess pressures.
- 10.04 Customer shall provide booster pumps to supply the dynamic head required to overcome friction loss within its premises, and to supply any elevation head required above that provided by the supply system.
- 10.05 The accuracy of the metering is dependent upon maintaining a reasonable steady and high temperature rise across the system. This can be most easily accomplished by varying the flow. Therefore, it is recommended that throttle valves be used at the cooling units as indicated on Sketch #1. Where for special reasons Customer desires to use a constant flow system, arrangements as indicated must be provided by Customer.
- 10.06 All normal make-up water requirements will be provided by Central in the central chilled water plant. However, the make-up required should be very small and Customers are not to draw off water from the chilled water system. Central should be notified of any loss of chilled water.

- 10.07 All provisions for temperature expansion of the distribution system water volume will be provided by Central in the central chilled water plant. Customer shall provide an expansion tank in its system to accommodate expansion in its piping system when the main service valves are closed.
- 10.08 Customer shall properly clean and flush its chilled water system and shall make certain there are no leaks at the maximum operating pressure. Customer shall notify Central when ready to have the valves opened for chilled water service. Customer shall be responsible for completely venting its system of air after the initial fill and as required in the future.
- 10.09 All chilled water systems installed by Central or Customer shall be designed for maximum operating pressures of 225 psig.
- All steam systems installed by Central or Customer before the PRV shall be designed for maximum operating pressures of 300 psig.
- 10.10 All chilled water piping and valves within the building walls shall be insulated by Customer even though the valve or piping was installed by Central.
- 10.11 Customer shall furnish and install pressure gauges and a strainer in its return line as close as possible to the service connection to prevent foreign matter from its system entering Central's distribution system.
- The pressure drop through the strainer should be included in Customer's system friction losses for the sizing of its chilled water booster pumps. Filter shall be inspected by Customer at regular intervals and cleaned as required.

NOTE:
 VERIFY UPSTREAM AND DOWN-
 STREAM METER REQUIREMENTS

* SUPPLIED BY CENTRAL HEATING
 INSTALLED BY CUSTOMER. ...



CUSTOMER STEAM METERING DIAGRAM
 250 PSIG STEAM

SCALE: NONE	APPROVED BY:
DATE: 10-25-74	DRAWN BY C
	REVISED

CENTRAL HEATING CO.

