

NOTICE TO BIDDERS

**EAST WINDSOR MUNICIPAL UTILITIES AUTHORITY
7 WILTSHIRE DRIVE, EAST WINDSOR, NJ 08520
609-443-6000**

WILL ACCEPT BIDS FOR WELL # 6R PRODUCTION WELL CONSTRUCTION

Sealed bids will be received by the Executive Director of the East Windsor Municipal Utilities Authority, East Windsor, New Jersey, County of Mercer, in the Board Room at the Administration Building, 7 Wiltshire Drive, East Windsor, NJ 08520 for: **Well # 6R Production well construction and Aquifer Test– Bid opening is January 27, 2021 at 11:00 a.m. at the East Windsor MUA Administration offices, 7 Wiltshire Drive, East Windsor N.J. 08520.**

BID OPENING DATE:

Specifications are on file in the Division of Human Resources, Budget & Purchasing, and may be obtained by prospective bidders during the hours of 9:00 a.m. to 4:00 p.m. Specifications may also be obtained from our website www.Eastwindsormua.com. Bids must be enclosed in a sealed envelope marked appropriately and must have the **NAME AND ADDRESS** of the bidder on the outside of the envelope. Bids may be hand delivered or mailed by certified mail to the above-mentioned address. No other forms will be accepted.

Bids must be accompanied by an agreement of surety (consent of surety) furnished by only those sureties who meet the requirements set forth in N.J.S.A. 2A:44-143, wherein the surety company agrees to post a performance bond of 100% of the awarded amount, if the contract is awarded in principal.

Bids must be accompanied by a certified check, cashier's check or bid bond payable to East Windsor Municipal Utilities Authority in the amount of 10% of the bid total, not to exceed \$20,000. All bid security except the security of the three apparent lowest responsible bidders shall be returned, unless otherwise requested by the bidder, within 10 days after the opening of the bids, Sundays and holidays excepted, and bids of such bidders shall be considered as withdrawn. Within 3 days, Sundays and holidays excepted, after the awarding and signing of the contract and the approval of the contractor's performance bond, the bid security of the remaining unsuccessful bidders shall be returned to them.

Bidders are required to comply with all applicable statutory requirements including the requirements of N.J.S.A. 10:5.31, et seq N.J.A.C. 17:27 (Equal Employment Opportunity) 42 U.S.C.-12101, et seq (Americans with Disabilities Act). N.J.S.A. 34:11-56.25 et seq (Prevailing Wages) N.J.S.A. 52:32-44, et seq (NJ Business Registration).

A corporation submitting a bid, in response to this advertisement, shall accompany such bid with a resolution authorizing its proper officers to submit such a bid and authorize said officers to execute a contract in the event its bid is accepted.

The East Windsor Municipal Utilities Authority, when applicable, reserves the right to take any number of units up to the maximum indicated in the specifications to increase or decrease the quantity by executing a change order provided that the change shall not cause the originally awarded contract price to be exceeded cumulatively by more than 20% net, in accordance with N.J.A.C. 5:34-4.2. The East Windsor Municipal Utilities Authority reserves the right to reject any or all bids as in its judgment may be deemed to be in the best interest of the East Windsor Municipal Utilities Authority. The East Windsor Municipal Utilities Authority also reserves the right to waive any minor irregularity or technicality. In the case of tie bids, the East Windsor Municipal Utilities Authority shall have the authority to award the contract to the bidder selected by the East Windsor Municipal Utilities Authority in its sole discretion.

BY ORDER of the East Windsor Municipal Utilities Authority Council of the East Windsor Municipal Utilities Authority.

Richard Brand
Executive Director

1/6/2021

**East Windsor Municipal Utilities Authority
ACKNOWLEDGMENT OF RECEIPT OF ADDENDA**

The undersigned Proponent hereby acknowledges receipt of the following Addenda:

Addendum Number

Dated

 1 _____

 1/18/2021 _____

Acknowledged for: _____
(Name of Proponent)

By: _____
(Signature of Authorized Representative)

Name: _____

Title: _____

East Windsor Municipal Utilities Authority

BID DOCUMENT CHECKLIST*

The following checklist is provided as assistance to the development of the Bid Response. It in no way supersedes or replaces the requirements of the Bid. Please initial on the lines below for each document/section attesting to the fact that you have read and/or included the documents with your Bid.

| Required by owner | Submission Requirement | Initial each required entry and if required submit the item |
|-------------------------------------|---|--|
| <input checked="" type="checkbox"/> | Stockholder Disclosure Certification | |
| <input checked="" type="checkbox"/> | Non-Collusion Affidavit | |
| <input checked="" type="checkbox"/> | Bid Proposal Form | |
| <input checked="" type="checkbox"/> | References | |
| <input checked="" type="checkbox"/> | Status of Present Contracts | |
| <input checked="" type="checkbox"/> | Equipment Certification | |
| <input checked="" type="checkbox"/> | Bid Guarantee (with Power of Attorney for full amount of <i>Bid Bond</i>) | |
| <input checked="" type="checkbox"/> | Public Works Contractor Certificate | |
| <input checked="" type="checkbox"/> | Consent of Surety (with Power of Attorney for full amount of Bid Price) | |
| <input checked="" type="checkbox"/> | Mandatory Affirmative Action Language | |
| <input type="checkbox"/> | Prevailing Wage | |
| <input checked="" type="checkbox"/> | Americans with Disabilities Act of 1990 Language | |
| <input checked="" type="checkbox"/> | Proof of Business Registration Certificate – Prior to Contract Award | |
| <input checked="" type="checkbox"/> | Affidavit of Compliance – Township of East Windsor | |
| <input checked="" type="checkbox"/> | Disclosure of Investment Activities in Iran | |
| <input checked="" type="checkbox"/> | Acknowledgement of Addenda | |
| <input checked="" type="checkbox"/> | Original Copy and Two (2) additional copies – with Original Signatures | |

*This form need not be submitted. It is provided for bidder's use in assuring compliance with all required documentation.

STOCKHOLDER DISCLOSURE CERTIFICATION
(MANDATORY REQUIREMENT)

_____ I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

_____ I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

____ Partnership ____ Corporation ____ Sole Proprietorship
____ Limited Partnership ____ Limited Liability Company ____ Limited Liability Partnership
____ Subchapter S Corporation ____ Non-Profit Corporation ____ Other _____

**PLEASE CHECK APPROPRIATE STATEMENTS ABOVE AND SIGN BELOW
THIS STATEMENT MUST BE INCLUDED WITH PROPOSAL SUBMISSION.**

Stockholders

Name: _____
Home Address: _____

Name: _____
Home Address: _____

Name: _____
Home Address: _____

Name: _____
Home Address: _____

Name: _____
Home Address: _____

Name: _____
Home Address: _____

THIS STATEMENT MUST BE INCLUDED WITH PROPOSAL SUBMISSION

Subscribed and sworn before me
this ____ day of _____, 20__ (Affiant)

(Notary Public)

(Print Name & Title)

Affiant)

My Commission expires: _____ (Corporate Seal)

NON-COLLUSION AFFIDAVIT

State of New Jersey
County of _____

ss:

I, _____ residing in
(name of affiant)
_____ in the County of _____
(name of municipality)

and State of _____ of full age, being duly sworn according to law on my oath depose and say that:

I am _____ of the firm of
(title or position)
_____ the Proponent making this Proposal
(name of firm)

for the proposal entitled _____, and that I executed the said

(title of proposal)
proposal with full authority to do so that said Proponent has not, directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive contracting proposals in connection with the above named project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with full knowledge that the _____ relies upon the
(name of contracting unit)
truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by _____.

Subscribed and sworn to
before me this day
_____ 20 .

(Type or print name of affiant under signature)

Notary public of

My Commission expires _____ 20 .

BID PROPOSAL FORM

Well # 6R Production Well Construction
(Contract Title and Bid Number, if applicable)

Drilling a new production well # 6R and connection to existing infrastructure
(Description of goods/services being bid)

The undersigned proposes to furnish and deliver the above goods/services pursuant to the bid specification and made part hereof:

#1 -18 - Amount in words

\$ _____

#1 – 18 Amount in numbers

\$ _____

Option A in Words

\$ _____

Option A in numbers

\$ _____

Option B in Words

\$ _____

Option B in numbers

Company Name

Federal I.D. # or Social Security # _____

Address

Signature of Authorized Agent

Type or Print Name

Title: _____

Telephone Number

Date

Fax Number

E-mail address

BID PROPOSAL FORM

| Item No. | Estimated Quantity | Quantity Units | Description of Work | Unit Cost | Total Cost |
|----------|--------------------|----------------|--|-----------|------------|
| 1 | LS | - | Mobilization | \$ | \$ |
| 2 | 580 | FT | Furnish and install 8-inch pilot hole to an estimated depth of 580' | \$ | \$ |
| 3 | 16 | Sample | Ditch samples every 10' from grade to a total of 500' and split spoon samples from 500' to 580' every 5 ft. | \$ | \$ |
| 4 | LS | - | Perform geophysical logs including gamma, spontaneous potential and electric resistivity. Provide LAS files and pdf log immediately after logging | \$ | \$ |
| 5 | 30 | FT | Furnish and install 30-inch diameter, black steel, plain end surface casing to an estimated depth of 30' | \$ | \$ |
| 6 | LS | - | Containment and disposal of soil cuttings. Installation of one or more tanks/pits/silt bags to detain and settle drilling fluids, and furnish and supply all labor for managing soil, drilling fluids, and all necessary soil and erosion control measures for ultimate discharge to storm drain. | \$ | \$ |
| 7 | 530 | FT | Ream pilot hole to 24-inches using the reverse circulation drilling method. Furnish and install a 20-inch diameter steel casing from the top of the water bearing formation to a minimum of 30-inches above grade | \$ | \$ |
| 8 | 60 | FT | Under ream through target formation to min. 28-inches and furnish and install 14-inch continuous-slot, high flow design, v-shaped wire-wound type construction of Type 304 stainless steel as manufactured by UOP Johnson or equivalent. Estimated length of screen is 60' | \$ | \$ |
| 9 | 530 | FT | Furnish and install 14-inch steel inner casing with a minimum of 10 feet of Type 304 stainless steel blank set between the screen and inner casing. | \$ | \$ |
| 10 | LS | - | Install filter pack as per NJDEP requirements | \$ | \$ |
| 11 | 80 | Hours | Operation of equipment and supplies as necessary (including chemicals) for the development of the production well until discharge water is clear and free of fines. based on the judgment of the Engineer, Hydrogeologist and Owner. | \$ | \$ |
| 12 | LS | - | Perform eight (8)-hour step test. The well will be pumped at a minimum of five (5) different rates as selected by the Engineer for 100 minutes at each rate. The Contractor shall furnish all labor, material and equipment to support an estimated test rate between 600 and 1,200 gpm. | \$ | \$ |
| 13 | LS | - | Perform 72-hour constant rate test. The Contractor shall furnish all labor, material and equipment to support the test rate of 1,200 gpm. | \$ | \$ |
| 14 | LS | - | Collection of water samples at the conclusion of the 72-hour test and analyzed for bacteriological and chemical quality in accordance with State drinking water regulations NJAC 7:10-5 and 7. | \$ | \$ |
| 15 | LS | - | Permanent pump installation shall include setting of a 1,200 gpm vertical turbine pump to an estimated depth of 175 feet with completion of the discharge line to the existing well building. A Baker Standard Pitless Unit (NSF 61 Certified) installation shall be included. Contractor is required to evaluate the existing VFD to confirm it can be used to support the target rate of 1,200 gpm and 348 ft. TDH. If not, Contractor must furnish labor and materials to install a new VFD and all associated connections to the new pump. | \$ | \$ |
| 16 | LS | - | Disinfection of well to NJDEP Regulations | \$ | \$ |
| 17 | LS | - | Furnish materials and labor to abandon/seal the existing 10-inch Well 6 according to N.J.A.C. 7:20-3.1 et seq | \$ | \$ |
| 18 | LS | - | All landscaping and site restoration | \$ | \$ |

Total price Cost for bid items 1-18 (in figures) \$ _____

Total price Cost for bid items 1-18 (in words) \$ _____

Add/Alternate – Disposal of materials in Item #6 above – Pricing for option A & option B

| | | | |
|----------|---|----------|----------|
| Option A | Containerize, and transport to EWMUA Wastewater Site located approximately 6 miles west/northwest (Rt. 133) | \$ _____ | \$ _____ |
| Option B | Containerize, and transport to licensed/appropriate facility for disposal | \$ _____ | \$ _____ |

EQUIPMENT CERTIFICATION

The undersigned Bidder hereby certifies as follows:

The bidder owns or controls all the necessary equipment required to accomplish the work described in the specifications.

Name of Bidder: _____

By: _____
(Signature)

Name of above: _____
(Print)

Title: _____

Date: _____

CONSENT OF SURETY

A performance bond will be required from the successful contractor on this project, and consequently, all bidders shall submit, with their bid, a consent of surety in substantially the following form:

To: _____
(Owner)

Re: _____
(Contractor)

(Project Description)

This is to certify that the

(Surety Company)

will provide to _____ a performance bond
(Owner)
in the full amount of awarded contract in the event that said contractor is awarded a contract for the above project.

(CONTRACTOR)

(Authorized Agent of Surety Company)

Date: _____

**CONSENT OF SURETY MUST BE SIGNED BY AN AUTHORIZED AGENT
OR REPRESENTATIVE OF A SURETY COMPANY AND NOT BY THE
INDIVIDUAL OR COMPANY REPRESENTATIVE SUBMITTING THE BID.**

**REQUIRED EVIDENCE
AFFIRMATIVE ACTION REGULATIONS
N.J.S.A. 10:5-31 et seq., N.J.A.C. 17:27**

If awarded a contract, all procurement and service contractors will be required to comply with the requirements of P.L.1975, C.127, (N.J.A.C. 17:27). Within seven (7) days after receipt of the notification of intent to award the contract or receipt of the contract, whichever is sooner, the contractor should present one of the following to the Purchasing Agent:

1. A photocopy of a valid letter from the U.S. Department of Labor that the contractor has an existing federally-approved or sanctioned Affirmative Action Plan (good for one year from the date of the letter).
OR
2. A photocopy of approved Certificate of Employee Information Report.
OR
3. An Affirmative Action Employee Information Report (Form AA302)
OR
4. All successful construction contractors must submit within three days of the signing of the contract an Initial Project Manning Report (AA201) for any contract award that meets or exceeds the Public Agency proposal threshold (available upon request).

NO FIRM MAY BE ISSUED A CONTRACT UNLESS IT COMPLIES WITH THE
AFFIRMATIVE ACTION REGULATIONS OF P.L. 1975, c. 127 (N.J.A.C. 17:27)

The following questions must be answered by all Respondents:

1. Do you have a federally-approved or sanctioned Affirmative Action Program?
YES_____ NO
If yes, please submit a copy of such approval.

2. Do you have a Certificate of Employee Information Report Approval?
YES_____ NO
If yes, please submit a copy of such certificate.

The undersigned contractor certifies that he is aware of the commitment to comply with the requirements of P.L.1975, c.127 and agrees to furnish the required documentation pursuant to the law.

DATE: _____

COMPANY _____

SIGNATURE: _____

TITLE: _____

Note: A contractor's proposal **must** be rejected as non-responsive if a contractor fails to comply with requirements of P.L. 1975, c.127, within the time frame.

EXHIBIT A

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127) N.J.A.C. 17:27

GOODS, PROFESSIONAL SERVICE AND GENERAL SERVICE CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor, where applicable, will send to each labor union or representative or workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to employ minority and women workers consistent with the applicable county employment goals established in accordance with N.J.A.C. 17:27-5.2, or a binding determination of the applicable county employment goals determined by the Division, pursuant to N.J.A.C. 17:27-5.2.

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, labor unions, that it does not discriminate on the basis of age, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the applicable employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

Letter of Federal Affirmative Action Plan Approval

Certificate of Employee Information Report

Employee Information Report Form AA302

The contractor and its subcontractors shall furnish such reports or other documents to the Div. of Contract Compliance & EEO as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Div. of Contract Compliance & EEO for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code at N.J.A.C. 17:27.

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
AFFIRMATIVE ACTION
(N.J.S.A. 10:5-31 et seq) (N.J.A.C. 17:27)
GOODS, SERVICES AND PROFESSIONAL CONTRACTS

The contractor or subcontractor agrees to inform in writing appropriate recruitment agencies in the area, including employment agencies, placement bureaus, colleges, universities, labor unions, that it does not discriminate on the basis of age, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

The contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, and conform with the applicable employment goals, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor and its subcontractors shall furnish such reports or other documents to the Division of Contract Compliance & EEO as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Contract Compliance & EEO for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (N.J.A.C. 17:27)**.

Signature: _____

Print Name: _____

Date: _____

AMERICANS WITH DISABILITIES ACT OF 1990
Equal Opportunity for Individuals with Disability

The CONTRACTOR and the OWNER do hereby agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "ACT") (42 U.S.C. S12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereunto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the OWNER pursuant to this contract, the CONTRACTOR agrees that the performance shall be in strict compliance with the Act. In the event that the Contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the CONTRACTOR shall defend the OWNER in any action or administrative proceeding commenced pursuant to this Act. The Contractor shall indemnify, protect, and save harmless the OWNER, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The CONTRACTOR shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the OWNER grievance procedure, the CONTRACTOR agrees to a proposal by any decision of the OWNER which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the OWNER or if the OWNER incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the CONTRACTOR shall satisfy and discharge the same at its own expense.

The OWNER shall, as soon as practicable after a claim has been made against it, give written notice thereof to the CONTRACTOR along with full and complete particulars of the claim. If any action or administrative proceedings is brought against the OWNER or any of its agents, servants, and employees, the OWNER shall expeditiously forward or have forwarded to the CONTRACTOR every demand, complaint, notice, summons, pleading, or other process received by the OWNER or its representatives.

It is expressly agreed and understood that any approval by the OWNER of the services provided by the CONTRACTOR pursuant to this contract will not relieve the CONTRACTOR of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the OWNER pursuant to this paragraph.

It is further agreed and understood that the OWNER assumes no obligation to indemnify or save harmless the CONTRACTOR, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the CONTRACTOR expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the CONTRACTOR'S obligations assumed in this Agreement, nor shall they be construed to relieve the CONTRACTOR from any liability, nor preclude the OWNER from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

DATE: _____

COMPANY NAME

SIGNATURE: _____

STATE OF NEW JERSEY
 DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT
 CONSTRUCTION EEO COMPLIANCE MONITORING PROGRAM

FORM AA-201
 Revised 11/11

INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

Assignment

Code

For instructions on completing the form, go to: http://www.state.nj.us/treasury/contract_compliance/pdf/aa201ins.pdf

| | | | |
|---|-------------------------|---|--|
| 1. FID NUMBER | 2. CONTRACTOR ID NUMBER | 5. NAME AND ADDRESS OF PUBLIC AGENCY AWARDING CONTRACT Name: Address: | |
| 3. NAME AND ADDRESS OF PRIME CONTRACTOR (Name) | | CONTRACT NUMBER DATE OF AWARD DOLLAR AMOUNT OF AWARD | |
| (Street Address) | | 6. NAME AND ADDRESS OF PROJECT Name: Address: | |
| (City) (State) (Zip Code) | | 7. PROJECT NUMBER | |
| 4. IS THIS COMPANY MINORITY OWNED [] OR WOMAN OWNED [] | | 8. IS THIS PROJECT COVERED BY A PROJECT LABOR AGREEMENT (PLA)? YES <input type="checkbox"/> | |
| | | COUNTY | |

| 9. TRADE OR CRAFT | PROJECTED TOTAL EMPLOYEES | | | | PROJECTED MINORITY EMPLOYEES | | | | PROJECTED PHASE - IN DATE | PROJECTED COMPLETION DATE |
|------------------------|---------------------------|----|--------|----|------------------------------|----|--------|----|---------------------------|---------------------------|
| | MALE | | FEMALE | | MALE | | FEMALE | | | |
| | J | AP | J | AP | J | AP | J | AP | | |
| 1. ASBESTOS WORKER | | | | | | | | | | |
| 2. BRICKLAYER OR MASON | | | | | | | | | | |
| 3. CARPENTER | | | | | | | | | | |
| 4. ELECTRICIAN | | | | | | | | | | |
| 5. GLAZIER | | | | | | | | | | |
| 6. HVAC MECHANIC | | | | | | | | | | |
| 7. IRONWORKER | | | | | | | | | | |
| 8. OPERATING ENGINEER | | | | | | | | | | |
| 9. PAINTER | | | | | | | | | | |
| 10. PLUMBER | | | | | | | | | | |
| 11. ROOFER | | | | | | | | | | |
| 12. SHEET METAL WORKER | | | | | | | | | | |
| 13. SPRINKLER FITTER | | | | | | | | | | |
| 14. STEAMFITTER | | | | | | | | | | |
| 15. SURVEYOR | | | | | | | | | | |
| 16. TILER | | | | | | | | | | |
| 17. TRUCK DRIVER | | | | | | | | | | |
| 18. LABORER | | | | | | | | | | |
| 19. OTHER | | | | | | | | | | |
| 20. OTHER | | | | | | | | | | |

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements are willfully false, I am subject to punishment.

 (Signature)

10. (Please Print Your Name)

(Title)

(Area Code)

(Telephone Number)

(Ext.)

(Date)

EXHIBIT B

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE

N.J.S.A. 10:5-31 et seq. (P.L.1975, c.127)

N.J.A.C. 17:27-1.1 et seq.

CONSTRUCTION CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Dept. of LWD, Construction EEO Monitoring Program, may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B, and C, as long as the Dept. of LWD, Construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers

EXHIBIT B (Cont)

provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:

(1) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

EXHIBIT B (Cont)

- (4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;
- (5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;
- (6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:
 - (i) The contractor or subcontractor shall interview the referred minority or women worker.
 - (ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.
 - (iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.
 - (iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.
- (7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.

EXHIBIT B (Cont)

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Dept. of LWD, Construction EEO Monitoring Program, and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq.

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
AFFIRMATIVE ACTION
(N.J.S.A. 10.5-31 et seq) (N.J.A.C. 17:27)
GOODS, SERVICES AND PROFESSIONAL CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. The contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation.

The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with the regulations promulgated by the Treasurer pursuant to P.L. 1975, c.27, as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to attempt in good faith to employ minority and female workers consistent with the applicable county employment goals prescribed by N.J.A.C. 17:27-5.2 promulgated by the Treasurer pursuant to P.L. 1975, c.127, as amended and supplemented from time to time or in accordance with a binding determination of the applicable county employment goals determined by the Division of Contract Compliance & EEO pursuant to N.J.A.C. 17:27-5.2 promulgated by the Treasurer pursuant to P.L. 1975, c.127, as amended and supplemented from time to time.

State of New Jersey
Division of Purchase and Property
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

Solicitation Number: _____ **Bidder/Offeror:** _____

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that the person or entity, or one of the person or entity's parents, subsidiaries, or affiliates, is not identified on a list created and maintained by the Department of the Treasury as a person or entity engaging in investment activities in Iran. If the Director finds a person or entity to be in violation of the principles which are the subject of this law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the person or entity.

I certify, pursuant to Public Law 2012, c. 25, that the person or entity listed above for which I am authorized to bid/renew:

- is not providing goods or services of \$20,000,000 or more in the energy sector of Iran, including a person or entity that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran, **AND**
- is not a financial institution that extends \$20,000,000 or more in credit to another person or entity, for 45 days or more, if that person or entity will use the credit to provide goods or services in the energy sector in Iran.

In the event that a person or entity is unable to make the above certification because it or one of its parents, subsidiaries, or affiliates has engaged in the above-referenced activities, a detailed, accurate and precise description of the activities must be provided in part 2 below to the Division of Purchase and Property under penalty of perjury. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

EACH BOX WILL PROMPT YOU TO PROVIDE INFORMATION RELATIVE TO THE ABOVE QUESTIONS. PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION. IF YOU NEED TO MAKE ADDITIONAL ENTRIES, CLICK THE "ADD AN ADDITIONAL ACTIVITIES ENTRY" BUTTON.

| | |
|--|--------------------------------------|
| Name _____ | Relationship to Bidder/Offeror _____ |
| Description of Activities _____ _____ | |
| Duration of Engagement _____ | Anticipated Cessation Date _____ |
| Bidder/Offeror Contact Name _____ | Contact Phone Number _____ |

ADD AN ADDITIONAL ACTIVITIES ENTRY

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____ Signature: _____
Title: _____ Date: _____

CONTRACT AWARD

Upon opening proposals, pricing shall remain firm for a period of sixty (60) calendar days. In the event that the award is not made within sixty (60) calendar days, bidders may hold their bid consideration beyond sixty days or until the contract is awarded.

Check here if willing to hold the pricing consideration beyond sixty days or until the contract is awarded.

Check here if not willing to hold the pricing consideration beyond sixty days or until the contract is awarded.

AUTHORIZED SIGNATURE

**East Windsor Municipal Utilities Authority
ACKNOWLEDGMENT OF RECEIPT OF ADDENDA**

The undersigned Proponent hereby acknowledges receipt of the following Addenda:

Addendum Number

Dated

Acknowledged for: _____
(Name of Proponent)

By: _____
(Signature of Authorized Representative)

Name: _____

Title: _____

East Windsor Municipal Utilities Authority

INFORMATION FOR BIDDERS

General Terms and Conditions

The East Windsor Municipal Utilities Authority (hereinafter the "Authority") reserves the right, if it is in the best interests of the Authority, to reject any or all Bids, select the Bid or combination of Bids which best suits the purposes of the Authority, and to waive any technical irregularity in any or all Bids.

The Authority shall not be liable for any failure on its part to detect or correct errors and no right shall inure to any Bidder as a result of any action taken by the Authority in connection therewith.

In submitting a Bid, the Bidder warrants that he has read thoroughly and understands all documents referenced in the specifications, such other additional material as he may deem relevant to the foundation of his Bid, and further that he has made such site inspection as may be necessary and appropriate to the work for which he is bidding and that the Bid as submitted represents his fully considered judgment as to the price, terms and conditions set forth therein. **In submitting the Bid, the Bidder recognizes that no subsequent claim of misunderstanding or of failure to read any relevant document or consider any relevant factor will relieve him of his obligation to act according to his Bid if the Authority accepts his Bid offer.**

A Bid proposal may be withdrawn when written request therefore is received by the Authority **before** the time designated for opening of Bids.

No Bidder may withdraw his Bid within sixty (60) days after the actual date of the opening thereof.

Changes in the Specifications: Interpretations

All Bidders must contact the East Windsor Municipal Utilities Authority's office twenty four (24) hours before the specified day of the Bid opening in order to insure receipt of all addenda.

No interpretation of the meaning of the specifications or other pre-Bid documents will be made to any Bidder orally. Any oral interpretation, not documented in writing to all Bidders before Bid opening or referenced in the Bid proposal, shall not be binding upon the Authority.

Every request for interpretation shall be in writing and addressed to the Authority Executive Director or her/his representative and to be given consideration must be received at least ten (10) days before the date fixed for the opening of Bids, Saturdays, Sundays and legal holidays excepted. Any and all such interpretations and any supplemental instructions will be in the form

of written bulletins to the Contract documents which, if issued, will be mailed by certified mail, return receipt requested and/or faxed with receipt of completion to all prospective Bidders (at the respective addresses and or fax numbers furnished for such purposes) not later than seven (7) days prior to the date fixed for opening of Bids, Saturdays, Sundays and legal holidays, excepted. Notice of such interpretation or addenda shall also be published at least seven (7) days before the date for acceptance of Bids, Saturdays, Sundays and holidays, excepted. No requests for interpretation shall be entertained less than ten (10) days before the date for the opening of Bids. Failure of any Bidder to receive any addenda or interpretations shall not relieve such Bidder from any obligation under his Bid as submitted. All bulletins, addenda or interpretations so issued shall become part of the Contract documents and shall be acknowledged in the proposals.

No changes, alterations, additions, or deductions from the scope of work as outlined herein, shall be made without the written consent of the East Windsor Municipal Utilities Authority.

Completion of Bid Proposal - General Directions

When the proposal is made by an individual, his post office address shall be stated and he shall sign the proposal; when made by a firm or partnership, its name and post office address shall be stated and the proposal shall be signed by one or more of the partners; when made by a corporation, its name and principal post office address shall be stated and the proposal shall be signed by an authorized official of the corporation and the corporate seal affixed.

Corporate Bidders not incorporated in the State of New Jersey must submit with their proposal a certificate from the office of the Secretary of State of New Jersey certifying that said corporation is authorized to transact business in the State of New Jersey. All other Bidders not residents of New Jersey, shall designate a proper agent in the State of New Jersey on whom service can be made in the event of litigation, which designation shall be shown by a written statement accompanying the proposal duly executed by the Bidder or submitted on request before award. The name and title of each person signing the Bid Proposal Forms shall be typed or printed below the signature. A Bid by a person who affixes to his signature the word "President", "Secretary" "Agent" or other designation, without disclosing the name of the principal, may be held to be the Bid of the individual signing. Prices shall be stated in writing and in figures as indicated on the proposal pages PBP. In the event of discrepancy, the written unit price shall govern. The specified unit price will serve as the basis for comparing Bids. Carelessness in quoting prices, or in preparation of bid otherwise will not relieve the Bidder. **BID PRICES SHALL BE FOB DESTINATION. NO ADDITIONAL FUEL OR RELATED SURCHARGES WILL BE ACCEPTABLE FOR THE DURATION OF THIS CONTRACT.**

Bids shall be submitted on the Bid Form supplied herewith or copies thereof. They shall be returned in sealed envelopes addressed to:

East Windsor M.U.A.
7 Wiltshire Drive
East Windsor, New Jersey 08520

The envelope shall be marked in the lower left quadrant:

Bid for : **Well 6R Production Well Construction**

The Authority accepts no liability for bids opened in error due to absence of such notation.

Please be advised that fax transmissions of any of the required bid documents shall not be acceptable. Your Bid will be declared non responsive.

Bids may be hand delivered or mailed per legal Notice to Bidders. In the case of mailed bids, the Authority assumes NO responsibility for Bids received after the designated date and time and will return late Bids to the Bidder unopened.

Bids shall be signed in ink. Erasures or other changes in a Bid must be explained or noted over the signature of the Bidder. Bids containing any conditions, omissions, unexplained erasures, or alterations or items not called for in the proposal, or irregularities of any kind, may be rejected by the Authority. Proposals in which the bid prices are unbalanced, in the opinion of the Authority, may be rejected.

Bids not submitted on the forms and in accordance with the instructions contained herein and in the "Advertisement for Bids" shall be considered informal and may be rejected.

Bid Proposal Forms

1. **Bid Form** The Bidder will be held to his Bid as submitted. No error in computation will relieve him of responsibility to act in accordance with the prices on his Bid form as submitted.

2. **Bid Bond and Consent of Surety**

a. **Bid Bond** Required for this Bid: Yes X No _____:

When required each Bid must be accompanied by an acceptable certified check or cashier's check payable to the Authority or a Bid Bond issued by a Surety authorized to transact business in New

Jersey and acceptable to the Authority. The Bid security shall be in the amount of the lesser of ten percent (10%) of the Bid price or twenty thousand dollars (\$20,000). All Bid securities, except those of the three (3) lowest responsible and responsive Bidders will be returned within ten (10) days, Saturdays, Sundays, and legal holidays excluded, after award of the contract.

In the event that the successful Bidder to whom the Contract is awarded fails or neglects to execute the agreement, to furnish the requisite Bond within the time specified and/or to meet other mandatory requirements pursuant to these Contract Documents, the Authority may determine that the Bidder has abandoned the Contract. Thereupon, the award of the Contract shall become a nullity and the Bid security shall be forfeited to the Authority.

In the event that the successful Bidder properly executes the Agreement and furnished all requisite documents within the time specified, the Authority shall return the Bid security of the remaining unsuccessful Bidders within three (3) days thereafter, Saturdays, Sundays, and legal holidays excepted.

Consent of Surety Required for this Bid: Yes X No _____

Each Bid must be accompanied by a Consent of Surety provided by a company authorized to transact business in New Jersey and acceptable to the Owner. The Consent of Surety shall serve as a guarantee that the surety company will provide an appropriate Bond within ten (10) days after notification of the award of the Contract to that Bidder.

In addition to the requirements set forth hereinbefore, each Surety instrument shall be accompanied by a properly dated and executed power-of-attorney. Each Surety shall furnish a current statement of financial condition to verify that the total amount of the Bond required will be within the maximum amount specified for that company pursuant to N.J.S.A. 17:18-9.

Non-Collusion Affidavit

A Non-Collusion Affidavit must be completed and submitted with all Bid proposals.

Ownership Disclosure Statement

Any corporation or partnership submitting a Bid shall include in the Bid proposal package a statement setting forth the names and addresses of all stockholders in the corporation or partnership who own ten percent (10%) or more of its stock, of any class or of all individual partners in the partnership who own a ten percent (10%) or greater interest therein, as the case may be. If one or more such stockholder or partner is itself a corporation or partnership, the stockholders holding ten percent (10%) or more of that corporation's stock, or the individual partners owning ten percent (10%) or greater interest in the partnership, as the case may be, shall also be listed. The disclosure shall be continued until names and addresses of every non-corporate

stockholder, and individual partner, exceeding the ten percent (10%) ownership criteria established in this act, have been listed.

Affirmative Action Requirements

Pursuant to the New Jersey Affirmative Action regulations P.L. 1975, C 127 (N.J.A.C. 17:27 et seq.) Bidders with either a Federally approved Affirmative Action Plan or a State Certificate of Approval are required to submit copies of those documents with their proposals. A successful Bidder without either Federal or State approval will be required to complete an Affirmative Action Employee Information Report (From AA302) upon signing the Contract. Bidders shall comply with the dictates of the Affirmative Action language in Exhibit A, as attached.

New Jersey Prevailing Wage Act

(P.L. 1963, Chapter 150) is hereby made part of every contract entered into by the EWMUA except those contracts which are not within the contemplation of the ACT, and the bidder's signature on this proposal is said bidder's guarantee that neither the bidder nor any subcontractors might employ any worker to perform work covered by this bid that is listed on or on record in the office of the Commissioner of the New Jersey Department of Labor and Industry as one who has failed to pay prevailing wages in accordance with the provisions of this ACT.

Americans with Disabilities Act

The Contractor and the Authority do hereby agree that the provisions of Title II of the Americans with Disabilities Act of 1990 (the "Act" (42 U.S.C. S12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the Authority pursuant to this contract, the Contractor agrees that the performance shall be in strict compliance with the Act. In the event that the Contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the Contractor shall defend the Authority in any action or administrative proceeding commenced pursuant to this Act. The Contractor shall indemnify, protect, and save harmless the Authority, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The Contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Authorities grievance procedure, the Contractor agrees to abide by any decision of the Authority which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in any award of damages against the Authority or if the Authority incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the Contractor shall satisfy and discharge the same at its own expense.

The Authority shall, as soon as practicable after a claim has been made against it, give written notice thereof to the Contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the Authority or any of its agents, servants, and employees, the Authority shall expeditiously forward or have forwarded to the Contractor every demand, complaint, notice, summons, pleading, or other process received by the Authority or its representatives.

It is expressly agreed and understood that any approval by the Authority of the services provided by the Contractor pursuant to this contract will not relieve the Contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the Authority pursuant to this paragraph.

It is further agreed and understood that the Authority assumes no obligation to indemnify or save harmless the Contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the Contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the Contractor's obligations assumed in the Agreement, nor shall they be construed to relieve the Contractor from any liability, nor preclude the Authority from taking any other actions available to it under any other provisions of this Agreement or otherwise at law.

Qualification of Bidders

The Authority reserves the power to make such investigations as it deems necessary to determine the ability of a Bidder to perform work, and a Bidder shall furnish to the Authority all such information and data for this purpose as the Authority may request. The Authority reserves the right to reject any Bid if the evidence submitted by or investigation of Bidder fails to satisfy the Authority that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

Where applicable, lump sum price work includes furnishing and delivering all the material to do and perform all the work and labor required to be furnished and delivered, done and performed for the Authority and to complete this contract in strict and entire conformity with the plans and specifications. Shipping will be FOB.

Where unit price items are delineated in the proposal section of the Bid Documents and specifications, it is understood by the Bidder that the Authority may increase, without limit, or decrease, without limit, the quantities to be done under any or all established unit price items. It is further understood by the Bidder that should there be any error, discrepancy or inconsistency in the figures, the unit prices as stated in the proposal shall govern. It is further understood that if his proposal is accepted, it is the unit price which he will receive and which the Authority will pay for the work specified to be done under the items, in the way required and set forth by the Bid

documents and specifications without recitation or repetition of said unit prices in the BID proposal PAGE". Shipping will be FOB.

Equal Bids

When two or more Bids are Equal in all respects, award may be made at the discretion of the Authority by a lottery drawing which shall be witnessed by at least three (3) persons and which may be attended by the Bidders or their representatives.

Award of Contract

The Contract shall be awarded to the lowest responsive Bidder. The lowest responsive Bidder shall have submitted a proposal which complies with the requirements of these Contract Documents and a Bid which is the lowest Bid submitted by Bidders possessing the skill, ability, and integrity necessary to the faithful performance of the Contract. The contracting unit shall award the Contract or reject all Bids within such time as may be specified in the invitation to Bid, but in no case more than sixty (60) days, except that the Bids of any Bidder who consent thereto may, at the request of the contracting unit, be held for consideration for such longer periods as may be agreed. All bid security except the security of the three (3) apparent lowest responsible Bidders shall, if requested, be returned after ten (10) days from the opening of the Bids, Saturdays, Sundays and legal holidays excepted, and the bids of such Bidders shall be considered as withdrawn, within three (3) days after the awarding of the Contract and the approval of the Contractor's performance bond, the Bid security of the remaining unsuccessful Bidders shall be returned to them forthwith, Saturdays, Sundays and legal holidays excepted.

The Bidder to whom the Contract has been awarded shall, within ten (10) days of the date of notification of award:

1. Execute and deliver to the Authority three (3) copies of the Contract.
2. Furnish proof in the form of Corporate Resolutions and /or Notarized Acknowledgments to establish the authority of the person executing the Contract on behalf of the successful Bidder.
3. Furnish satisfactory evidence of insurance as required in these specifications.
4. Furnish and maintain the requisite Surety Bond.

Contract Documents

All of the terms and conditions in this Contract Packet, including but not limited to the Invitation to Bid, Instructions, Specifications, Proposal, the Contract executed by the successful Bidder and

the Authority, and the Resolution authorizing same, shall constitute the Agreement and shall be binding upon all parties in full.

New Jersey Sales Tax

The East Windsor Municipal Utilities Authority is a body politic and corporate and as such is qualified for exemption under the New Jersey Sales Tax Law from the sales tax. Therefore, the Contractor shall not charge the sales tax on materials and labor in connection with any work being performed for it. The Contractor should advise his suppliers and furnish them with the necessary exemption forms so that this charge will not be made on this project.

Indemnification

The successful Bidder shall agree to defend, indemnify, and save harmless the Authority, its officers, agents, servants, and employees and each and every one of them against and from all damages to which the Authority and any of its officers, agents, servants, and employees may be put (including attorneys' fees and professional fees) through the negligence of said Bidder or through any improper or defective machinery, implements, or appliances used by said Bidder in the aforesaid work, or through any act or omission on the part of the said Bidder or its agents, employees, or servants.

Extension of Time Not a Waiver

Any extension of time beyond the date fixed for completion or the doing or the acceptance of any part of the work called for by the Contract, or the taking of possession in whole or in part prior to the date of completion of the Work, shall not be deemed a waiver by the Authority of its right to annul or terminate the Contract for abandonment or delay in the manner provided by the terms of the Contract, nor relieve the successful Bidder from full responsibility.

Compliance with All Laws

The Bidder's attention is directed to the fact that all applicable Federal, State, and local laws, municipal ordinances, and the Rules and Regulations of all Authorities having jurisdiction over the work pursuant to the Contract shall apply to the Contract throughout and will be deemed to be included to the Contract as though herein written out in full. The successful Bidder, sub contractors, and all of their representative shall obey and comply with all such laws, ordinances, and rules and regulations.

Business Registration Act. N.J.S.A. 52:32-44 P.L. 2004,c 57

- a. Required all business organizations must submit proof of business registration to the contracting agency (EWMUA). It is also the Contractors responsibility to provide proofs

of business registration of those subcontractors required to be listed in the contractor's submission. Proof of business registration shall be a copy of a Business Registration Certification issued by the Department of the Treasury, Division of Revenue. Before final payment of the contract is made by the EWMUA, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

- b. An individual with no business tax or employer obligations to the State of New Jersey, who is entering into, or has entered into a contract with a contraction agency to perform personal services shall submit proof of business registration in the form of a Certification and Registration for Individuals Contacting with Public Agencies (NJ-REG-A) issued by the Department of the Treasury, Division of Revenue. For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates (N.J.S.A. 52:32-44 (g) (3) shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.
- c. Contractors must include proof of business registration at the time it submits a bid. A business organization that fails to provide a copy of a business registration as required pursuant to section 1 of P.L. 2001, c.134 (C:52:32-44 et al.) Or subsection e. or f. of section 92 of P.L. 1977, c.110 (C:5:12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with the EWMUA.

Pay to Play Law

The Contractor is advised of the responsibility to file an annual disclosure statement on political contributions with the New Jersey Election Law enforcement Commission (ELEC) pursuant to N.J.S.A. 19:44A-20.13 (P.L. 2005, c.271, s.3) if the Contractor receives contracts in excess of \$50,000 from public entities in a calendar year. It is the Contractor's responsibility to determine if filing is necessary. Additional information on the requirement is available from ELEC at (888) 818-3532 or at www.elec.stae.nj.us.

Domestic Materials

The successful Bidder shall comply with Chapter 107, P.L. 1982 (N.J.S.A. 40A:11-18) and Chapter 90, P.L. 1934 (N.J.S.A. 52:33-1 et seq.) which require that only manufactured and farm products of the United States, whenever available, shall be used in this project.

Brand Names

Brand Names and/or description used in this proposal are to acquaint bidders with the type of commodity desired and will be used as a standard by which alternate or competitive materials offered will be judged. Competitive items must be equal to the workmanship. Variations between the materials described and materials offered are to be fully explained by the Bidder in an accompanying letter. All commodities must be in current production detail wherein the material offered differs from the specifications. If no exceptions are indicated, it will be required that the material or service be delivered or performed as per the specifications.

Quantities

Bidders should be aware that the quantities mentioned in the Bid Specifications and/or Bid Proposal are estimates based on historical data. The actual quantities required may be slightly higher or lower during this contract period. Bid prices remain in effect for one full year, however, as an option in some bids, Bidders are encouraged to submit a second year bid please note any exceptions on the appropriate Bid Proposal page. Complete both years either by submitting prices for the second year or by initialing second year option and stating not interested. It will be at the sole discretion of the OWNER which option is accepted. The Bid prices will remain in effect from date of contract acceptance for the actual quantity ordered during this contract period.

Time of Completion and Liquidated Damages

Bidders must agree to commence the work on the Contract on or before the date to be specified in the notification which will be issued to inform the successful Bidder of the acceptance of the Contract Document by the Authority. Bidders for the work shall agree to the completion date set forth in the Contract Documents. Liquidated Damages shall be assessed for every day the successful Bidder fails to substantially complete the Contract after the completion date, as more fully set forth in General Conditions.

Contract Security (required for this Bid): Yes X No

Within ten (10) days after receiving the Notice of Award of a Contract, the successful Bidder shall furnish one Bond to the Authority in an amount at least equal to one hundred percent (100%) of the Contract price as security for the faithful performance of the Contract. The Bond shall be issued by a Surety company licensed to transact business in the State of New Jersey and, pursuant to New Jersey Law holding sufficient financial resources to issue said Bond. The Bond shall bear a date on or subsequent to the date of the Agreement. Each signature of an attorney-in-fact shall be accompanied by a certified and effectively dated power-of-attorney. The Bond shall assure fulfillment of the Contract and all of its provisions, including any additions, deductions, or other modifications, or full reimbursement to the Authority for all expenses incurred in making good any default. The bond shall contain a Waiver of Notice being required of alterations, additions, deductions, extension of time, or other modifications of the Contract as ordered. The Bond shall

provide for the corrections of any defects which may develop for a period of one year from the date of substantial completion of the work performed under the Contract. All defects occurring within this guarantee period shall be presumed to have resulted from defective workmanship or material.

Insurance Requirements:

The successful Bidder shall procure and maintain, at his own expense, until acceptance by the Authority of the contracted work, insurance for liability of the kinds and in the amounts hereinafter provided, with insurance companies authorized to do business in the State of New Jersey. The successful Bidder shall not commence the work under the Contract until a Certificate or Certificates of Insurance have been furnished to the Authority and found in compliance with these requirements. Upon request, the successful Bidder shall furnish to the Authority a certified copy of each policy, including the provisions establishing premiums.

An unqualified endorsement shall be provided that the policies shall not be changed or canceled prior to sixty (60) days after notice to the Authority. The successful Bidder shall be obligated to maintain the insurance and to renew policies as necessary, and shall provide evidence of the renewal of policies where required. In the event the successful Bidder fails or refuses to renew its insurance policies, or the coverage is canceled, terminated, or modified so that the insurance does not meet the requirements of this Contract, the Authority may refuse to make payment or provide further monies due under this Contract, or refuse to make payment or provide further monies due under other Contracts between the same contracting entities and the Authority. The Authority in its sole discretion may use monies retained under this paragraph to renew the successful Bidders' insurance for the periods and amounts referred to herein. Ultimately, the Authority may default the contracting entity and direct a Surety to complete the project. During any period when the required insurance is not in effect, the Authority may suspend performance of the Contract. If the Contract is so suspended no additional compensation or extension of time shall be due on account thereof.

All insurance required herein shall be maintained during the life of this Contract. Insurance coverage in the minimum amount set forth herein shall not be construed to relieve the contracting entity from liability in excess of such coverage, nor shall it preclude the Authority from taking such other actions as are available to it under provisions of this Contract or otherwise in the law. All insurance policies required hereunder shall include the designation as additional insured of the Authority and the solicitor to the Authority, their successors, officers, agents, employees, and servants. The various requisite types of insurance shall be written for not less than the statutory limits of liability or the limits of liability specified below, whichever coverage is greater:

Comprehensive General Liability Insurance shall be at least as broad as the standard, basic, un-amended policy, endorsed to include broad form comprehensive general liability coverage, in the following amounts:

Bodily injury liability- combined single limit, one million dollars (\$1,000,000.00)

Property damage liability combined single limit, one million dollars (\$1,000,000.00)

Comprehensive Automobile Liability, including owned, hired, and non-owned vehicles, in the following amounts:

Bodily injury liability and property damage liability in the combined single limit, one million dollars (\$1,000,000.00)

Workers Compensation and Employers' Liability Insurance is required to be provided in accordance with the Laws of the State of New Jersey and to include an All States' Endorsement to extend coverage to any State which may be interpreted to have legal jurisdiction. The Employers' Liability Insurance is to have a limit of not less than one hundred thousand dollars (\$100,000.00) per occurrence.

PRODUCTION WELL CONSTRUCTION AND AQUIFER TEST SPECIFICATIONS

East Windsor Municipal Utilities Authority
Proposed Well No. 6R
7 Wiltshire Drive
East Windsor Twp., Mercer County, NJ

PART 1- GENERAL

1.1 DESCRIPTION

These specifications provide the construction and testing details for one proposed production well (Well No. 6R) for the East Windsor Municipal Utilities Authority (EWMUA) system, East Windsor Township, Mercer County, New Jersey. The well site is shown on the attached Figure 1. The new well is to be installed as a 20-inch by 14-inch steel double cased, reverse circulation gravel packed well. Well No. 6R is to be permitted as a public community supply well and as such, will be installed under the direct supervision of a driller with a Master's Drilling License from the State of New Jersey. This specification does not include a meter vault; the Contractor will connect approximately 25-feet of 10-inch DIPCL raw water main leading from the finished production well (Pump head and foundation) to an existing 10" 90 degree elbow, for ultimate connection to the existing filter building. The contractor will install approximately 30 feet of electrical conduit and proper size copper wire and ground wire from the existing disconnect located in the well building to the terminal box on the new motor. A liquid tight electrical whip shall be installed between the rigid conduit pipe and the motor junction box. The Contractor shall provide, install, and test, at a minimum, all items included in these Specifications. If there is any discrepancy between the plans, specifications, and bid form, the specifications shall govern. It is the responsibility of the Contractor to visit the site and review the conditions and all bidding documents to ensure that all items as set forth in these Specifications and as shown on the Plans are included in the Contractor's lump sum bid and any add-on/deduct line items included are part of the bid form. Due to the emergent need of this project and summer time demand, **this well must be operational by May 10, 2021. The East Windsor MUA may impose a \$500.00/day fee for every day past May 10, 2021 unless the delay was outside the control of the contractor which will be at the sole discretion of the East Windsor MUA.**

A pre-bid site meeting will be held on Friday, January 15, 2021 at 10 am. Well 6 is located at 45 Twin Rivers Drive, East Windsor N.J. All bidders are asked to attend.

1.2 RELATED WORK

Although it is not to be considered comprehensive, attention is brought to the following specifications listed elsewhere that are particularly pertinent:

| | |
|-------|--|
| NJDEP | Applicable and Relevant Rules and Regulations on water well construction, installation, water quality, etc., specifically N.J.A.C. 7:9D and N.J.A.C. 7:10. |
| AWWA | A-100 Standards for Water Wells, |
| AWWA | C-200 Standards for Steel Water Pipe 6 in. or larger, |
| AWWA | C-206 Standard for Field Welding of Steel Water Pipe, |
| AWWA | C-654 Disinfection of Wells. |

1.3 CARE OF PROPERTY

The Contractor shall keep the property free from accumulations of waste and debris caused by the work. Before work shall be considered as having been completed, the Contractor shall clean and remove from the property all surplus, discarded material, equipment, temporary structures, etc. Clean-up operations shall continue with the progress of the work.

1.4 PERMITS, CERTIFICATIONS, LAWS and ORDINANCES

The Contractor shall, at his own expense, procure the well drilling permits and shall comply with all State or local laws, ordinances or rules and regulations relating to the performance of the work. The Owner will obtain the necessary permits from the State of New Jersey Department of Environmental Protection ("NJDEP") Division of Water Supply and Geoscience (WSG), and the Mercer County Department of Health for permission to construct and operate a new public community water supply well.

PART 2- MATERIALS AND EQUIPMENT

2.1 WELL INSTALLATION

The following are to be included for the installation of this well:

- Pilot Hole
- Geophysical Logging
- Test Well Installation
 - Surface Casing
 - 20-inch outer carbon steel casing and grouting
 - Minimum 28-inch under ream for well screen
 - 14-inch stainless steel screen and 10 feet stainless steel riser
 - 14-inch inner carbon steel casing to grade
 - Gravel Pack
- Well Development
- Well Testing and Water Quality Sampling

All steel casing pipe shall be new and conform to ASTM A-53 and AWWA A100-06 et seq.

The surface casing shall be minimum 30-inches in diameter and shall have a wall thickness of 0.375 inches. The 30-inch diameter steel casing shall have a minimum weight of 110.64 pounds per linear foot.

The outer steel casing shall be 20-inches in diameter and shall have a wall thickness of 0.375 inches. The 20-inch diameter steel casing shall have a minimum weight 78.60 pounds per linear foot.

The well inner casing shall include 10 feet of 14-inch diameter stainless steel leader of 0.375 inches wall thickness immediately above the well screen and the necessary length of 14-inch carbon steel of 0.375-inch wall thickness to grade, having a minimum weight 54.57 pounds per linear foot.

The well screen shall be Johnson closed rod, high capacity wire wrapped stainless steel well screen.

Grout material shall meet the requirements of NJAC 7:9D-2.9.

Gravel filter pack shall meet the requirements of NJAC 7:9D-2.3(f).

2.2 WELL PUMPING EQUIPMENT

The following materials and equipment are to be installed for all new well pumping equipment (note that pump and discharge specifications included below are for bidding purposes, considered to be approximate and are subject to change depending on the results of the well construction and aquifer pumping test):

- Vertical Turbine Pump, proposed 1,200 gpm at 348 feet TDH
- 8-inch pump column, estimated setting depth 175 feet
- 10-inch pump head and foundation. Underground infrastructure set 4 feet below grade
- Necessary length and adapters of 10-inch diameter DIPCL (above ground piping) to connect from the well discharge head to the 10" (inch) 90 degree elbow located in the well house and treatment facilities (an estimated 25 feet).
- Two 1 1/4 " PE/poly drop tubes from surface to top of pump
- Install Sigma Controls type pressure transducer for SCADA system
 - Install to surface seal for M-scope water level measuring access
 - Sanitary vented well cap with mushroom type head set a 24-inches above grade
- Air release valve
- Backflow check valve
- Gate valve for isolation of well from raw water main

The new pump and new discharge assembly that is to be installed in well # 6R is a Flowserve, Goulds or equal, Deep Well Turbine Pump. This pump consists of approximately 175' feet' of 8" coupled column pipe, epoxy coated both outside and inside. Approximately 175' of stainless steel shafts.

The new pump shall be manufactured to the following performance characteristics:

- design capacity (gpm)..... 1200
- total dynamic head (feet)..... 348'
- pump efficiency (minimum %)..... 81%
- pump/motor speed (rpm)..... 1800
- motor horsepower..... TBD

Column Discharge Assembly:

Contractor shall furnish 175', seventeen (17) 10' sections plus difference, of 8" epoxy coated with a 10 – 12 mil finish, coupled column assembly complete. Each 10' section shall be complete with one

(1) 10' stainless steel line shaft with stainless steel line shaft sleeve and coupling, cutless rubber bearing, bronze bearing bracket, Water lubricated.

Protective coating:

Epoxy coat the exterior and interior of the pump head and the interior and exterior of the column pipe. The product will be Plasite 9133 high resistant protective coating, NSF approved or equal.

Plasite coating # 9133, FDA approved for potable water, inside and outside of all sections of new column pipe. Each coat shall be 5.0 mils dry film thickness for a total thickness of 10 - 12 mils. Surface preparation for painting shall be sandblast, inside and outside, for removal of any oils or rust. Final coat of new paint shall cure to 5 days. Field touch-up of marred or damaged coating shall be with like material, heat cured to expedite drying and to drive off solvents.

Care must be exercised in handling and installation of the pumping equipment because of the special coatings. If any of the equipment is delivered in a scratched condition, the Contractor may be required to return those pieces to his shop for re-coating in accordance with the manufacturer's recommendations.

Column pipe:

The column pipe shall be carbon steel ASTM A-53B. The pipe size shall be such that friction loss shall not exceed 5' per 100' of column based upon the rated capacity of the pump. The pipe shall be furnished in interchangeable sections having a nominal length of not over 10'. The column pipe shall be connected by a threaded sleeve type coupling.

Line shaft:

The Line shaft shall be turned and polished 316 stainless steel ASTM A-582-416-T. These shafts shall be furnished in interchangeable sections having a nominal length of not over 10'. The butting phases shall be machined square to the axis of the shaft. The Line shaft shall be coupled with 316 stainless steel couplings and shall have a left-hand thread to tighten during pump operation. The shaft shall be provided with a non-corrosive sleeve of 316 stainless steel at the location of each guide bearing.

Line shaft bearings:

The bearings shall be designed for a vertical turbine pump service to be lubricated by liquid being pumped (water). They shall be mounted in bronze bearing retainers, which shall be held in position in the column couplings by means of the butted ends of the column pipes. The bearings shall be spaced of intervals of not more than 10'. The bearing brackets will be bronze ASTM-B-584-836. The rubber bearings shall be ASTM-Buna N.

Discharge head:

Clean, sandblast and paint the discharge head.

Stuffing box bearing:

Stuffing box bearing shall be ASTM B505-C84400.

Head shaft:

Head shaft 416 stainless steel ASTM A-582-416-T

Impellers:

The impellers shall be 316 stainless steel ASTM A-582-416-T.

Pipe Supports:

Pipe supports shall be within 4' (Feet) of the pump head, 2' (feet) after the gate valve and every 8' (feet) of pipe run. Supports shall be of reinforced concrete saddle with a 3,000 psi strength.

Transducer Tubes:

Contractor shall install two (2) 1 1/4" polyethylene (P.E.) Tubes in each of the wells for the purposes of utilizing an M-Scope for draw down level measurement and for the future installation of a pressure transducer for continuous draw down measurement. Each tube shall extend to a depth 5 feet above the pump intake screen. P.E. tubing shall be secured to the column piping via stainless steel or approved equal straps. Access to the P.E. tubes shall be made available at the wellhead via screwed NPT plugs or equal method. Each PE tube shall be capped at the bottom.

Motor:

The EWMUA requires an inverter duty Premium Efficiency Motor for use with a VFD. Motor must have a shaft grounding ring.

PART 3- EXECUTION/INSTALLATION

3.1 **NEW PRODUCTION WELL**

3.1.1 **Well Drilling**

The Contractor shall inspect the existing test well site and access conditions and prepare a lay-down area as needed for the completion of the well drilling and test pump installation to provide for a safe and proper working environment. Contractor shall repair all damage to the existing roads and curbs, fences, parking areas, and other disturbed site improvements. EWMUA shall conduct limited site preparation such as potential relocation of existing fencing and/or potential limb removal of overhanging branches. Appendix A of these specifications include the Well 6 well log which roughly reflects the anticipated construction of replacement Well No. 6R.

A pilot borehole will be advanced through the entire thickness of the middle PRM Aquifer, an estimated depth of 580 feet. Ditch samples are to be retained at 10-foot intervals from grade to the total completed depth. The

contractor shall keep an accurate log of each type of material encountered, location and depth of each sample. The Contractor shall have direct experience installing wells within the PRM Aquifer.

Ditch samples will be retained at 5-foot intervals through the PRM Aquifer from the top of the aquifer through to the base of the aquifer and into the underlying confining unit estimated to be 580 feet below grade. Split spoon samples shall be collected at five (5) foot intervals throughout the entire thickness of the Upper PRM, estimated to be between 500 and 560 feet below grade. Both split spoon samples and the finest ditch samples shall be retained for sieve analysis. Contractor shall furnish the complete set of grain size distribution results (in excel format) from the sieve analysis for Engineer and Owner for their review and analysis in conjunction with the Contractor and screen manufacturer review for determination of filter pack and screen sizing.

The on-site area surrounding the well shall be maintained in an orderly and refuse-free condition, and surface water shall be diverted away from the well, at a minimum of 250 feet away from the test well site. **Soil cuttings must be contained and removed from site. Mud and liquids generated from drilling operations must be controlled on site in a manner that detains the flow and allows sediment to settle after which clearer liquids can be skimmed/pumped or gravity drained to the nearest storm sewer. Contractor is responsible for providing adequate erosion and sedimentation controls, including straw bales, silt socks and fencing – to be placed to contain drainage, and to filter sediment at the headwall outlet into pond, if required.** If any water is used during drilling, the water must be obtained from a potable, tested source of supply. Potable water is available from a nearby, on site, hydrant provided by EWMUA. If this hydrant is to be used for a competent water source by the Contractor, the Contractor shall provide the necessary connections to the 2-1/2” hydrant hose nozzle, including an EWMUA-approved backflow prevention device, shut off valve and meter. The Contractor shall install and maintain appropriate erosion and sedimentation controls and measures to handle all runoff/ discharge water related to the well drilling operation.

3.1.2 Geophysical Logging

After the aquifer has been penetrated to depth, geophysical logs including at a minimum, gamma, spontaneous potential and electric resistivity, will be conducted. The Contractor must specify capability of equipment proposed for geophysical logging. The Contractor is responsible to assure that the geophysical logging instruments and equipment are in proper working condition.

The Contractor must supply a trained and expert crew to operate the geophysical logging equipment. Copies of the log as well as digital output of the log (in such format as required by the New Jersey Geologic Survey) will be made available to the Engineer as part of the permanent file.

3.1.3 Surface Casing

The necessary length of temporary (starter) minimum 30-inch diameter, black steel, plain end surface casing shall be installed. The casing shall be ASTM-A53 pipe with a minimum wall thickness of 0.375 inches. For bidding purposes, the minimum diameter and length of casing is to be 30 inches and 30 feet, respectively. However, the actual diameter and depth of the surface casing shall be determined by the Contractor to allow the casing to be seated in the first encountered competent soil bearing conditions, account for the presence of shallow groundwater, and to prevent surface caving and provide sanitary protection of the borehole during drilling.

3.1.4 Outer Casing

Following geophysical logging and selection of the depth to the top of the aquifer, the pilot hole shall be reamed to 24-inches using the reverse circulation drilling method. The hole will extend only to the top of the water bearing formation. A 20-inch diameter steel casing shall be installed from the top of the water bearing formation to a minimum of 30-inches above grade. The 20-inch casing shall be installed with centralizers to keep the casing in the center of the borehole. The casing shall be ASTM-A53 pipe with a minimum wall thickness of 0.375 inches. The Contractor shall adhere to the NJDEP construction requirements for a Category 1 well as provided for in NJAC 7:9D-2.3.

The 20-inch casing shall be sealed with Neat Portland Cement grout from the bottom to top. Grouting shall be placed by the Halliburton method in accordance with NJAC 7:9D-2.9 and procedures in NJAC 7:90-2.10. The grouting must be performed in one continuous operation until the grout is visible at the ground surface.

3.1.5 Well Screen Cavity

After the outer casing is placed, cemented, and cured as described above, an under reamed cavity through the water bearing formation of a minimum 28-inches in diameter is to be drilled. The under ream must provide a cavity for the injection of a gravel envelope of adequate thickness around the screen to ensure low velocity of inflow free from sand. The under reaming shall be conducted using the reverse rotary drilling method using only potable water. No drilling mud of any type shall be injected into the under ream cavity.

3.1.6 Well Screen

The well screen shall be continuous-slot, high flow design, v-shaped wire-wound type construction of Type 304 stainless steel as manufactured by UOP Johnson or equivalent.

The screen shall be 14 inches in diameter. The high flow well screen is selected to provide the maximum open area per foot of well screened, having an entrance velocity of less than one-tenth (1/10) of a foot per second. The openings or slots shall be designed to prevent clogging and shall be free of jagged edges, irregularities, or anything that will accelerate or contribute to clogging or corrosion. The screen shall have welded vertical and horizontal joints, and there shall be no internal projections. It is estimated that the screen will be up to 60 feet in length set approximately 500 to 560 feet below grade. Screen slot size, gravel pack, and final length of screen will be determined based on results of the pilot boring, geophysics and in accordance with NJAC 7:9D-2.3(f). A five-foot long by 14-inch diameter, 0.000 slot stainless steel screen shall be placed at the base of the screen for a sump.

The screen must have adequate strength to resist external forces applied to it after installation and to minimize the likelihood of damage during installation. The screen must have no change of alignment at any joint after installation. The contractor shall submit for approval drawing and other information showing the design and method of construction of the screen. All screen pieces and the inside casing shall be joined by electric welding.

3.1.7 Inner Casing

The inside casing shall be welded to the well screen and shall be brought up to grade from the top of the screen. The inside casing shall be 14 inches in diameter, shall be 0.375 inches minimum wall thickness and shall meet the requirements of ASTM A-53 steel pipe. Gravel (see Section 3.1.9) shall be brought up between the inside and outside casings a minimum of 30 feet above the well screen and in accordance with NJAC 7:9. The gravel pack level will be maintained at that level throughout development. The inner casing shall have a minimum of 10 feet of Type 304 stainless steel blank set between the screen and inner casing. The stainless-steel pipe shall be the same size and thickness as the 14-inch inner casing. The Contractor must provide adequate corrosion

control between the stainless-steel screen and steel casing. Pipe joints shall be welded by qualified welders in accordance with AWS Standards. The Contractor must provide in the bid package a description of the method to be used to align the screen and inner casing in the center of the outer casing prior to the installation of the gravel pack.

3.1.8 Plumbness and Alignment

The well shall be constructed with all casing set round, plumb and true to line as described herein. Tests for plumbness and alignment shall be made after complete construction of the production well.

Plumbness and alignment shall be tested by lowering into the production well to a depth equal to the top of the inner casing a section of pipe 30 feet long or a dummy of the same length. The Contractor shall furnish for the test's equipment provided with adjustable guides suitable for precise centering of the plumb directly over the center of the casing without moving or jacking the well drilling derrick. The outer diameter of the plumb shall be not more than 1/2 inch smaller than the diameter of that part of the casing being tested. If a dummy is used, it shall consist of a rigid spindle with three rings, top, middle and bottom of the dummy. The central member of the dummy shall be rigid so that it will maintain the alignment of the axes of the rings.

The dummy must move freely throughout the length of the casing to the specified depth or should not vary from the vertical in excess of 2/3 of the smallest inside diameter of that part of the well being tested per 100 feet of depth, or beyond the limitations of this test. The Contractor at their own expense shall correct the plumbness or alignment of the well or the Engineer and Owner may refuse to accept the well. The East Windsor MUA and its Engineer may waive the requirement of this paragraph for plumbness if, in their judgment, the Contractor has exercised all possible care in constructing the well and the defect is due to circumstances beyond his control, the utility of the completed well will not be materially affected and the cost of the necessary remedial measures will be excessive. The requirements for alignment will not be waived.

3.1.9 Gravel Filter

The gravel filter must be placed hydraulically to ensure the placement of gravel around the screen, feeding the same from the surface so as to build up the gravel wall around the screen from the bottom up as the graveling process proceeds. Cape May gravel, or equivalent shall be used; the size determined by the Contractor in accordance with the characteristics of the water-bearing formation; such size and specifications to be reviewed and confirmed by the Engineer. The material shall be 95% siliceous with not more than 5% calcareous material by weight. The characteristics of the formation shall be determined through grain size analysis performed on the split spoon and ditch samples taken during the pilot hole drilling. The level of the gravel pack at 30 feet above the top of the outer casing base must be maintained throughout development of the well. The bottom of the screen shall be properly plugged with steel plate or cement in accordance with the conditions found. Note that NJAC 7:9D-2.3(f)3ii requires that the gravel pack shall not extend more than 50 percent of the length of the well screen or approximately 30 feet; depending on the actual installed final screen length.

3.1.10 Development

The water-bearing formation shall then be developed to produce the 1,200 gpm capacity as efficiently as possible with a minimum of drawdown in accordance with NJAC 7:9D-2.11. Methods of development can include but are not limited to initial swab of the inner casing and screen by using a walking beam surging and bailing, double-disc air surging, hydraulic jetting and pump surging to free the inside of the screen from sand and any deleterious materials to produce clear water free of sand. The Contractor shall record improvements in the well specific capacity during development and measurements of the gravel pack depth. Records of

development data obtained during development shall be submitted to the Engineer for review and acceptance of the capacity and efficiency. Final development must include surging with the test pump and providing specific capacity data to the Engineer. A development test shall be conducted in accordance with AWWA A-100-06 et seq., Sections 9.2 through 9.4, with the exception that the Contractor is responsible for point of discharge of the water as provided herein. Contractor is required to install and maintain all appropriate erosion and sedimentation controls to manage the development/discharge water.

Development must be performed for a minimum of 80 hours (two weeks). Contractor must continue development until discharge water is clear and free of fines, based on the judgment of the Engineer, Hydrogeologist and Owner. If the Contractor anticipates that additional time required to achieve this goal is greater than 80 hours, such additional time must be included in the lump sum costs of the bid package.

3.1.11 Step Testing

Upon completion of the well and all well development work, an eight- (8) hour step test shall be conducted in the presence of the Engineer. The well will be pumped at a minimum of five (5) different rates as selected by the Engineer for 100 minutes at each rate. The Contractor shall furnish all labor, material and equipment for the test. The test pump may be a submersible pump used in development of the well. The test pump shall be set with the intake at depth necessary to ensure a maximum pumping rate of 1,210 gpm for the step test (i.e. maintain no less than 1,200 gpm at the top step). All test pumping equipment shall be cleaned and disinfected prior to installing in new well.

Two, one and a quarter (1 ¼)-inch PE or poly stilling tubes will be installed for the testing. The stilling tubes must be free and clear for the installation of one pressure transducer with up to a 1.1-inch diameter, and one manual water level probe. Flow volumes are to be measured using a 4-inch orifice on a 6-inch pipe free discharging orifice monitored by pressure transducer.

The pump must have sufficient capacity and appropriate controls to deliver between 600 and 1,200 gpm at the head and drawdown conditions encountered. Actual step rates will be established after well development, but for the purposes of this specification, five (5) steps shall be conducted at approximately 600, 750, 900, 1050 and 1,200 gpm. Automatic water level recording equipment shall be provided in the production well and will record water level change for each step on a logarithmic scale. Manual water level and manual orifice measurements shall be collected and recorded at a ten-minute interval throughout the step test.

The Contractor shall furnish all necessary discharge piping for the pumping test, which shall be of sufficient size and length to conduct the water being pumped a sufficient distance away for the work site. At a minimum, 250 feet of temporary well discharge piping shall be provided and installed by the Contractor. Discharge from the test will be the responsibility of the Contractor. Contractor is required to install and maintain all appropriate erosion and sedimentation controls to manage the test discharge water. **The well head is also to be equipped with backflow prevention (check valve) to stop back-flow of water in the pump column and discharge hose to occur at the start of recovery.**

3.1.12 72-Hour Constant Rate Test

A 72-hour constant rate test for the purposes of a Bureau of Water System Engineering and Water Allocation permit is required. This test must continue until the pumping level stabilizes at a drawdown of less than 0.2 feet per hour for 6 hours. The test must be conducted in accordance with the New Jersey Geological and Water

Survey, Technical Memorandum 12-2, entitled “Hydrogeologic Testing and Reporting Procedures in Support of New Jersey Water Allocation Permit Applications”, dated 2012.

This test includes up to three (3) full days of background monitoring with the installation of automated pressure transducers (electronic dataloggers) to be installed in the new production well and the existing 4-inch on-site test/observation well. The electronic dataloggers utilized by the Contractor should be capable of measuring water level changes to the nearest 0.01 foot and should be synchronized to the same time. The dataloggers will be programmed to record on a 1-minute frequency at the pumping well, and if access is authorized and physically possible, dataloggers will be utilized at a 2-minute frequency at observations wells to be specified once access is established. Manual measurements will be performed immediately prior to the start of each test component and regularly throughout the aquifer test in order to both backup and confirm the electronic logged measurements. The free discharging orifice must also be set to record flow rates electronically as well as manually. Manual water level and manual orifice measurements shall be collected and recorded on a ten (10) minute interval throughout the first hour of the test, every 30 minutes for the next 5 hours of the test, then hourly until the end of the test. The manual checks of water levels for recovery shall follow this same time interval.

The aquifer recovery test shall start immediately after the end of the drawdown test. Readings at the production well shall be obtained in the same manner as at the start of the constant rate drawdown test. A minimum of 72 hours monitoring, and 90 percent recovery is required in the production well.

The Contractor shall furnish all necessary discharge piping for the pumping test, which shall be of sufficient size and length to conduct the water being pumped an adequate distance away from the work site. The well head is also to be equipped with backflow prevention (check valve) to stop the immediate back flow of water in the pump column and discharge hose to occur at the start of recovery. Flow metering shall be as described in the Step Testing section, above. **Contractor is required to furnish all materials and labor to connect to existing power at the site, which is located at the back of the treatment building/office.**

All water level data for the step test, background test, constant rate drawdown test, and recovery test shall be provided to the Owner and Engineer. All electronically recorded data shall be provided in ASCII format and provided on a cd or flash drive. Copies/records of all manual readings shall also be provided.

3.1.13 Water Quality Sampling

Contractor shall arrange for water sample collection at the end of the constant rate testing. The sample shall be analyzed by a NJ certified laboratory for new source sampling as per N.J.A.C. 7:10 (Safe Drinking Water Act Rules), et seq. and as set forth below. The Contractor must coordinate with EWMUA which will be present for the sampling and will collect split samples. **Contractor is responsible for all costs related to sample collection and analysis.**

3.1.14 Chemical Analysis

During the final hour of the constant rate pumping test, a chemical analysis shall be performed on the raw water from the new well by a laboratory certified by the NJDEP for the following parameters:

Secondary Standards

Physical Characteristics

Color (units)
pH (optimum range)
Odor (threshold number)
Taste
Coliform Bacteria
Turbidity (units)

Chemical Characteristics (ppm)

ABS/L.A.S.
Aluminum
Chlorides
Fluoride
Free Carbonic Acid (CO₂)
Carbonate Hardness
Non-Carbonate Hardness
Calcium Hardness
Total Hardness
Manganese
Iron
Silver
Sulfate (SO₄)
Sodium
Alkalinity - M.O.
Total dissolved solids
Zinc

Inorganic Contaminants

Contaminants (ppb)

Antimony
Arsenic
Asbestos, fibers/liter
Barium
Beryllium
Cadmium
Chromium (Hexavalent Cr+6)
Copper
Cyanide
Lead
Mercury
Nickel
Nitrate Nitrogen as NO₃
Nitrite (combined nitrate/nitrite)
Selenium
Thallium

Radiological

Contaminants (pCi/L)

Radon
Radium - 226
Radium - 228
Gross Alpha*
Uranium

* - Gross Alpha must be tested within 48 hours of collecting samples and shall be of the precipitation method (711-OC) or the evaporation method (900.0). All Gross Alpha samples must be collected in bottles acidified with hydrochloric acid.

Synthetic Organic Compounds

Contaminants (ppb)

Aalachlor
Aldicarb
Aldicarb Sulfone
Aldicarb Sulfoxide
Atrazine
Benzo[a]pyrene (PAHs)
Carbofuran
Chlordane
Dalapon
Dibromochloropropane (DBCP)
Di[ethylhexyl]adipate
Di[ethylhexyl]phthalate
Dinoseb
Diquat
Endothall
Endrin
Ethylene dibromide
Glyphosphate
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Lindane
Methoxychlor
Oxamyl (Vydate)
PCBs
Pentachlorophenol
Picloram
Simazine
Toxaphene
2,3,7,6-TCDD (Dioxin)
2,4-D
2,4,5-TP (Silvex)
**Perfluorooctanoic Acids (PFOAs
and PFAs)**

Volatile Organic Compounds (VOCs) (Complete VOC Scan)

Contaminants (ppb)

Benzene
Carbon Tetrachloride
meta-Dichlorobenzene
ortho-Dichlorobenzene
para-Dichlorobenzene
1,1-Dichloroethane
1,2, Dichloroethane
1,1-Dichloroethylene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
1,2-Dichloropropane
Dichloromethane
1,4-Dioxane
Ethylbenzene
Methyl-tertiary Butyl Ether
Methylene Chloride
Monochlorobenzene
Naphthalene
Petroleum Hydrocarbons
Styrene
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
Toluene
1,2,4-Trichlorobenzene
1,1,1,-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Vinyl Chloride
Xylenes (total)

and any other chemical substance currently regulated or monitored as required by the NJDEP Bureau of Water System Engineering for a new groundwater source.

3.1.15 Permanent Pump Installation and Variable Frequency Drive (VFD)

Permanent pump installation shall include setting of a 1,200 gpm vertical turbine pump to an estimated depth of 175 feet with completion of the discharge line to include a new air release valve, silent check valve and 10" gate valve to the existing well building that houses the original Well No. 6. A pump head and foundation (NSF 61 Certified) installation shall be included. The center line of the pump head discharge shall be aligned with the center line of the connection to the 90 degree elbow. A half inch (1/2") tap with brass nipple and ball valve to be installed after the check valve, to be used for pre lube line. Contractor to install 1/2" copper to lube line between pump and check valve. East Windsor MUA will supply and install control wiring and solenoid for Lube Line at a later date, The associated Pump and Flow Control equipment referenced in Section 2.2 of this specification will either be utilized using the existing controls in the existing Well 6 pump building, reconfigured to work with Well 6R, or added or replaced as required.

Overboard Pumping Piping

East Windsor MUA has overboard piping located in the filter building. No additional piping is required.

Electrical work

Trenching:

The bottom of the conduit trench should be undisturbed, tamped, or relatively smooth earth. Must meet NEC requirements. Conduit must be installed at a minimum of 24" below grade and no greater than 48". Conduit is not to penetrate any foundation wall.

Conduit:

All electrical conduit above/below grade shall be sized according to National Electric Code (NEC) standards. Metallic rigid pipe shall be utilized for all above grade and any riser pipe that penetrates from below to above grade. Non - metallic pipe may be utilized for below grade installation. Any underground non - metallic pipe shall have #8 THHN stranded tracer wire that is physical connected to conduit.

LB's and pull boxes shall be utilized above grade for easy access for pulling wire to eliminate any chaffing of wire and provide access for future maintenance. Metallic risers are required where conduit penetrates grade. These risers at a minimum must extend at least 6" below grade and extend to a minimum of 6" above the top of the well pump head foundation.

RISER MATERIAL:

Riser shall not be cut with a torch, welded or brazed. Underground risers shall be of Rigid Metallic (galvanized) or Intermediate Metallic Conduit (IMC) and listed or rated for their intended use. Only true round cross-section risers will be acceptable. (see Steel Conduit below)

RISER COUPLINGS:

No PVC riser couplings allowed above grade

RISER INSTALLATION:

Risers shall be securely fastened to wall by at least one strap and the service equipment enclosure. The strap shall be located between the riser entrance to the service equipment and finished grade, plus or minus 6". Riser straps are not required if riser is 18" or less in length from ground to equipment. The riser strap/straps shall be listed for the purpose for which it's intended.

METALLIC RISER COATING:

All risers must be wrapped with a 20 mil corrosion protection pipe wrap. Riser shall be wrapped the full length underground including connection and extend to a minimum of 8 " above grade. Wrap shall be ½ over lapped to give a total thickness protection of 40 mil. The tape shall be labeled to include the thickness (20 mil.) and the manufacturer's name. If riser is factory coated, it shall have a U.L. label.

Note: The coupler connecting the PVC conduit system to the metallic riser shall also be taped

STEEL CONDUIT:

All rigid or intermediate conduits and fittings shall be hot-dipped galvanized. Rigid or Intermediate steel conduit shall be installed with threaded couplings and joints made up tight.

MINIMUM BENDING RADIUS FOR SWEEPS IN A CONDUIT SYSTEM:

All 2" – 3" sweeps in a conduit system designed for 3Ø shall have a minimum of 24" radius, "unless otherwise specified." All 4" sweeps in a conduit system designed for 3Ø shall have a minimum of 36" radius. All non-metallic sweeps to be Schedule 40 minimum.

All conduit bends shall be long radius type.

Conduit Diameter Minimum Radius

| <u>Size</u> | <u>minimum radius of bend</u> |
|-------------|-------------------------------|
| 2" - 3" | 24" |
| 4" | 36" |

NON-METALLIC CONDUIT

WORKMANSHIP:

(PVC) Conduit shall be cut cleanly and square. All burrs and sharp edges which may damage conductors shall be removed before joining. PVC joints shall be primed before gluing. Gluing solvent shall be applied to both pieces to be joined. The conduit system shall be clean of internal obstructions and contaminants which may interfere with pulling of the conductors, the life of the conductors or conduit system. Installed conduit shall not be left uncapped.

INSTALLATION OF NON-METALLIC CONDUIT:

Installation preparation of non – metallic conduit shall be as follows:

- a) All conduit and fittings not chamfered by the manufacturer shall be chamfered in the field with a knife, reamer, half round file or abrasive open mesh cloth, to provide a smooth transition which will not cause scuffing of the cable when it is pulled through the conduit during installation.
- b) Wipe dirt and foreign material from conduit and fitting with a clean, dry cloth.
- c) All PVC electrical conduits shall meet NEC standards, be of the bell and spigot type with formed deep socket bell.

PVC TO PVC JOINTS:

Apply purple primer/cleaner ASTM F 656, to both the fitting socket and the conduit. Avoid puddling of the primer. Verify all surfaces to be joined are covered. This primer coat is important, as it helps to penetrate the hard, inner surfaces on most bell-end conduit and on fittings which are fabricated from conduit stock. Many of the extruded conduit stocks and some molded fittings have hard, inner surfaces, and are more difficult for the cement to penetrate without aid from the primer. Apply a coat of gray PVC to PVC cement ASTM D 2564, to both parts of the joint, and immediately push the joint together with a slight rotating motion (in one direction only). When the joint bottoms out, hold without motion for 15 seconds (1 minute in extreme cold weather), so that conduit does not push out of the fittings. Do not twist or drive conduit after insertion is complete.

NOTE: The requirement for the purple color on the primer and the gray color on the PVC cement is to aid in the inspection of finished work. Use of clear cement makes for poor inspection, performance and failure to use primer with any PVC system results in a joint that is almost guaranteed to fall.

materials are unacceptable. The riser shall be plumb with no kicks or bends other than one sweep at the bottom for transition to trench elevation and securely fastened to wall with 1/4" lag screws or equivalent. Any deviation from plumb may result in the entire installation being turned down

Grounding:

Install 4' grounding rod next to pump foundation and have it extended 4" – 6" above grade. Bare copper ground wire required to ground motor pecker head to ground rod. Bonding connection must meet NEC standards.

Ground wire must be utilized between new disconnect in existing well house and well pump pecker head

Disconnect:

Remove existing disconnect and install new. Disconnect must be a NEMA 4X rating. Disconnect must be rated for new well pump motor.

Contractor must evaluate the existing VFD and given the proposed pump size, motor, setting depth, TDH and existing and proposed connections, must confirm that the VFD and three AWG (4/0) wires (THHN) and ground wire will be able to continue to be utilized with the new pump. **If the existing VFD cannot be utilized, Contractor must furnish labor and equipment to replace the VFD (in kind) and connect to the new pump as required.**

Existing VFD is a ABB model ACQ550 NEMA 1 Drive package with bypass contactor. Rated at 480 volts, 150 H.P, and 180 amps. This VFD has a soft start in bypass. Output has a dv/dt filter

3.1.16 Disinfection

The contractor shall disinfect the well as per AWWA specification C654-03 (latest revision) Disinfection of Wells and in accordance with NJAC 7:10-11.6(d).

PART 4- DATA TO BE SUBMITTED

4.1 NEW PRODUCTION WELL

4.1.1 Technical Data Submission

At selected phases of work, and upon completion of the pumping test (all phases), the Contractor shall plot all data and furnish the Engineer with the following in the form of a technical data booklet:

1. A detailed copy of all well records and logs
2. Copies of all well drilling permits
3. Copies of the LAS files from the geophysical logging
4. Detailed drawing of the well design
5. Background reading, constant rate pumping and recovery tests data
6. Data of external influences measured during the test
7. Sieve analysis of water-bearing formation samples
8. Compact disk/flash drive in ASCII or MS Excel format of all automatically recorded data

4.1.2 As build drawings Submission

1. East Windsor MUA will require as-build drawings of the piping from the well to the existing connection.
2. East Windsor MUA will require as-build electrical drawings (schematics) of the replacement of the existing drive and control wiring.

PART 5- SEALING OF EXISTING WELL

5.1 EXISTING WELL

5.1.1 Sealing of Existing Well

At the completion of all work, and as directed by the Engineer and Owner, the existing R-L socket production well (16" casing from approx. grade to 519', and 10" screen and casing from a depth of 367' to 565') shall be abandoned and sealed according to N.J.A.C. 7:20-3.1 et seq. The Contractor shall prepare and submit a well abandonment plan to the NJDEP Bureau of Water Allocation Permitting for approval to abandon the well in accordance with NJDEP requirements. Upon completion of the well abandonment, the Contractor shall provide a copy of the well abandonment report to the Owner and Engineer.

PART 6- NOTIFICATIONS

6.1 NOTIFICATIONS

The Contractor shall notify the Owner and Engineer of its actions or occurrences according to the following timing schedule:

| <u>Action/Occurrence</u> | <u>Notification Timing</u> |
|---|----------------------------|
| 1. Start of Drilling | 72 Hours Prior |
| 2. Completion of Drilling | Immediately |
| 3. Geophysical logging | 48 Hours Prior |
| 4. Completion of Sieve Analysis | Immediately |
| 5. Setting of Well Screen | 24 Hours Prior |
| 6. Start of Step-Drawdown Test | 96 Hours Prior |
| 7. Start of Background Test | 24 Hours Prior |
| 8. Start of Pumping Test | 24 Hours Prior |
| 9. Completion or Interruption of Pumping Test | Immediately |

TECHNICAL DATA
EAST WINDSOR MUNICIPAL
UTILITIES AUTHORITY

WELL NO. 6

JOB NO. 8252

TWIN RIVERS, N.J.

JANUARY 1971

exhibit H

TECHNICAL DATA
EAST WINDSOR MUNICIPAL UTILITIES AUTHORITY
CONSTRUCTION OF 16" x 8" DIA. WELL

WELL NO. 6

JOB NO. 8252

TWIN RIVERS, N.J.

JANUARY 1971

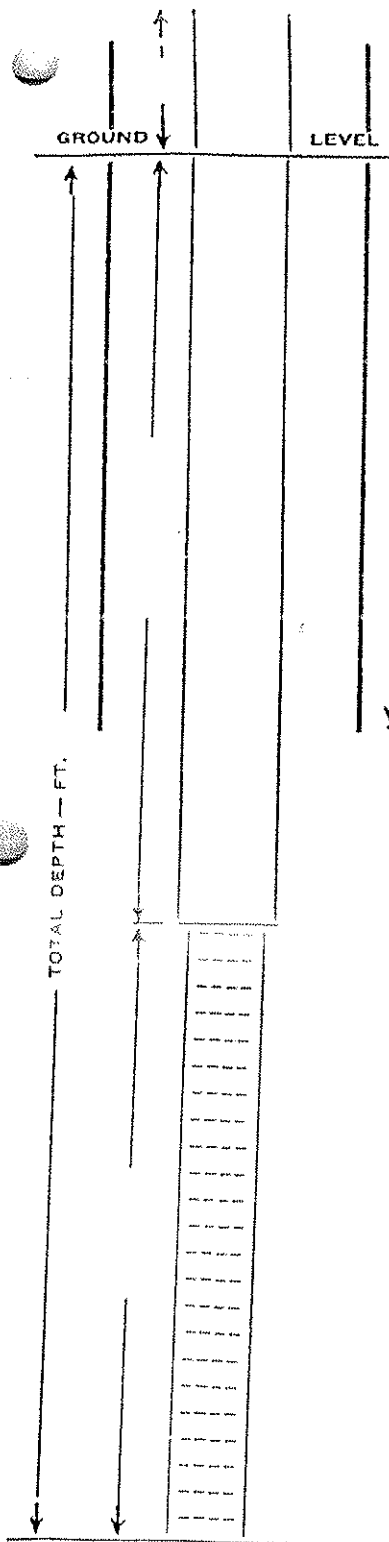
CONSTRUCTED BY
A. C. SCHULTES & SONS, INC.
WOODBURY, NEW JERSEY
609-845-5656

CONTENTS

1. Driller's Log
2. Well Drawing
3. Pumping Test
4. Recovery Readings
5. Water Level Reading
6. Water Analysis
7. Sand Analysis
8. Electric Log

A.C. SCHULTES & SONS, INC.

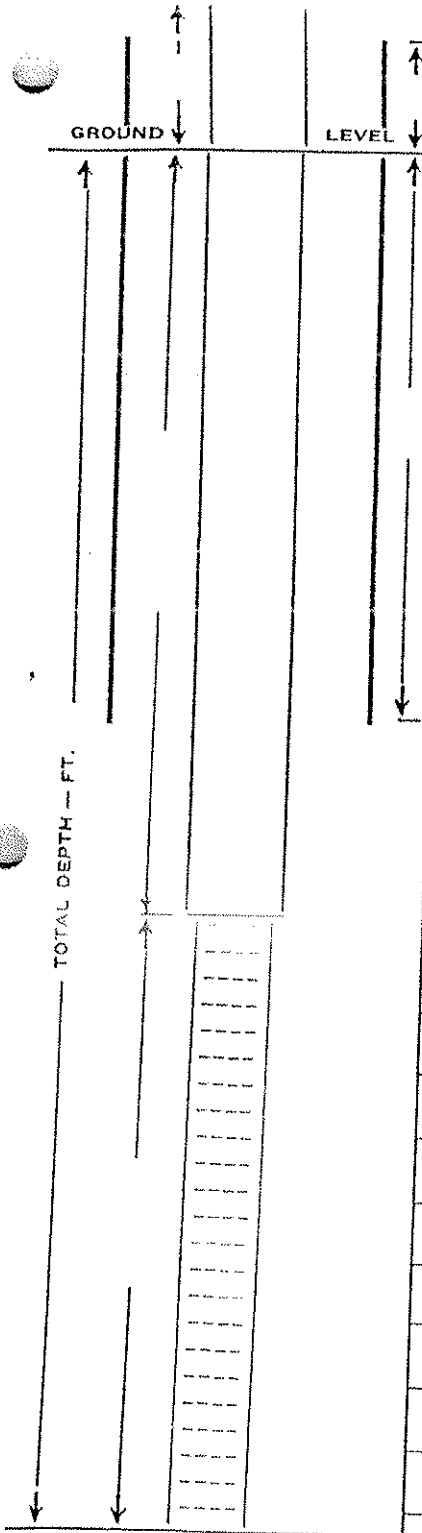
GRAVEL PACKED WELL



| WELL LOG | FEET FROM GROUND SURFACE | NAME OF OWNER |
|----------------------------|--------------------------|--|
| | 0 TO _____ | East Windsor Municipal Utilities Authority |
| Brown clay | 0-5 | Location Twin Rivers |
| Dk. brown sandish clay | 5-29 | Well No. 6 |
| Hard grey clay | 29-65 | Job No. 8252 |
| Black marl | 65-101 | Test Pumped (Hrs.) 26 |
| Clay | 101-128 | Capacity G.P.M. 1209 |
| Marl | 128-130 | Static Level (Rotary Table) 70 |
| Clay | 130-157 | Pumping Level (Rotary Table) 135 |
| Hard packed sand-clay | 157-164 | Specific Capacity 18.22 |
| Clay | 164-169 | Diameter of Outer Casing 16" |
| Sand - Layers of hard pan | 169-197 | Diameter of Inner Casing 8" |
| Marl, sand, hard pan | 197-209 | Depth of Well (Rotary Table) 568 |
| Hard packed sand | 209-218 | Depth to R.L. Nipple (Rotary Table) 370 |
| Soft clay | 218-238 | Gravel Ground Size #3 373 |
| Hard clay- Streaks of sand | 238-250 | Length of Outer Casing 519' 9" 16" |
| Hard packed sand | 250-254 | Length of Inner Casing and Screen 198 |
| Marl | 254-262 | Underream Size 32" |
| Clay | 262-277 | Screen Material SS |
| Sand | 277-327 | Screen Mfg. Johnson |
| Clay | 327-343 | Size of Screen (Dia.) <input type="checkbox"/> Telescore <input checked="" type="checkbox"/> Pipe Size |
| Hard pan | 343-344 | Length of Screen 40 |
| Clay | 344-348 | Top Screen Fitting T.C. to pipe |
| Hard pan | 348-349 | Bottom Screen Fitting cellar-plug |
| Sandish clay | 349-375 | Slot Size .060 |
| Sand laminated | 375-379 | Bags of Cement 500 |
| Hard pan | 379-380 | Drilling Machine 36-L |
| Sand-gravel | 380-394 | Date Well Completed 1-6-71 |
| Clay | 394-398 | Driller Wm. Sergonne |

A.C. SCHULTES & SONS, INC.

GRAVEL PACKED WELL

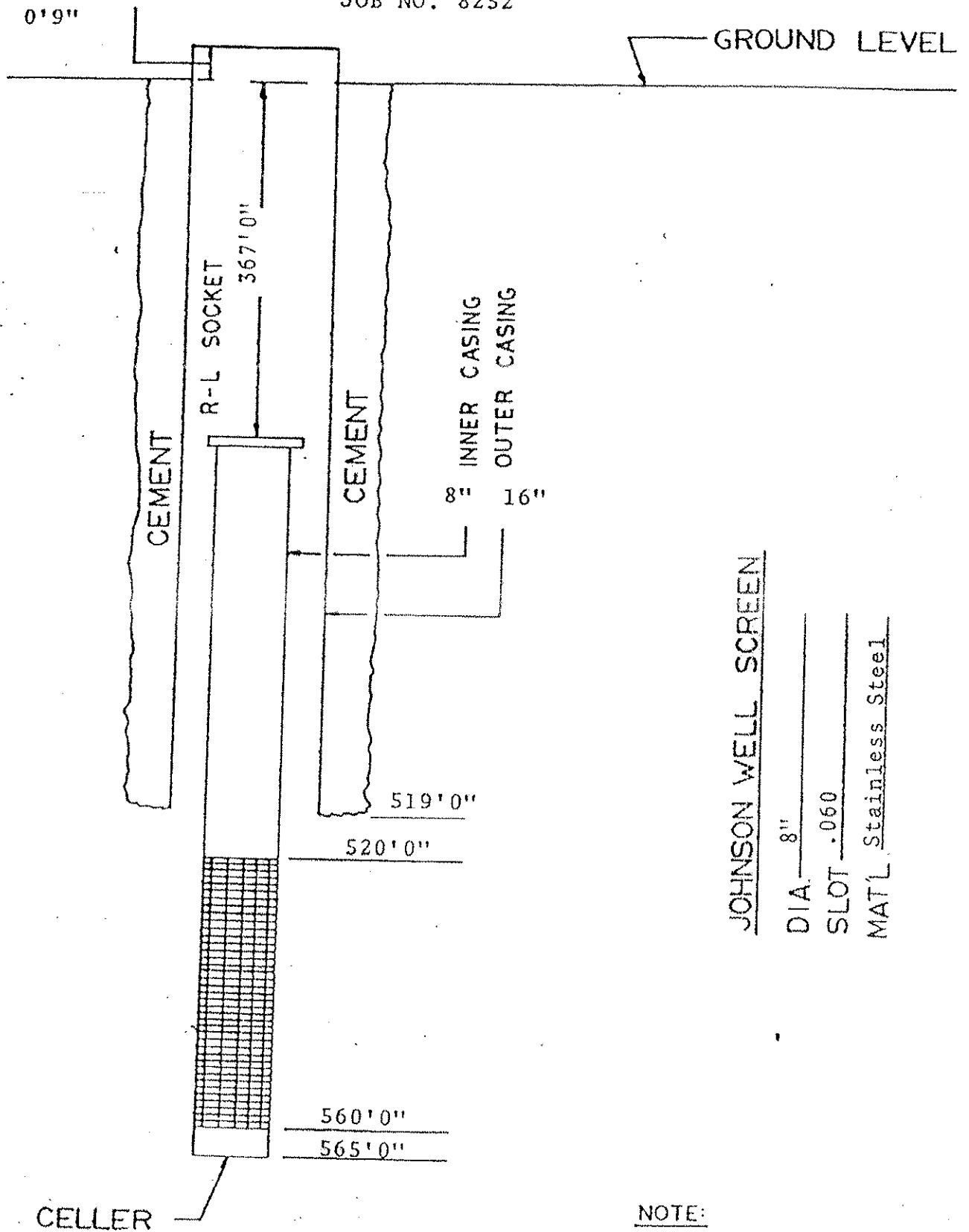


| WELL LOG | FEET FROM GROUND SURFACE | NAME OF OWNER |
|---------------------|--------------------------|---|
| | 0 TO _____ | East Windsor Municipal Utilities Authority |
| Sand-Layers of clay | 398-407 | Location Twin Rivers |
| Silty Sand | 407-427 | Well No. 6 |
| Sandish clay | 427-477 | Job No. 8252 |
| Fine sand | 477-486 | Test Pumped (Hrs.) |
| Coarse sand | 486-560 | Capacity G.P.M. |
| Sand | 560-568 | Static Level (Rotary Table) |
| Clay | 568-597 | Pumping Level (Rotary Table) |
| | | Specific Capacity |
| | | Diameter of Outer Casing |
| | | Diameter of Inner Casing |
| | | Depth of Well (Rotary Table) |
| | | Depth to R.L. Nipple (Rotary Table) |
| | | Gravel Size |
| | | Length of Outer Casing |
| | | Length of Inner Casing and Screen |
| | | Underream Size |
| | | Screen Material |
| | | Screen Mfg. |
| | | Size of Screen (Dia.) <input type="checkbox"/> Telescope <input type="checkbox"/> Pipe Size |
| | | Length of Screen |
| | | Top Screen Fitting |
| | | Bottom Screen Fitting |
| | | Slot Size |
| | | Bags of Cement |
| | | Drilling Machine |
| | | Date Well Completed |
| | | Driller Wm. Sergonne |

*Rotary Table approx. 3' above original ground level

EAST WINDSOR MUNICIPAL UTILITIES AUTHORITY
Twin Rivers, N.J.
PRODUCTION WELL NO. 6

JOB NO. 8252



JOHNSON WELL SCREEN

DIA. 8"
SLOT .060
MAT'L Stainless Steel

NOTE:

ALL DIMENSIONS ARE
FROM GROUND LEVEL

A.C. SCHULTES & SONS, INC.

PUMPING TEST DATA

CUSTOMER East Windsor Mun. Utilities Authority JOB. NO. 8252

LOCATION OF WELL Twin Rivers, N. J.

WELL NO. 6 DIAMETER 16" x 8" DEPTH 568'

STATIC WATER LEVEL 70' DATUM _____

CAPACITY MEASURED BY 8 x 6 orifice

DATE TEST STARTED January 5, 1971 DURATION OF TEST 24 hrs.

| TIME | CAPACITY | DISCHARGE PRESSURE | PUMPING LEVEL | DRAW DOWN | SPECIFIC CAPACITY GAL/FT. | WATER LEVELS & REMARKS | | |
|-------|----------|--------------------|---------------|-----------|---------------------------|------------------------|--|--|
| | | | | | | | | |
| 12:00 | 1209 | | S.H. 70' | | | | | |
| 12:02 | 1209 | | 125'5" | | | | | |
| 12:04 | 1209 | | 125'0" | | | | | |
| 12:06 | 1209 | | 126'2" | | | | | |
| 12:08 | 1209 | | 126'5" | | | | | |
| 12:10 | 1209 | | 126'7" | | | | | |
| 12:12 | 1209 | | 126'9" | | | | | |
| 12:13 | 1209 | | 126'9" | | | | | |
| 12:14 | 1209 | | 126'10" | | | | | |
| 12:15 | 1209 | | 126'11" | | | | | |
| 12:16 | 1209 | | 127'0" | | | | | |
| 12:17 | 1209 | | 127'1" | | | | | |
| 12:18 | 1209 | | 127'2" | | | | | |
| 12:19 | 1209 | | 127'2" | | | | | |
| 12:20 | 1209 | | 127'3" | | | | | |
| 12:24 | 1209 | | 127'5" | | | | | |
| 12:25 | 1209 | | 127'7½" | | | | | |
| 12:30 | 1209 | | 128'0" | 58'0" | 21.20 | | | |
| 12:35 | 1209 | | 128'1" | | | | | |
| 12:40 | 1209 | | 128'3" | | | | | |
| 12:45 | 1209 | | 128'5" | | | | | |

PUMPING TEST DATA

| TIME | CAPACITY | DISCHARGE PRESSURE | PUMPING LEVEL | DRAW DOWN | SPECIFIC CAPACITY GAL/FT. | WATER LEVELS & REMARKS | | |
|-------|----------|--------------------|---------------|-----------|---------------------------|------------------------|--|--|
| | | | | | | | | |
| 12:50 | 1209 | | 128'7½" | | | | | |
| 12:55 | 1209 | | 128'9" | | | | | |
| 1:00 | 1209 | | 128'11" | | | | | |
| 1:10 | 1209 | | 129'1" | | | | | |
| 1:20 | 1209 | | 129'3" | 59'3" | | | | |
| 1:30 | 1209 | | 129'5" | | | | | |
| 1:40 | 1209 | | 129'8" | | | | | |
| 1:50 | 109 | | 129'10" | | | | | |
| 2:00 | 1209 | | 130'0" | | | | | |
| 2:10 | 1209 | | 130'0" | | | | | |
| 2:20 | 1209 | | 130'0" | | | | | |
| 2:30 | 1209 | | 130'1" | | | | | |
| 2:45 | 1209 | | 130'3" | 60'3" | | | | |
| 3:00 | 1209 | | 130'5" | | | | | |
| 3:15 | 1209 | | 130'6½" | | | | | |
| 3:30 | 1209 | | 130'7½" | | | | | |
| 3:45 | 1209 | | 130'9" | | | | | |
| 4:00 | 1209 | | 130'11" | | | | | |
| 4:15 | 1209 | | 130'11" | | | | | |
| 4:30 | 1209 | | 131'2" | | | | | |
| 4:45 | 1209 | | 131'3" | | | | | |
| 5:00 | 1209 | | 131'3" | 61'3" | | | | |
| 5:15 | 1209 | | 131'4" | | | | | |
| 5:30 | 1200 | | 131'5" | 61'5" | | | | |
| 5:45 | 1200 | | 131'5½" | | | | | |
| 6:00 | 1200 | | 131'6" | | | | | |
| 6:15 | 1200 | | 131'7½" | | | | | |
| 6:30 | 1200 | | 131'8" | | | | | |

A.C. SCHULTES & SONS, INC.

East Windsor
Well No. 6
Sheet # 3
JOB. NO. 8252

PUMPING TEST DATA

| TIME | CAPACITY | DISCHARGE PRESSURE | PUMPING LEVEL | DRAW DOWN | SPECIFIC CAPACITY GAL/FT. | WATER LEVELS & REMARKS | | |
|-------|----------|--------------------|---------------|-----------|---------------------------|------------------------|--|--|
| | | | | | | | | |
| 6:45 | 1200 | | 131'9" | | | | | |
| 7:00 | 1200 | | 131'10" | | | | | |
| 7:15 | 1200 | | 131'10½" | | | | | |
| 7:30 | 1200 | | 132'0" | 62'0" | 19.5 | | | |
| 7:45 | 1200 | | 132'2" | | | | | |
| 8:00 | 1200 | | 132'2½" | | | | | |
| 8:15 | 1200 | | 132'3½" | | | | | |
| 8:30 | 1200 | | 132'5" | | | | | |
| 8:45 | 1200 | | 132'7" | | | | | |
| 9:00 | 1200 | | 132'8" | | | | | |
| 9:15 | 1200 | | 132'9" | | | | | |
| 9:30 | 1200 | | 132'10½" | | | | | |
| 9:45 | 1200 | | 132'11" | | | | | |
| 10:00 | 1200 | | 133'2"1 | 63'2" | | | | |
| 10:15 | 1200 | | 133'2½" | | | | | |
| 10:30 | 1200 | | 133'3½" | | | | | |
| 10:45 | 1200 | | 133'5" | | | | | |
| 11:00 | 1200 | | 133'3¼" | 63'3½" | | | | |
| 11:15 | 1200 | | 133'3½" | | | | | |
| 11:30 | 1200 | | 133'3½" | | | | | |
| 11:45 | 1200 | | 133'3½" | | | | | |
| 12:00 | 1200 | | 133'3½" | | | | | |
| 12:15 | 1200 | | 133'4" | | | | | |
| 12:30 | 1200 | | 133'5" | 63'5" | | | | |
| 1:00 | 1200 | | 133'7" | | | | | |
| 1:30 | 1200 | | 133'7" | | | | | |
| 2:00 | 1200 | | 133'7" | | | | | |
| 2:30 | 1200 | | 133'8½" | | | | | |

A.C. SCHULTES & SONS, INC.

WATER LEVEL READING

CUSTOMER East Windsor Municipal Utilities Authority JOB NO. 8252

LOCATION Twin River, N.J.

WELL NO. 5 (Obs. Well)

DATE January 5, 1971 DURATION OF TEST 24 hours

| TIME | WATER LEVEL | TIME | WATER LEVEL | TIME | WATER LEVEL | TIME | WATER LEVEL |
|-------|-------------|------------|-------------|-------|-------------|--------|-------------|
| 12:30 | 70' 3" | (Noon) | | 10:30 | 75' 6" | | |
| 1:30 | 71' 1" | | | 11:30 | 75' 6" | | |
| 2:30 | 71' 10" | | | 12:30 | 75' 6" | (Noon) | |
| 3:30 | 72' 4" | | | 1:30 | 75' 7" | | |
| 4:30 | 72' 9" | | | 2:00 | 75' 9-1/2" | | |
| 5:30 | 73' 2" | | | | | | |
| 6:30 | 73' 5" | | | | | | |
| 7:30 | 73' 8" | | | | | | |
| 8:30 | 73' 10" | | | | | | |
| 9:30 | 74' 1" | | | | | | |
| 10:30 | 74' 3" | | | | | | |
| 11:30 | 74' 4" | | | | | | |
| 12:30 | 74' 5" | (Midnight) | | | | | |
| 1:30 | 74' 5" | | | | | | |
| 2:30 | 74' 7" | | | | | | |
| 3:30 | 74' 10" | | | | | | |
| 4:30 | 74' 11" | | | | | | |
| 5:30 | 75' 1" | | | | | | |
| 6:30 | 75' 2" | | | | | | |
| 7:30 | 75' 3" | | | | | | |
| 8:30 | 75' 4" | | | | | | |
| 9:30 | 75' 6" | | | | | | |

water analyses

Booth, Garrett & Blair, Inc.

180 SOUTH MAIN ST., P.O. Box 58

AMBLER, PENNA. 19002

(215) 646-8320

January 8, 1971

Penna. State Approved Lab. No. 1-26



A. C. Schultes & Sons, Inc.
664 South Evergreen Avenue
Woodbury, New Jersey

PLEASE MARKED —

SAMPLE RECEIVED — January 6, 1971

East Winsor 6 January 1971
Job #8252 Well #6
Twin Rivers 2:30
Point of Sample: Orifice

| | | REMARKS |
|---|------|---------|
| Solids on evaporation, PPM | 34. | |
| Non-carbonate Hardness, PPM | 5. | |
| Carbonate Hardness, PPM | 7. | |
| Total Hardness, PPM | 12. | |
| Calcium Hardness, PPM | 8. | |
| Iron (Chloride), PPM | 7. | |
| Iron — M.O., PPM | 5. | |
| Carbonic Acid (CO ₂), PPM | 31. | |
| Chloride, PPM | 1.00 | |
| Manganese, PPM | 0.01 | |
| Total Nitrogen as N, PPM | | |
| Total Nitrogen as NO ₃ , PPM | 1.14 | |
| Sulfate (SO ₄), PPM | 7. | |
| Hardness (L.A.S.), PPM | | |
| Alkalinity, (Units) | 2. | |
| | 5.4 | |
| Calcium, (Units) | | |
| Iron (Threshold Number) | | |
| Iron, PPM | | |
| Iron, PPM | | |

Yours respectfully,

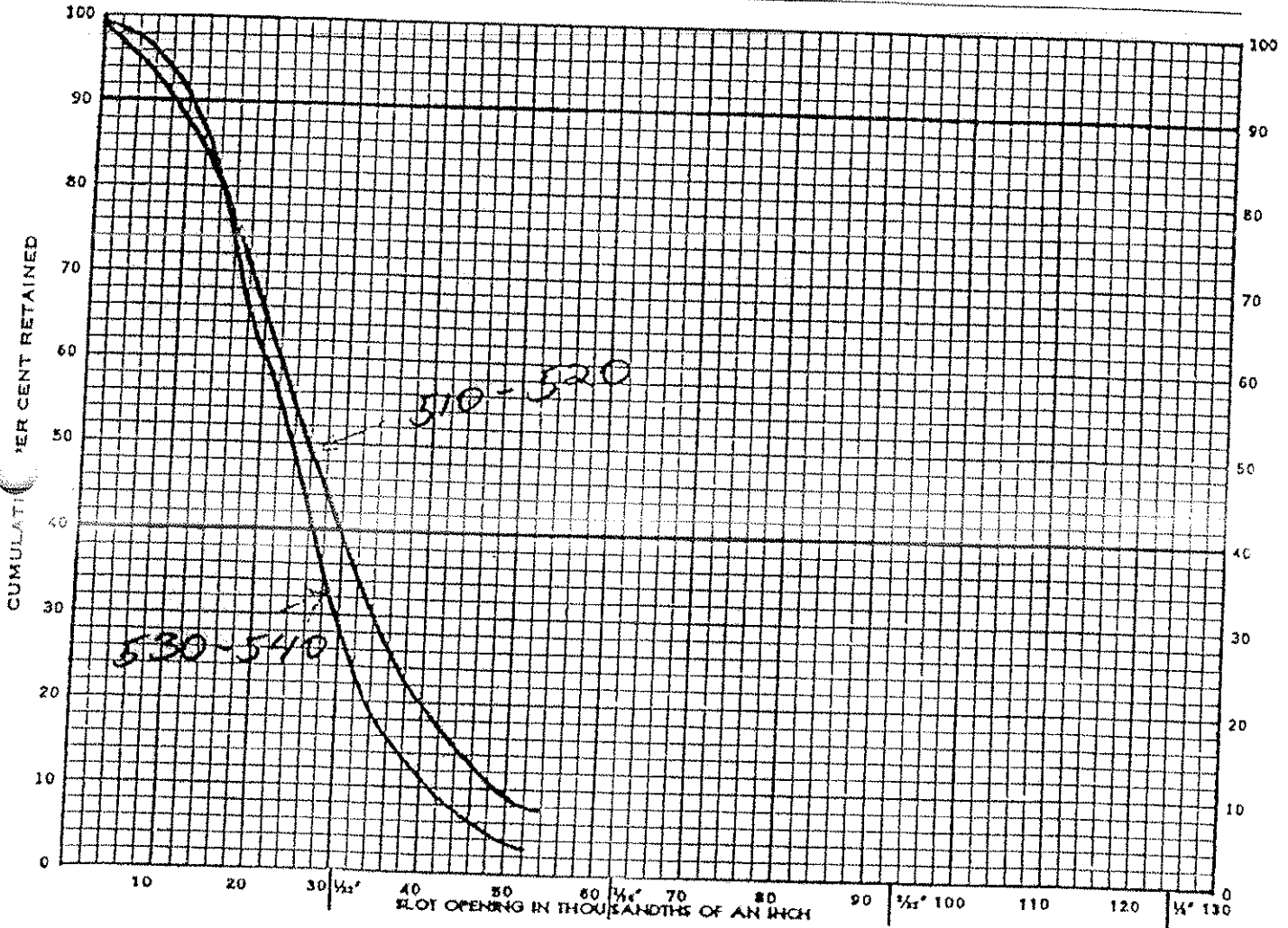
BOOTH, GARRETT & BLAIR, INC.

TEST RESULTS
ON
HYDROGEN SULFIDE
AND
CARBON DIOXIDE

Hydrogen Sulfide - P.P.M. 0.0
Carbon Dioxide - P.P.M. - 60.0

SAND ANALYSIS
A. C. SCHULTES & SONS, INC.
 WOODBURY, NEW JERSEY

Sample sent in by _____
 Town Twin River State N. J. Date 11/17/70
 From well of East Windsor Well No. 6
 Remarks Ditch Sample 530-540
510-520



| SIEVE OPENINGS | CUMULATIVE PER CENT RETAINED | |
|----------------|------------------------------|---------|
| | 530-540 | 510-520 |
| .131 | | |
| .093 | | |
| .065 | | |
| .046 | 7 | 14 |
| .033 | 23 | |
| .023 | 54 | 32 |
| .016 | 74 | 55 |
| .012 | 86 | 76 |
| .008 | 92 | 88 |
| .006 | 95 | 95 |
| SCREEN | 100 | 91 |
| SLOT | 100 | 100 |

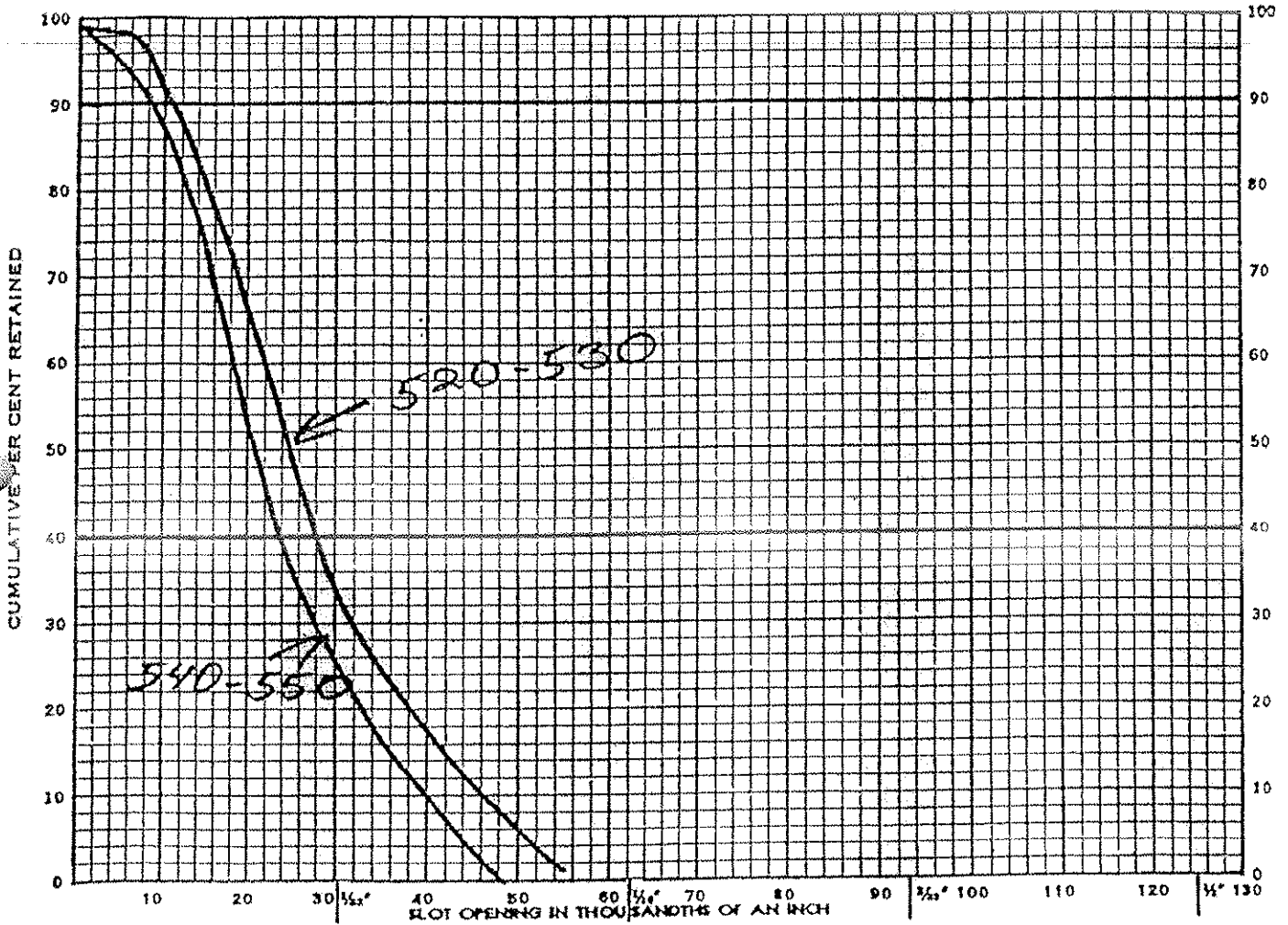
NOTES: _____

 SLOT OPENING RECOMMENDED: _____
 RECOMMENDED SCREEN: DIA. _____ IN. LENGTH _____ FT.
 BY: _____

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS

SAND ANALYSIS
A. C. SCHULTES & SONS, INC.
 WOODBURY, NEW JERSEY

Sample sent in by _____
 Town Twin Rivers State N. J. Date 11/17/70
 From well of East Windsor Well No. 6
 Remarks Ditch Sample 520-530
Ditch Sample 540-550



| SIEVE OPENINGS | CUMULATIVE PER CENT RETAINED | |
|----------------|------------------------------|---------|
| | 520-530 | 540-550 |
| .151 | | |
| .093 | | |
| .065 | | |
| .046 | 12 | 4 |
| .033 | 30 | 32 |
| .023 | 56 | 44 |
| .016 | 76 | 70 |
| .012 | 87 | 84 |
| .008 | 92 | 91 |
| .006 | 96 | 94 |
| SCREEN SLOT | 100 | 100 |

NOTES: _____

 SLOT OPENING RECOMMENDED: _____

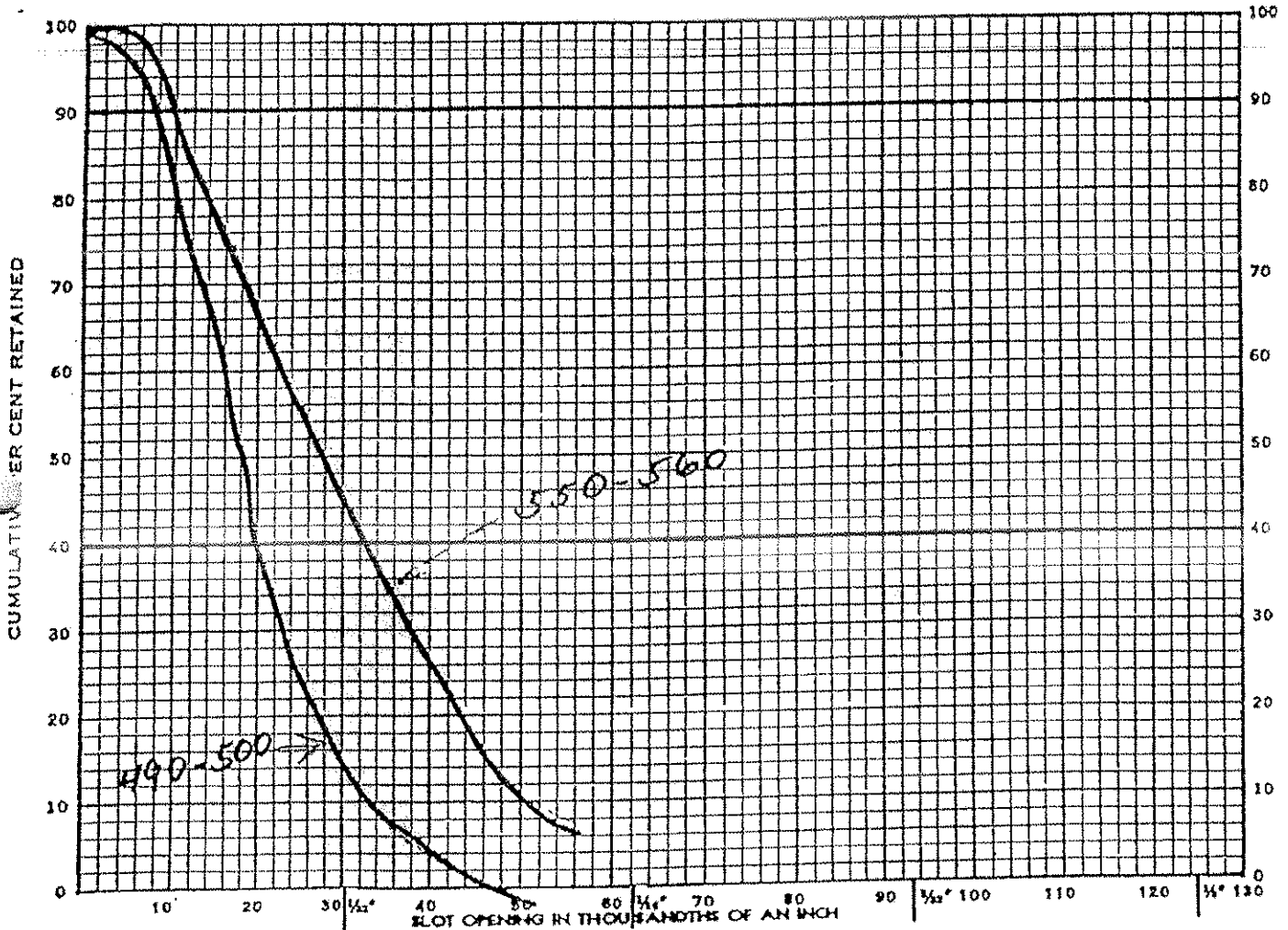
 RECOMMENDED SCREEN: DIA. _____ IN. LENGTH _____ FT.

 BY: _____

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS

SAND ANALYSIS
A. C. SCHULTES & SONS, INC.
 WOODBURY, NEW JERSEY

Sample sent in by _____
 Town Twin Rivers State N. J. Date 11/17/70
 From well of East Windsor Well No. 6
 Remarks Ditch Sample 550-560
490-500



| SIEVE OPENINGS | CUMULATIVE PER CENT RETAINED | |
|----------------|------------------------------|---------|
| | 550-560 | 490-500 |
| .131 | | |
| .093 | | |
| .065 | 1 | |
| .046 | 40 15 | 10 2 |
| .033 | | |
| .023 | 59 | 52 |
| .016 | 76 | 62 |
| .012 | 85 | 79 |
| .008 | 95 | 87 |
| .006 | 99 | 94 |
| SCREEN SLOT | 100 | 100 |

NOTES: _____

 SLOT OPENING RECOMMENDED: _____

 RECOMMENDED SCREEN: DIA. _____ IN. LENGTH _____ FT.

 BY: _____

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS

ELECTRIC

A. C. SCHULTES & SONS INC.

Water Well Contractors
Woodbury, New Jersey

LOG

COMPANY East Windsor Municipal Utilities Authority

WELL NO. P. W. # 6

COUNTY Mercer

STATE New Jersey

RECORDED BY James E. Schultes

DATE Nov. 17, 1970

WITNESSED BY

DATE

TYPE OF LOG Electric

DATE 11/17/70

FOOTAGE 596.0"

TOTAL DEPTH 597.0"

I. D. DRILLER 12"

LOG MEAS. FROM Rotary Table

DRILLING MEAS. FROM Rotary Table

PERMANENT DATUM ground level

WEIGHT

VISCOSITY

pH

RESISTIVITY

POTENTIAL

ELECTRODE SPACING

SYMMETRICAL

NON-SYMMETRICAL

FLUID LEVEL

LGTH. MEAS. DEVICE-IN

O. D. OF INSTRUMENT-IN

TIME CONSTANT-SECONDS

LOGGING SP. - FT/MIN.

STATISTICAL VAR.-IN.

SENSITIVITY REF.

WELL RECORD

WELL SIZE

DEPTH

BOT. OF OUTER CASING

TOP OF SCREEN

BOT. OF SCREEN

SIZE OF SCREEN

SLOT SIZE

MATERIAL

GRAVEL SIZE

DEPTH TO R-L NIPPLE

PUMPING TEST

DATE

CAPACITY

STATIC LEVEL

DRAWDOWN

PUMPING LEVEL

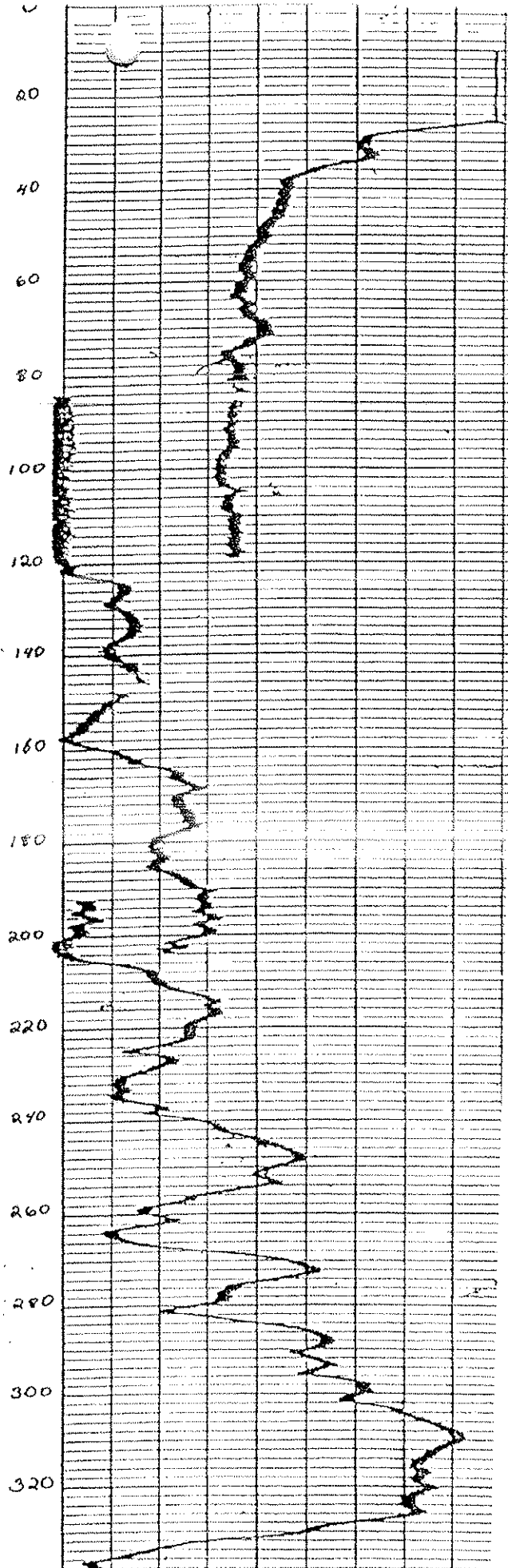
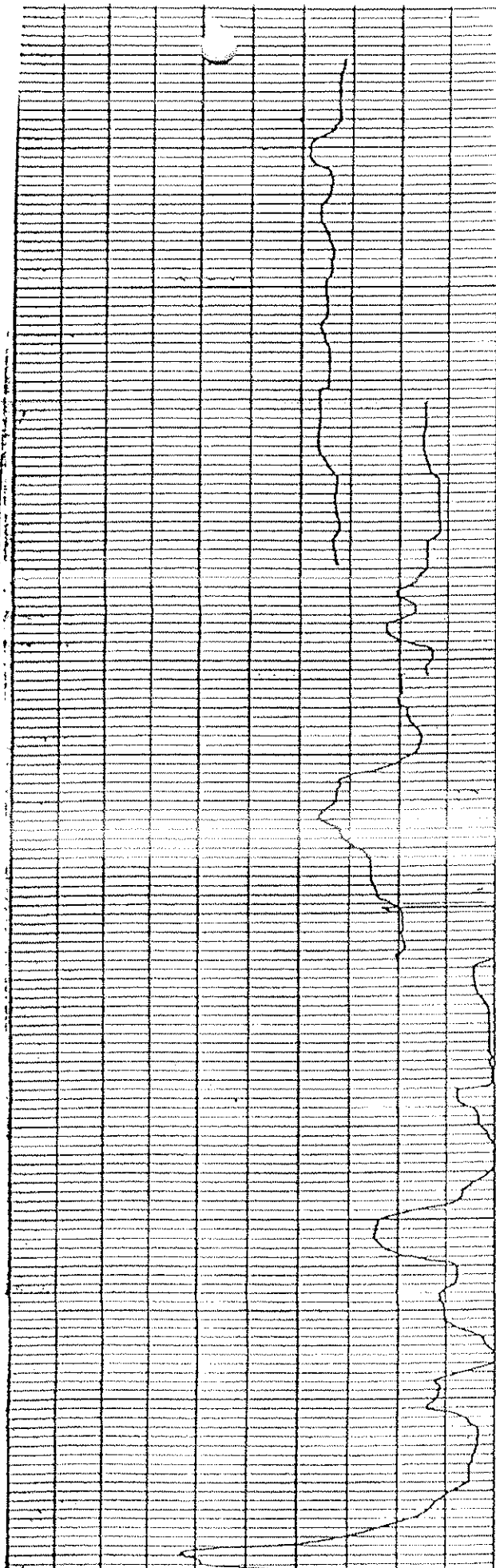
SP. CAPACITY

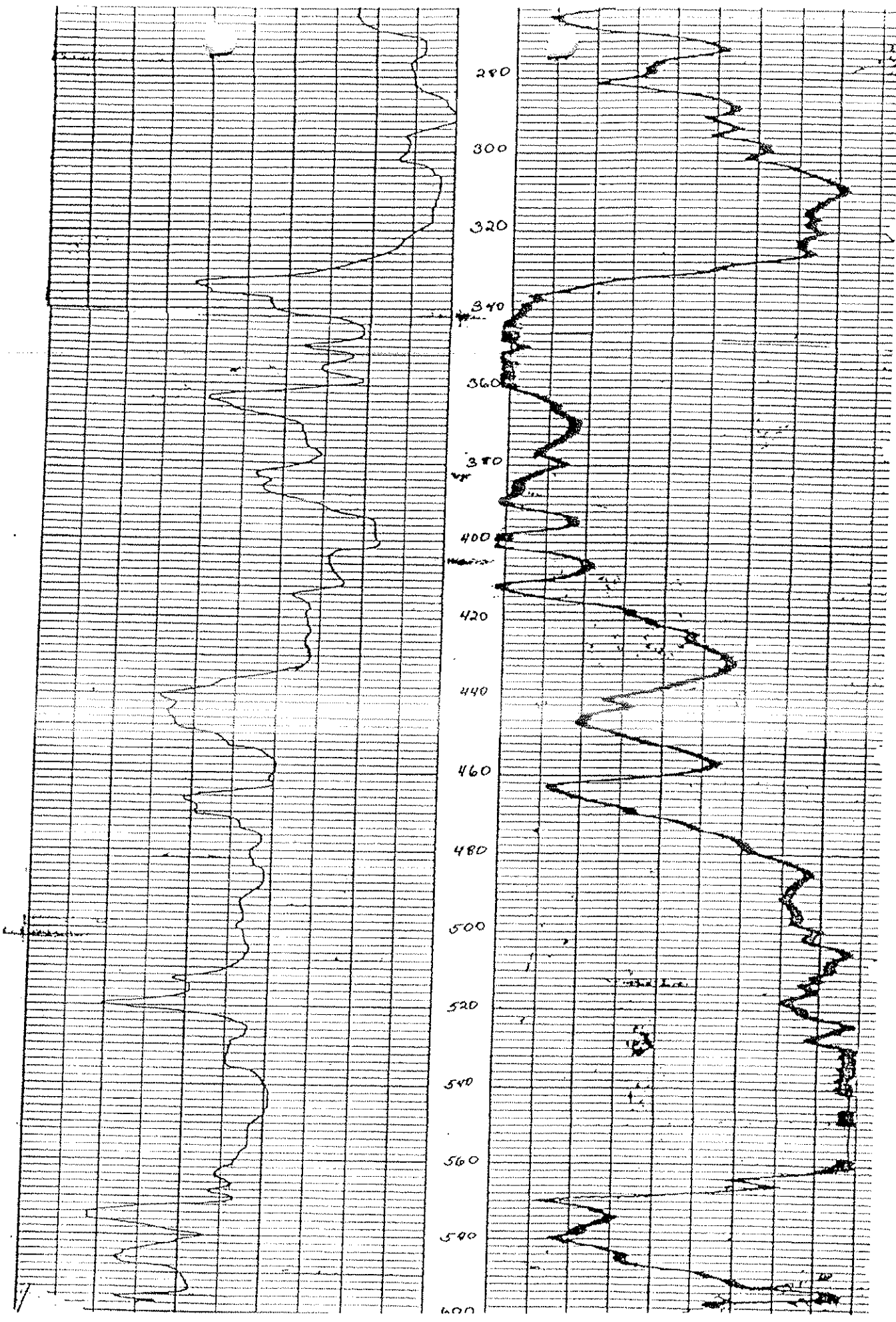
REMARKS OR OTHER DATA

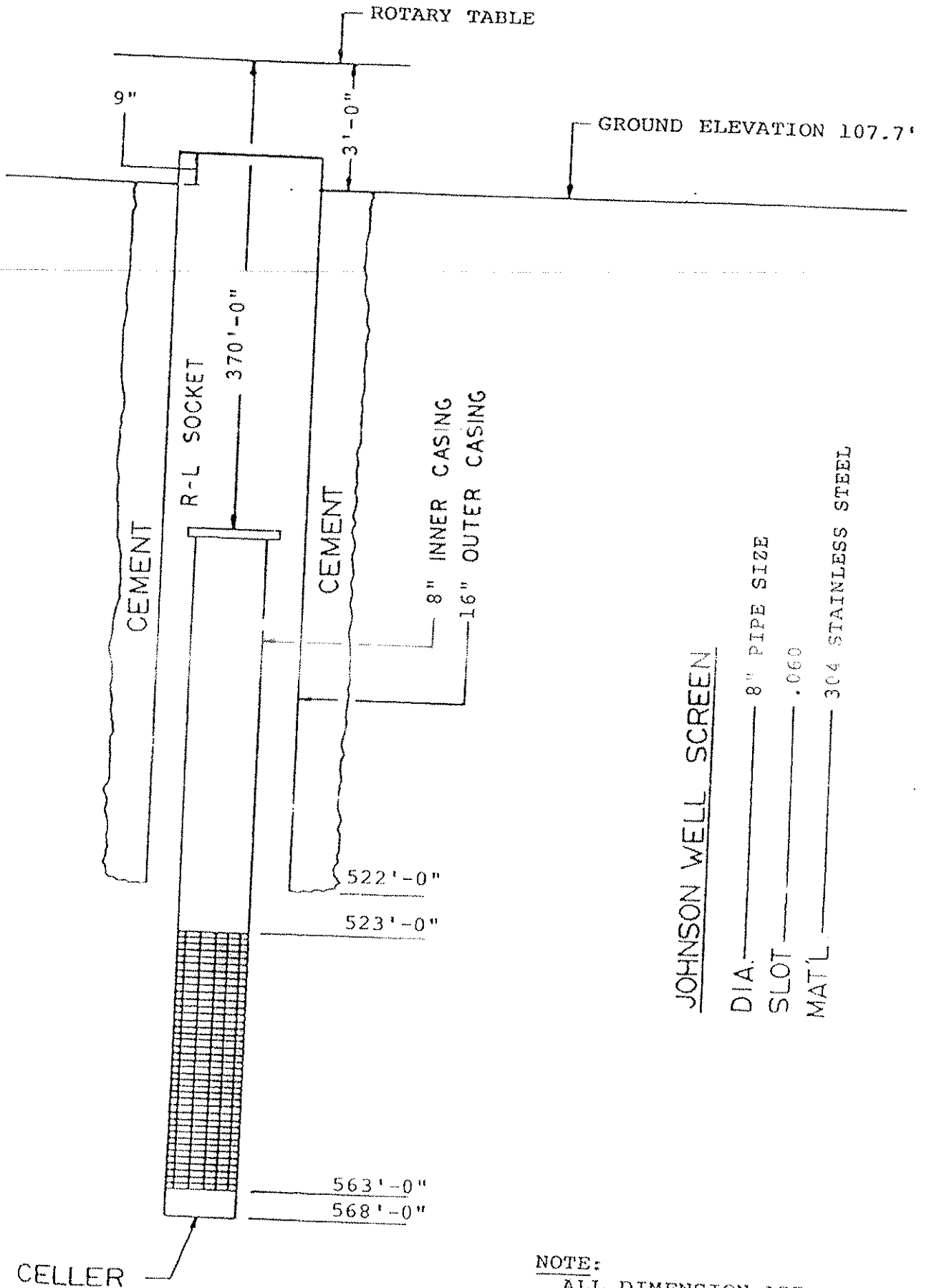
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JOHNSON WELL SCREEN

DIA. _____ 8" PIPE SIZE
 SLOT _____ .060
 MAT'L _____ 304 STAINLESS STEEL

NOTE:
 ALL DIMENSION ARE
 FROM ROTARY TABLE

Well #6 Twin Ri co, N.J.

Well #6 Twin Ri co, N.J.
Continued 1937

28411000
3.6

90514 9374

123

126

129

132

135

138

78 41 wrap resp

