

**SPECIFICATIONS, PROPOSAL AND
CONTRACT DOCUMENTS
FOR**

***MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY
PARTROY TRANSFER STATION
NORTH TIPPING FLOOR RESTORATION***

**MORRIS COUNTY, NEW JERSEY
BID NO. 2025-SW06**

OCTOBER 2025

 **10/15/25**
DATE:

Richard A. Alaimo, P.E.
N.J. Professional Engineer
License No. 13195

**RICHARD A. ALAIMO ASSOCIATES
CONSULTING ENGINEERS
201 WILLOWBROOK BLVD., SUITE 501, WAYNE, NEW JERSEY 07470
(973) 523-6200
OUR FILE NO. A-1340-0024-000 (S3081)**

MORRIS COUNTY MUA

Form of Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we, Persistent Construction, Inc.
, Hereinafter called the Principal, as Principal, and the Endurance Assurance
Corporation of 12890 Lebanon Road, Mount Juliet, TN 37122 a corporation duly organized
under the laws of the State of Delaware, hereinafter called the Surety, as Surety are held and
firmly bound unto Morris County Municipal Utilities Authority hereinafter called the Obligee, in the
sum of Ten Percent of the Amount Bid Dollars, (\$ 10% Not to
Not to Exceed Twenty Thousand Exceed \$20,000) for the payment of
which sum, well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs,
executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, The Principal has submitted a bid for
Par/Troy Transfer Station - North Tipping Floor Restoration - Bid No, 2025-SW06

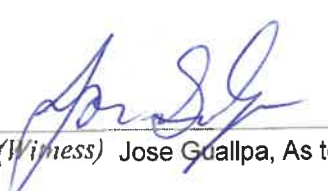
NOW, THEREFORE, if the Obligee shall accept the Bid of the Principal and the Principal shall enter into a Contract
with the Obligee in accordance with the terms of such bid and give bond or bonds as may be specified in the Bid
Documents with good and sufficient surety for the faithful performance of such Contract and the prompt payment of
labor and material furnished in the prosecution thereof, then this obligation shall be null and void, otherwise to remain
in full force and effect.

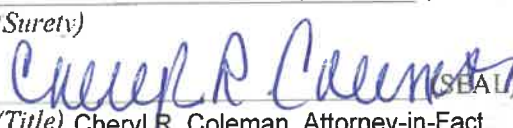
SIGNED AND SEALED this 21st day of November, 20 25. In the presence of:


(Witness)

Persistent Construction, Inc. (SEAL)
(Principal)

(Title)


(Witness) Jose Guallpa, As to Surety

Endurance Assurance Corporation (SEAL)
(Surety)

(Title) Cheryl R. Coleman, Attorney-in-Fact

MORRIS COUNTY MUA

Consent of Surety

In consideration of the premises and of One Dollar (\$1.00), lawful money of the United States, to it in hand paid by the Contractor, the receipt whereof is hereby acknowledged, the undersigned surety consents and agrees that if the Contract, for which the preceding estimate and Bid is made, be awarded to the person or persons submitting the same as contracted, it will become bound as surety and guarantor for its faithful performance, and shall provide a one year performance bond in the amount equal to 100% of the contract amount prior to the execution of the contract. The Contractor shall also execute thereafter a bond as party of the third part thereto when required to do so by Owner.

In witness whereof, said surety has caused these present to be signed and attested by a duly authorized officer and its corporate seal to be hereto affixed this 21st day of November, 2025.

(A corporate acknowledgment and statement of authority to be hereto attached by the surety company)

Endurance Assurance Corporation

By




Surety Company

Cheryl R. Coleman

Attorney-in-Fact

Attest:



Jose Guallpa, As to Surety

MORRIS COUNTY MUA

Surety Acknowledgement

STATE OF New Jersey)
) SS:
COUNTY OF Morris)

On this 21st day of November in the year 20 25 before me personally came
Cheryl R. Coleman to me known, who being by me duly sworn, did depose

and say, that he resides in Whippany, NJ,

that he is the Attorney-in-Fact of Endurance Assurance Corporation,

the Corporation described in and which executed the foregoing instrument; that he knows the seal of said Corporation; that the seal affixed to said instrument is such Corporate seal; that it was so affixed

by order of the Board of Directors of said Corporation and that he signed his name thereto in like order.

Christina Marcelay

(Seal)

CONTRACTOR ACKNOWLEDGMENT

STATE OF New Jersey)
) SS:
COUNTY OF Bergen)

CHRISTINA MARCELAY
NOTARY PUBLIC
STATE OF NEW JERSEY
MY COMMISSION EXPIRES SEPTEMBER 15, 2026
COMMISSION: #50045834

On this 21st day of November in the year 20 25, before me personally
came Anthony Grano to me known, who being by me duly

sworn, did depose and say, that he resides in Wyckoff, NJ; that he is the

President of Persistent Construction, Inc., the

Corporation described in and which executed the foregoing instrument, that he knows the seal of said Corporation, that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Corporation and that he signed his name thereto in like order.

(Seal)

Olga M Liapis

OLGA M LIAPIS
Notary Public, State of New Jersey
Comm. # 50214311
My Commission Expires 9/18/2028

MORRIS COUNTY MUA

Corporate Acknowledgement

STATE OF New Jersey)
COUNTY OF Bergen) SS:

On this 21st day of November in the year 2025, before me personally came

and appeared Anthony Ormo

to me known, who, being by me duly sworn, did depose and say, that he resides at
Wyckoff, NJ

That he is the President
(principle executive officer or duly authorized representative)

of Persistent Construction, Inc.

the Corporation described in and which executed the foregoing instrument; that he knows the seal of said Corporation; that one of the impressions affixed to said instrument in an impression of such seal, that it was so affixed by order of the Board of Directors of said Corporation, and he signed his name thereto by like order.

(Seal)

Olga M Liapis
Notary Public

County, State



MORRIS COUNTY MUA

Surety Disclosure Statement and Certificate

Endurance Assurance Corporation, surety(ies) on the attached bond, hereby certifies(y) the following:

(1) The surety meets the applicable capital and surplus requirements of R.S.17:17-6 or R.S.17:17-7 as of the surety's most current annual filing with the New Jersey Department of Insurance.

(2) The capital (where applicable) and surplus, as determined in accordance with the applicable laws of this State, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ended December 31, 2024 (most recent calendar year for which capital and surplus amounts are available), which amounts have been certified as indicated by certified public accountants (indicating separately for each surety that surety's capital and surplus amounts, together with the name and address of the firm of certified public accounts that shall have certified those amounts):
Capital and Surplus: \$3,002,608,881

Ernst & Young LLP

5 Times Square, New York, NY 10036-6530

(3) (a) With respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. sec. 9305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows (indicating for each such surety that surety's underwriting limitation and the effective date thereof):

Underwriting Limitation: \$300,261,000 As of August 1, 2025

(b) With respect to each surety participating in the issuance of the attached bond that has not received such a certificate of authority from the United States Secretary of the Treasury, the underwriting limitation of that surety as established pursuant to R.S.17:18-9 as of (date on which such limitation was so established is as follows (indicating for each such surety that surety's underwriting limitation and the date on which that limitation was established):

N/A

(4) The amount of the bond to which this statement and certification is attached is
\$ The Amount Bid

(5) If, by virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bond as set forth in items (3) (1) or (3) (b) above, or both, then for each such contract of reinsurance:

(a) The name and address of each such reinsurer under that contract and the amount of that reinsurer's participation in the contract is as follows:

N/A

MORRIS COUNTY MUA

Surety Disclosure Statement and Certificate

_____ ; and

(b) Each surety that is party to any such contract of reinsurance certifies that each re-insure listed under item (5) (a) satisfies the credit for reinsurance requirement established under P.L.1993, c.243 (c.17:513-1 et seq.) and any applicable regulations in effect as of the date on which the bond to which this statement and certification is attached shall have been filed with the appropriate public agency.

CERTIFICATE

**(to be completed by an authorized certifying agent
for each surety on the bond)**

I Cheryl R. Coleman, as Attorney-in-Fact for
(Name of Agent) (Title of Agent)

Endurance Assurance Corporation a corporation ~~located in the state of~~ (indicating
(Name of Surety)

type of business organization) (circle one) domiciled in Delaware, DO
(State of Domicile)

HEREBY CERTIFY that, to the best of my knowledge, the foregoing statements made by me are true
and ACKNOWLEDGE that if any of those statements are false, this bond is VOID.


(Signature of Certifying Agent)

Cheryl R. Coleman
(Printed Name of Certifying Agent)

Attorney-in-Fact
(Title of Certifying Agent)

Dated: November 21, 2025



KNOW ALL BY THESE PRESENTS, that **Endurance Assurance Corporation, a Delaware corporation ('EAC'), Endurance American Insurance Company, a Delaware corporation ('EAIC'), Lexon Insurance Company, a Texas corporation ('LIC'), and/or Bond Safeguard Insurance Company, a South Dakota corporation ('BSIC'), each, a "Company" and collectively, "Sompo International,"** do hereby constitute and appoint: **Cheryl R. Coleman, Dana Montagna, Kipp Case, Michael Sinzer, Sandra A. Pace** as true and lawful Attorney(s)-In-Fact to make, execute, seal, and deliver for, and on its behalf as surety or co-surety; bonds and undertakings given for any and all purposes, also to execute and deliver on its behalf as aforesaid renewals, extensions, agreements, waivers, consents or stipulations relating to such bonds or undertakings provided, however, that no single bond or undertaking so made, executed and delivered shall obligate the Company for any portion of the penal sum thereof in excess of the sum of **One Hundred Million (\$100,000,000.00)**

Such bonds and undertakings for said purposes, when duly executed by said attorney(s)-in-fact, shall be binding upon the Company as fully and to the same extent as if signed by the President of the Company under its corporate seal attested by its Corporate Secretary.

This appointment is made under and by authority of certain resolutions adopted by the board of directors of each Company by unanimous written consent effective the 30th day of March, 2023 for BSIC and LIC and the 17th day of May, 2023 for EAC and EAIC, a copy of which appears below under the heading entitled "Certificate".

This Power of Attorney is signed and sealed by facsimile under and by authority of the following resolution adopted by the board of directors of each Company by unanimous written consent effective the 30th day of March, 2023 for BSIC and LIC and the 17th day of May, 2023 for EAC and EAIC and said resolution has not since been revoked, amended or repealed:

RESOLVED, that the signature of an individual named above and the seal of the Company may be affixed to any such power of attorney or any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signature or seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

IN WITNESS WHEREOF, each Company has caused this instrument to be signed by the following officers, and its corporate seal to be affixed this 25th day of May, 2023.

Endurance Assurance Corporation

Endurance American Insurance Company

Lexon Insurance Company

Bond Safeguard Insurance Company

Richard M Appel

Richard M Appel

Richard M Appel

Richard M Appel

By:
Richard Appel; SVP & Senior Counsel

By:
Richard Appel; SVP & Senior Counsel

By:
Richard Appel; SVP & Senior Counsel

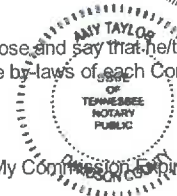
By:
Richard Appel; SVP & Senior Counsel



ACKNOWLEDGEMENT

On this 25th day of May, 2023, before me, personally came the above signatories known to me, who being duly sworn, did depose and say that he/she is an officer of each of the Companies; and that he executed said instrument on behalf of each Company by authority of his office under the by-laws of each Company.

By: *Amy Taylor*
Amy Taylor, Notary Public - My Commission Expires 3/9/27



CERTIFICATE

I, the undersigned Officer of each Company, DO HEREBY CERTIFY that:

1. That the original power of attorney of which the foregoing is a copy was duly executed on behalf of each Company and has not since been revoked, amended or modified; that the undersigned has compared the foregoing copy thereof with the original power of attorney, and that the same is a true and correct copy of the original power of attorney and of the whole thereof;
2. The following are resolutions which were adopted by the board of directors of each Company by unanimous written consent effective the 30th day of March, 2023 for BSIC and LIC and the 17th day of May, 2023 for EAC and EAIC and said resolutions have not since been revoked, amended or modified:
"RESOLVED, that each of the individuals named below is authorized to make, execute, seal and deliver for and on behalf of the Company any and all bonds, undertakings or obligations in surety or co-surety with others: RICHARD M. APPEL, MATTHEW E. CURRAN, MARGARET HYLAND, SHARON L. SIMS, CHRISTOPHER L. SPARRO, and be it further
RESOLVED, that each of the individuals named above is authorized to appoint attorneys-in-fact for the purpose of making, executing, sealing and delivering bonds, undertakings or obligations in surety or co-surety for and on behalf of the Company."
3. The undersigned further certifies that the above resolutions are true and correct copies of the resolutions as so recorded and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal this

21st day of November, 2025

By: *Daniel S. Lute*, Secretary

NOTICE: U. S. TREASURY DEPARTMENT'S OFFICE OF FOREIGN ASSETS CONTROL (OFAC)

No coverage is provided by this Notice nor can it be construed to replace any provisions of any surety bond or other surety coverage provided. This Notice provides information concerning possible impact on your surety coverage due to directives issued by OFAC. **Please read this Notice carefully.**

The Office of Foreign Assets Control (OFAC) administers and enforces sanctions policy, based on Presidential declarations of "national emergency". OFAC has identified and listed numerous foreign agents, front organizations, terrorists, terrorist organizations, and narcotics traffickers as "Specially Designated Nationals and Blocked Persons". This list can be located on the United States Treasury's website - <https://www.treasury.gov/resource-center/sanctions/SDN-List>.

In accordance with OFAC regulations, if it is determined that you or any other person or entity claiming the benefits of any coverage has violated U.S. sanctions law or is a Specially Designated National and Blocked Person, as identified by OFAC, any coverage will be considered a blocked or frozen contract and all provisions of any coverage provided are immediately subject to OFAC. When a surety bond or other form of surety coverage is considered to be such a blocked or frozen contract, no payments nor premium refunds may be made without authorization from OFAC. Other limitations on the premiums and payments may also apply.

Any reproductions are void.

Surety Claims Submission: LexonClaimAdministration@sompo-intl.com

Telephone: 615-553-9500 Mailing Address: Sompo International; 12890 Lebanon Road; Mount Juliet, TN 37122-2870

ENDURANCE ASSURANCE CORPORATION

Balance Sheet - Statutory - Basis

December 31, 2024

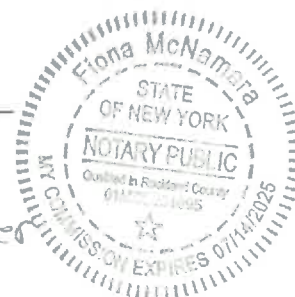
Assets:	
Bonds	\$ 9,575,738,600
Preferred stocks	15,965,244
Common stocks	2,974,058,744
Cash, cash equivalents, and short-term investments	380,926,489
Other invested assets	382,161,094
Receivables for securities	7,743,789
Total cash and invested assets	<u>13,336,593,960</u>
Agents' balances or uncollected premiums	3,751,103,321
Reinsurance recoverable on loss and loss adjustment expense payments	1,079,426,776
Funds held by or deposited with reinsured companies	146,694,256
Investment income due and accrued	75,551,122
Current federal and foreign income tax recoverable and interest thereon	9,551,514
Net deferred tax asset	201,158,214
Receivables from parent, subsidiaries and affiliates	38,811,391
Other assets	396,387,073
Total admitted assets	<u>\$ 19,035,277,627</u>
Liabilities:	
Loss and loss adjustment expenses	\$ 7,434,113,469
Reinsurance payable on paid loss and loss adjustment expenses	797,536,780
Commissions payable, contingent commissions and other similar charges	7,067,852
Other expenses	26,564,195
Taxes, licenses and fees (excluding federal and foreign income taxes)	18,927,896
Unearned premiums	2,959,915,954
Advanced premium	9,091,368
Dividends declared and unpaid (stockholders)	430,000,000
Ceded reinsurance premiums payable	1,659,311,317
Funds held by company under reinsurance treaties	155,788,157
Amounts withheld or retained by company for account of others	702,732,322
Remittances and items not allocated	186,045,368
Provision for reinsurance	26,000,766
Payable to parent, subsidiaries and affiliates	234,928,735
Payable for securities	48,893,701
Other liabilities	57,059,433
Total liabilities	<u>14,753,977,313</u>
Capital and surplus:	
Common capital stock	5,000,000
Gross paid in and contributed surplus	3,480,137,280
Unassigned funds (surplus)	794,870,512
Aggregate write-ins for special surplus funds	1,292,522
Total capital and surplus	<u>4,281,300,314</u>
Total liabilities and capital and surplus	<u>\$ 19,035,277,627</u>

I, Hana Entela, Treasurer of Endurance Assurance Corporation (the "Company") do hereby certify that to the best of my knowledge and belief, the foregoing is a full and true Statutory Statement of Admitted Assets, Liabilities, Capital and Surplus of the Company as of December 31, 2024 prepared in conformity with accounting practices prescribed or permitted by the State of Delaware Department of Insurance. The foregoing statement should not be taken as a complete statement of financial condition of the Company. Such a statement is available upon request at the Company's office located at 4 Manhattanville Road, Purchase, NY 10577.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Company at Purchase, New York.

Hana Entela

Subscribed and sworn to before me this 25th day of March, 2025
State of New York, County of Westchester
Fiona McNamara





NEW JERSEY SURETY DISCLOSURE STATEMENT AND CERTIFICATION (Pursuant to N.J.S.A. 2A: 44-143)

The attached surety bond is written by one of the following surety companies, all members of the Sompo Group (NAIC Group #3219) holding company system:

Bond Safeguard Insurance Company – NAIC #27081 – Domiciled in South Dakota
Endurance American Insurance Company – NAIC #11126 – Domiciled in Delaware
Endurance Assurance Corporation – NAIC #11551 – Domiciled in Delaware
Lexon Insurance Company – NAIC #13307 – Domiciled in Texas

The above companies hereby certify the following:

1. The surety companies meet the applicable capital and surplus requirements of R.S. 17:17-6 or R.S. 17:17-7 as of the companies' most current annual filing with the New Jersey Department of Banking and Insurance.
2. The capital and surplus, as determined in accordance with the applicable laws of New Jersey, of the surety company(ies) participating in the issuance of the attached bond is in the following amounts as of the calendar year ended **December 31, 2024** (most recent calendar year for which these amounts are available) which amounts are being certified by certified public accountants and are included in the amended Annual Statements on file with the National Association of Insurance Commissioners (NAIC) and the New Jersey Department of Banking & Insurance, 20 West State Street, CN-325, Trenton, NJ 08625-0325:

Capital and Surplus:

Bond Safeguard Insurance Company	Endurance American Insurance Company	Endurance Assurance Corporation	Lexon Insurance Company
\$45,042,997	\$1,142,260,274	\$4,281,300,314 <u>\$1,278,691,433 Deduction</u> \$3,002,608,881 Adjusted	\$91,388,162

CPA Firm: Ernst & Young LLP
5 Times Square, New York, NY 10036-6530

3. The above surety companies, as members of the Sompo Group holding company system, currently have the following rating from A.M. Best:

Rating: A+ (Superior)
Financial Size Category: XV (\$2 Billion or greater)

4. Each of the above surety companies have received from the United States Secretary of the Treasury a Certificate of Authority pursuant to 31 U.S.C. §9305, and the underwriting limitation per bond established therein effective **August 1, 2025** is as follows:

Underwriting Limitation:

Bond Safeguard Insurance Company	Endurance American Insurance Company	Endurance Assurance Corporation	Lexon Insurance Company
\$4,504,000	\$114,226,000	\$300,261,000	\$9,139,000

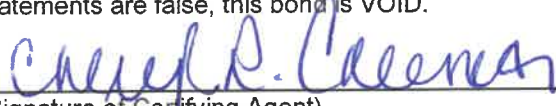
5. The amount of the bond to which this statement and certification is attached is

\$ The Amount Bid

CERTIFICATE

(To be completed by an authorized certifying agent for each surety on the bond.)

I Cheryl R. Coleman *(name of agent)* as Attorney-In-Fact *(title of agent)*
for Endurance Assurance Corporation *(name of surety)*, a corporation domiciled in
Delaware *(state of domicile)*, DO HEREBY CERTIFY that, to the best of my
knowledge, the foregoing statements made by me are true and ACKNOWLEDGE that if any of those
statements are false, this bond is VOID.


(Signature of Certifying Agent)

Cheryl R. Coleman
(Printed Name of Certifying Agent)

Attorney-In-Fact
(Title of Certifying Agent)

November 21, 2025
(Date)

ACORDTM**CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY)

11/20/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER USI Insurance Services, LLC 180 Park Avenue Suite 103 Florham Park, NJ 07932	CONTACT NAME: Laurette Merusi	
	PHONE (A/C, No, Ext): 973 315-0570	FAX (A/C, No): 610 537-2349
	E-MAIL ADDRESS: laurette.merusi@usi.com	
INSURED Persistent Construction, Inc. 58 Industrial Ave. Fairview, NJ 07022	INSURER(S) AFFORDING COVERAGE	
	INSURER A: Riverport Insurance Company	NAIC # 36684
	INSURER B: American Alternative Insurance Corp	19720
	INSURER C: Berkley National Insurance Company	38911
	INSURER D: New Jersey Casualty Insurance Company	10732
	INSURER E: Allied World Assurance Co (US) Inc.	19489
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:		MKG0000004002	11/15/2025	11/15/2026	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
C	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY		MKA0000001802	11/15/2025	11/15/2026	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10000		93A2UB100017800	11/15/2025	11/15/2026	EACH OCCURRENCE \$ 5,000,000
C			MKC1110028100	11/15/2025	11/15/2026	AGGREGATE \$ 5,000,000 \$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input checked="" type="checkbox"/> N/A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		1016774	11/15/2025	11/15/2026	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
E	Prof Liability Pollution		03119728	11/15/2025	11/15/2026	1,000,000
			03119728	11/15/2025	11/15/2026	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Parsippany Transfer Station located at 1100 Edwards Rd, Parsippany, NJ 07054. Bid # 2025-SW06
 Morris County Municipal Utilities Authority (MCMUA), owner, engineers and their respective officers, employees and agents are named additional insureds that are primary and non-contributory as required by written contract with respect to the general liability, auto, umbrella and excess liability with a waiver of subrogation as required by written contract.

CERTIFICATE HOLDER**CANCELLATION**

MCMUA & The County of Morris
 370 Richard Mine Rd
 Wharton, NJ 07885

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



© 1988-2015 ACORD CORPORATION. All rights reserved.

09/08/04

Taxpayer Identification# 223-520-109/000

Dear Business Representative:

Congratulations! You are now registered with the New Jersey Division of Revenue.

Use the Taxpayer Identification Number listed above on all correspondence with the Divisions of Revenue and Taxation, as well as with the Department of Labor (if the business is subject to unemployment withholdings). Your tax returns and payments will be filed under this number, and you will be able to access information about your account by referencing it.

Additionally, please note that State law requires all contractors and subcontractors with Public agencies to provide proof of their registration with the Division of Revenue. The law also amended Section 92 of the Casino Control Act, which deals with the casino service industry.

We have attached a Proof of Registration Certificate for your use. To comply with the law, if you are currently under contract or entering into a contract with a State agency, you must provide a copy of the certificate to the contracting agency.

If you have any questions or require more information, feel free to call our Registration Hotline at (609)292-1730.

I wish you continued success in your business endeavors.

Sincerely,


John E. Tully, CPA
Acting Director

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

DEPARTMENT OF TREASURY/
DIVISION OF REVENUE
PO BOX 252
TRENTON, N J 08846-0252

TAXPAYER NAME:
PERSISTENT CONSTRUCTION, INC.

TAXPAYER IDENTIFICATION#:
223-520-109/000

ADDRESS:
**58 INDUSTRIAL AVE
FAIRVIEW NJ 07022**

EFFECTIVE DATE:
04/28/97

FORM-BRC(08-01)

TRADE NAME:

SEQUENCE NUMBER:
1084416

ISSUANCE DATE:
09/08/04


Acting Director

This Certificate is NOT assignable or transferable. It must be conspicuously displayed at above address

Certificate Number
607567

Registration Date: 06/18/2024
Expiration Date: 06/17/2026



State of New Jersey

Department of Labor and Workforce Development Division of Wage and Hour Compliance

Public Works Contractor Registration Act

Pursuant to N.J.S.A. 34:11-56.48, et seq. of the Public Works Contractor Registration Act, this certificate of registration is issued for purposes of bidding on any contract for public work or for engaging in the performance of any public work to:

Responsible Representative(s):
Anthony Grano, President

Responsible Representative(s):
Francesco Grano, Vice-President

Persistent Construction, Inc.
2024

A handwritten signature in black ink, appearing to read "RA Angelo".

Robert Asaro-Angelo, Commissioner
Department of Labor and Workforce Development

NON TRANSFERABLE

This certificate may not be transferred or assigned and may be revoked for cause by the Commissioner of Labor and Workforce Development.



BUSINESS ENTITY ANNUAL STATEMENT
NEW JERSEY ELECTION LAW ENFORCEMENT COMMISSION
Phone: (609) 292-8700
THIS FORM MUST BE ELECTRONICALLY FILED AT:
www.elec.nj.gov

FORM BE

FOR STATE USE ONLY

This statement is required to be filed by a business entity which has received \$50,000 or more in the aggregate during a calendar year through agreements or contracts with a public entity or public entities.

Part 1: General Information

Date of Statement March 12, 2025 Activity for Calendar Year 2024 ☐ Check if Amendment

Part 2: Business Entity Information

Business Name Persistent Construction, Inc.

Business Type Other Business Organization

Address 1 58 Industrial Ave

Address 2 _____

City Fairview State New Jersey Zip 07022

*(Area Code) Telephone Number 201-941-9888

ACKNOWLEDGEMENT

I have been authorized by the above named business entity to complete the annual statement, and certify that the statements and/or information contained herein are true. I am aware that if any of the statements or information are willfully false, I may be subject to punishment.

First Name Olga Last Name Liapis

Title/Position Administrative Assistant Date March 12, 2025

*(Area Code) Telephone Number 201-941-9888

☒ Check this box to certify the above acknowledgement.

A business entity which has received \$50,000 or more in the aggregate during a calendar year through agreements or contracts with a public entity or public entities, but has made no contributions to candidates or committees, shall file the business entity annual disclosure statement with the Commission to report that no contributions were made during the calendar year.

☐ Check this box if the business entity has not made any reportable contributions during the calendar year.

Part 3: Summary of Amounts (Totals will be automatically calculated)

Total Amount Received through
Agreements or Contracts in 2024

\$2,172,230.00

Total of Reportable Contributions Made
to Candidates or Committees in 2024

\$8,575.00

*Leave this field blank if your telephone number is unlisted. Pursuant to N.J.S.A. 47:1A-1.1, an unlisted telephone number is not a public record and must not be provided on this form.

Part 4: Contracts Received

Contract ID#	<u>389</u>	Contract Date	<u>May 29, 2024</u>
Name of Contracting Public Entity	<u>Jersey City Municipal Utilities Authority</u>		
Public Entity Type	<u>Municipality</u>		
Address 1	<u>13-15 Linden Ave East</u>		
Address 2	<u></u>		
City	<u>Jersey City</u>	State	<u>New Jersey</u> Zip <u>07305</u>
Description of the goods, services, equipment provided or property sold :			
<u>Johnston & Halladay Emergency Sewer Repair: General Concrete, Paving, Underground Utilities</u>			
<input checked="" type="checkbox"/>	Check this box if the contract was awarded pursuant to a fair and open process.		Contract Amount Received <u>\$588,630.00</u> (Enter numbers only)

Contract ID#	<u>390</u>	Contract Date	<u></u>
Name of Contracting Public Entity	<u>Jersey City Municipal Utilities Authority</u>		
Public Entity Type	<u>Municipality</u>		
Address 1	<u>13-15 Linden Ave East</u>		
Address 2	<u></u>		
City	<u>Jersey City</u>	State	<u>New Jersey</u> Zip <u>07305</u>
Description of the goods, services, equipment provided or property sold :			
<u>Recon of St. Paul's Outfall: General Concrete, Underground Utilities</u>			
<input checked="" type="checkbox"/>	Check this box if the contract was awarded pursuant to a fair and open process.		Contract Amount Received <u>\$1,300,000.00</u> (Enter numbers only)

Part 4: Contracts Received (continued)

Contract ID#	<u>398</u>	Contract Date	<u>December 5, 2024</u>
Name of Contracting Public Entity	<u>Borough of Cliffside Park</u>		
Public Entity Type	<u>County</u>		
Address 1	<u>525 Palisade Ave</u>		
Address 2	<u></u>		
City	<u>Cliffside Park</u>	State	<u>New Jersey</u> Zip <u>07101</u>
Description of the goods, services, equipment provided or property sold :			
<u>Old River Road Remediation: Grading, Paving, Underground Utilities</u>			
<input checked="" type="checkbox"/>	Check this box if the contract was awarded pursuant to a fair and open process.	Contract Amount Received	<u>\$147,490.00</u> <small>(Enter numbers only)</small>

Contract ID#	<u>402</u>	Contract Date	<u>November 20, 2024</u>
Name of Contracting Public Entity	<u>County of Bergen</u>		
Public Entity Type	<u>County</u>		
Address 1	<u>220 E. Ridgewood Ave</u>		
Address 2	<u></u>		
City	<u>Paramus</u>	State	<u>New Jersey</u> Zip <u>07652</u>
Description of the goods, services, equipment provided or property sold :			
<u>Drainage Improvements (Ramsey): Underground Utilities</u>			
<input checked="" type="checkbox"/>	Check this box if the contract was awarded pursuant to a fair and open process.	Contract Amount Received	<u>\$136,110.00</u> <small>(Enter numbers only)</small>

Part 5: Contributions Made (Please provide each contributor's information followed by all related contributions)

Part 5: Contributions Made (Please provide each contributor's information followed by all related contributions)

(continued)

Contributor InformationName Anthony Grano Type PrincipalAddress 1 178 Cottage Rd

Address 2 _____

City Wyckoff State New Jersey Zip 07481

Recipient Name Fund for Quality Leadership

Political Office or
Committee Type Mayor Contribution Type Check

Contribution Date June 20, 2024 Contribution Amount \$5,200.00
(If Refund, Enter a Negative Number -) (Enter numbers only)

Recipient Name Hudson County Democratic Organization

Political Office or
Committee Type County Executive Contribution Type Credit Card

Contribution Date October 1, 2024 Contribution Amount \$1,500.00
(If Refund, Enter a Negative Number -) (Enter numbers only)

Recipient Name Moving Secaucus Forward

Political Office or
Committee Type Mayor Contribution Type Check

Contribution Date March 14, 2024 Contribution Amount \$600.00
(If Refund, Enter a Negative Number -) (Enter numbers only)

Recipient Name Committee To Elect Jacqueline Weimmer

Political Office or
Committee Type Council or Municipal Office Contribution Type Check

Contribution Date March 14, 2024 Contribution Amount \$125.00
(If Refund, Enter a Negative Number -) (Enter numbers only)

Recipient Name Jim McGreevey For Mayor, Inc.

Political Office or
Committee Type Mayor Contribution Type Check

Contribution Date September 5, 2024 Contribution Amount \$1,000.00
(If Refund, Enter a Negative Number -) (Enter numbers only)

Part 5: Contributions Made (Please provide each contributor's information followed by all related contributions)

(continued)

Recipient Name Fund For Quality Leadership

Political Office or
Committee Type Mayor

Contribution Type Check

Contribution Date March 14, 2024

Contribution Amount \$150.00
(If Refund, Enter a Negative Number -) (Enter numbers only)

Persistent Construction, Inc.

Contracts on Hand

As of 12/31/2024

Project	Owner/ General Contractor	Location	Original Contract	Changes to Contract	Adjusted Contract Value	Billed & Completed	Balance to Completion	Estimated Completion Date	% Complete
325 Bayonne Ave G - PHASE 3	Arc NJ	Bayonne, NJ	\$ 1,648,234	\$ 1,829,193	\$ 3,477,427	\$ 3,392,170	\$ 85,257	Jan-25	98%
328 District 15 Fifteen Sitework	DeSano Contracting Company	Morristown, NJ	\$ 10,180,138	\$ 1,051,544	\$ 11,231,682	\$ 10,962,182	\$ 269,500	Jun-25	98%
340 Hudson County Infrastructure Improvement	County of Hudson	Jersey City, Harrison & Secaucus NJ	\$ 6,063,415	\$ 1,069,774	\$ 7,133,189	\$ 6,076,420	\$ 1,056,769	Jun-25	85%
349 Unimatic	Sevenson Environmental Services	Fairfield, NJ	\$ 255,888	\$ 360,858	\$ 616,746	\$ 601,075	\$ 15,671	Jul-25	97%
353/371 Waterware/JCMUA Ridge Road	Jersey City Municipal Utilities Authority	Jersey City, NJ	\$ 870,900	\$ 1,312,809	\$ 2,183,709	\$ 1,735,004	\$ 448,705	Nov-25	79%
358 Hudson Exchange Phase II	Consigli Construction Co	Jersey City, NJ	\$ 932,855	\$ 647,499	\$ 1,580,354	\$ 515,298	\$ 1,065,056	Sep-25	33%
362 119 Newkirk St	Hudson County Community College	Jersey City	\$ 1,373,182	\$ 204,884	\$ 1,578,066	\$ 1,447,329	\$ 130,737	Jul-25	92%
369 1075 West Side Square Project	Sordoni Construction	Jersey City NJ	\$ 6,155,158	\$ 879,678	\$ 7,034,836	\$ 4,783,204	\$ 2,251,632	Oct-25	68%
372 Garden State Plaza	Sordoni Construction	Paramus, NJ	\$ 13,500,000	\$	\$ 13,500,000	\$ -	\$ 13,500,000	Feb-26	0%
385 Passaic Ave Bridge Over Passaic River	Union County Engineer	Providence, NJ	\$ 3,450,000	\$ 84,250	\$ 3,534,250	\$ 60,277	\$ 3,473,973	Oct-25	2%
387 Parsippany Residence Inn	Brandt Hospitality Group	Parsippany, NJ	\$ 1,200,000	\$ (165,989)	\$ 1,034,011	\$ 412,780	\$ 621,231	Nov-25	40%
389 Johnston & Halladay Emergency Sewer Repair	Jersey City MUA	Jersey City, NJ	\$ 588,630	\$ 353,787	\$ 942,417	\$ 789,399	\$ 153,018	Sep-25	84%
390 Recon Of St. Paul's Outfall	Jersey City MUA	Jersey City, NJ	\$ 1,300,000	\$ 53,100	\$ 1,353,100	\$ 607,896	\$ 745,204	Sep-25	45%
391 Ridge Road Hydrant Replacement	Waterware	Jersey City, NJ	\$ 800,000	\$ 4,545	\$ 804,545	\$ 785,865	\$ 18,680	Jun-25	98%
392 Garden State Plaza Parking Lot Improvement	Sordoni Construction	Paramus, NJ	\$ 1,250,000	\$ 46,716	\$ 1,296,716	\$ 1,233,900	\$ 62,816	Dec-25	95%
393 Thomas McGovern Drive	Plaza Construction	Jersey City, NJ	\$ 678,318	\$	\$ 678,318	\$ 90,133	\$ 588,185	Oct-25	13%
397 Hoboken Connect Site 2	Consigli Construction Co	Hoboken, NJ	\$ 3,490,000	\$ 141,258	\$ 3,631,258	\$ 45,260	\$ 3,585,998	Feb-26	1%
398 Old River Road Remediation	Cliffside Park	Edgewater, NJ	\$ 147,490	\$	\$ 147,490	\$ -	\$ 147,490	Mar-26	0%
399 30" Water Main Modifications	Waterware	Jersey City, NJ	\$ 43,858	\$	\$ 43,858	\$ 29,131	\$ 14,727	Oct-26	66%
402 Drainage Improvements (Ramsey)	Bergen County	Ramsey, NJ	\$ 136,110	\$	\$ 136,110	\$ 136,110	\$ -	Apr-25	100%
403 Lexington Ave Water And Sewer Replacement	Jersey City Municipal Utilities Authority	Jersey City, NJ	\$ 1,665,390.00	\$	\$ 1,665,390	\$ -	\$ 1,665,390	Oct-25	0%

404	Bayfront 1 Redevelopment - Phase 1A	JCRA	Jersey City, NJ	1,024,000.00	\$	1,024,000	\$	-	\$	1,024,000	Mar-26	0%
406	Hudson Place Street Improvements	Hunter Roberts Construction Group	Hoboken, NJ	4,400,000.00	\$	4,400,000	\$	-	\$	4,400,000	Mar-26	0%
407	Hoboken Connect Ferry/Bus Terminal & Warrington Plaza	Hunter Roberts Construction Group	Hoboken, NJ	5,800,000.00	\$	5,800,000	\$	-	\$	5,800,000	Jul-26	0%
412	55 Hudson Street	Noble/Hunter Roberts	Jersey City, NJ	2,104,000.00	\$	2,104,000	\$	-	\$	2,104,000	Jul-26	0%
413	SRM Plant Maintenance	SRM	Various Locations	113,636.61	\$	113,637	\$	-	\$	113,637	Jun-25	0%
414	Mt. Olive Tarp Rack Replacement	MCMUA	Randolph, NJ	347,700.00	\$	347,700	\$	-	\$	347,700	Dec-25	0%
415	Site 8A Site Work	NADC	Jersey City, NJ	1,172,199.00	\$	1,172,199	\$	-	\$	1,172,199	Dec-25	0%
416	Skyway Golf Retaining Wall Repairs	Hudson County Infrastructure Authority	Jersey City, NJ	46,780.00	\$	46,780	\$	-	\$	46,780	Apr-25	0%
417	Garden State Plaza Pre-Closing	Sordani Construction	Paramus, NJ	777,740.00	\$	777,740	\$	-	\$	777,740	Jul-25	0%
418	Drainage Improvements	Bergen County	Ramsey, NJ	60,550.00	\$	60,550	\$	-	\$	60,550	Apr-25	0%
419	Lexington Ave Water Main Replacement	Jersey City Municipal Utilities Authority	Jersey City, NJ	1,292,970.00	\$	1,292,970	\$	-	\$	1,292,970	Aug-25	0%
420	Emergency Rehabilitation of Frank Sinatra Drive Seawall	Simpson & Brown	Hoboken, NJ	893,662.00	\$	893,662	\$	-	\$	893,662	Aug-25	0%
422	Out Parcel Restroom Pad	Hudson County Infrastructure Authority	Jersey City, NJ	51,730.00	\$	51,730	\$	-	\$	51,730	Nov-25	0%

\$	81,668,439	\$	33,703,433	\$	47,985,007
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Equipment Listing

Description	ID	Business Unit	Category	Equipment Type	Location	Mobility Type
AB-1 - Wanco Solar Arrow Board 1 - 2012	64	Persistent Construction	Traffic Control Equipment	Traffic Control Equipment	No location available	Self Mobile
AB-2 - Wanco Solar Arrow Board 2 - 2012	65	Persistent Construction	Traffic Control Equipment	Traffic Control Equipment	No location available	Self Mobile
AC-2 - Ingersoll Rand Air Compressor - 2006	31	Persistent Construction	Misc	Air Compressor	No location available	Self Mobile
AC-3 - Ingersoll Rand Air Compressor - 1999	32	Persistent Construction	Misc	Air Compressor	No location available	Self Mobile
AC-4 - Ingersoll Rand Air Compressor - 2007	114	Persistent Construction	Misc	Air Compressor	No location available	Self Mobile
AC-5 - Ingersoll Rand Air Compressor - 2002	176	Persistent Construction	Misc	Air Compressor	No location available	Self Mobile
AC-6 - Ingersoll Rand Air Compressor - 2004	210	Persistent Construction	Misc	Air Compressor	No location available	Self Mobile
ALLEN-S1 - Allen Screenshot 2010	147	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
ALLEN-S2 - Allen Steel Air Screenshot	156	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
ALLEN-S3 - Allen Steel Air Screenshot - 2017	157	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
AR-1 - Asphalt Compactor - 2008	38	Persistent Construction	Compactor	Compactor	No location available	Self Mobile
Asphalt Zipper 360X-200H	232	Persistent Construction			No location available	Requires Move
AT-1 - FreightLiner FL60 Truck - 1998	24	Persistent Construction	Traffic Control Equipment	Traffic Control Equipment	No location available	Self Mobile
AT-2 - FreightLiner FL60 Truck - 1998	25	Persistent Construction	Traffic Control Equipment	Traffic Control Equipment	No location available	Self Mobile
BT-1 - International 4700 Box Truck - 1999	98	Persistent Construction	Truck	Box Truck	No location available	Self Mobile
BT-2 - International 4700 Box Truck - 1999	99	Persistent Construction	Truck	Box Truck	No location available	Self Mobile
BT-3 - International 4300 Box Truck - 2006	1001	Persistent Construction	Truck	Box Truck	No location available	Self Mobile
BT-4 - International 4300 Box Truck - 2012	122	Persistent Construction	Truck	Box Truck	No location available	Self Mobile
BT-5 - International 4300 Box Truck - 2007	154	Persistent Construction	Truck	Box Truck	No location available	Self Mobile
BT-6 - Kenworth K370 - 2016	213	Persistent Construction	Truck	Box Truck	No location available	Self Mobile
BT-7 - International 4300 Box Truck - 2017	240	Persistent Construction	Truck	Box Truck	No location available	Self Mobile
CAM-TR1 - CAM Trailer - 2018	155	Persistent Construction	Trailer	Trailer	No location available	Self Mobile
CS420-1 - Target CS420 Concrete/Steel Saw - 1999	96	Persistent Construction	Saw	Saw	No location available	Self Mobile

CSC-1 - EX250 Slab Crab - 2019	180	Persistent Construction	Concrete	Concrete Equipment	No location available	Self Mobile
D-1 - Mack Tandem Dump Truck - 2002	19	Persistent Construction	Truck	Dump Truck	No location available	Self Mobile
D-2 - Mack Tri Axle Dump Truck - 2017	139	Persistent Construction	Truck	Dump Truck	No location available	Self Mobile
D3-1 - CAT D3G Dozer - 2004	85	Persistent Construction	Dozer	Dozer	No location available	Self Mobile
D3-2 - CAT D3G Dozer - 2006	86	Persistent Construction	Dozer	Dozer	No location available	Self Mobile
D6T-1 - CAT D6T Dozer - 2015	161	Persistent Construction	Dozer	Dozer	No location available	Self Mobile
DOKA - DOKA Forms	160	Persistent Construction	Concrete	Concrete Equipment	No location available	Self Mobile
EX305CR-4 - CAT 305CR - 2022	222	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX305CR-5 - CAT 305CR - 2023	229	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX305CR-6 - CAT 305CR - 2023	237	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX310-1 - CAT 310LCR Excavator - 2022	225	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX315-2 - CAT 315-07 - 2023	236	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX315F-1 - CAT 315F - 2020	187	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX321D-1 - CAT 321DLR Excavator - 2013	79	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX321D-2 - CAT 321DLR Excavator - 2013	118	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX335F-1 - CAT 335 FLR - 2019	194	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX336D-1 - CAT 336DLC Excavator - 2009	100	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
EX352F-1 - CAT 352-08FG - 2023	235	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
Fork Lift - HYSTER - Pneumatic ForkLift	153	Persistent Construction	Forklift	Forklift	No location available	Self Mobile
G125-1 - Mobile Generator (125KW) - 2010	39	Persistent Construction	Misc	Generator	No location available	Self Mobile
G45-1 - Mobile Generator (45KW) - 2009	40	Persistent Construction	Misc	Generator	No location available	Self Mobile
G5-1 - Mobile Generator (5KW) - 2014	41	Persistent Construction	Misc	Generator	No location available	Self Mobile
G5-2 - Mobile Generator (5KW) - 2014	42	Persistent Construction	Misc	Generator	No location available	Self Mobile
G5-3 - Mobile Generator (5KW) - 2014	43	Persistent Construction	Misc	Generator	No location available	Self Mobile
G5-4 - Mobile Generator (5KW) - 2014	44	Persistent Construction	Misc	Generator	No location available	Self Mobile
G5-5 - Mobile Generator (5KW) - 2014	45	Persistent Construction	Misc	Generator	No location available	Self Mobile

GR-1 - 2.5" Grundomat 65P	221	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
HM-1 - Rockblaster 5000 lb Hammer - 2015	125	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
HM-2 CAT 1000 lb Hammer	218	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
HM-3 Rockblaster 1000 lb Hammer	219	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
ICS-CCS - 16" Chain/Concrete Chain Saw/Gas	164	Persistent Construction	Saw	Saw	No location available	Self Mobile
JJ-1 - Wacker BS50-2I -2017	158	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
JJ-2 - Wacker BS50-2Plus Rammer - 2020	186	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile
LB410G-2 - JD 410G Backhoe Loader - 2004	74	Persistent Construction	Loader	Loader Backhoe	No location available	Self Mobile
LB410L-3 - JD 410L Loader Backhoe - 2015	117	Persistent Construction	Loader	Loader Backhoe	No location available	Self Mobile
LB410L-4 - JD 410L Loader Backhoe - 2016	131	Persistent Construction	Loader	Loader Backhoe	No location available	Self Mobile
LT-1 - Ingersoll Rand Light Tower - 2001	36	Persistent Construction	Misc	Light Tower	No location available	Self Mobile
LT-2 - Ingersoll Rand Light Tower - 2005	37	Persistent Construction	Misc	Light Tower	No location available	Self Mobile
Manhole Trench Box	1102	Persistent Construction			No location available	Requires Move
MD-2 - Ford F600 Mason Dump - 2021	205	Persistent Construction	Truck	Dump Truck	No location available	Self Mobile
MP3-3 - Wacker PDT3A 3" Diaphragm Pump - 2020	184	Persistent Construction	Pump	Pump	No location available	Self Mobile
MT-2 - Kenworth T440 Service Truck - 2021	193	Persistent Construction	Truck	Service Truck	No location available	Self Mobile
P-10 - Ford F350 - 2021 (Frank)	200	Persistent Construction	Truck	Pick Up Truck	No location available	Self Mobile
P-11 - FORD TRUCK 2024 S-DTY F-3	239	Persistent Construction	Truck	Pick Up Truck	No location available	Self Mobile
P-2 - Ford F350 - 2011 (Juvie)	7	Persistent Construction	Truck	Pick Up Truck	No location available	Self Mobile
P-7 - Ford F350 - 2016 (Joe)	126	Persistent Construction	Truck	Pick Up Truck	No location available	Self Mobile
P-777 - Ford F250 - 2019 (A Grano)	179	Persistent Construction	Truck	Pick Up Truck	No location available	Self Mobile
P-8 - Ford F350 - 2014	181	Persistent Construction	Truck	Pick Up Truck	No location available	Self Mobile
P-9 - Ford F350 - 2020 (Lofaro)	190	Persistent Construction	Truck	Pick Up Truck	No location available	Self Mobile
PB-1 - Terex PB21 Power Buggies - 2006	62	Persistent Construction	Concrete	Concrete Equipment	No location available	Self Mobile
PB-2 - Terex PB21 Power Buggies - 2006	63	Persistent Construction	Concrete	Concrete Equipment	No location available	Self Mobile

R-1 - International 4700 Rack Truck - 1990	14	Persistent Construction	Truck	Rack Truck	No location available	Self Mobile
R-2 - International 4700 Rack Truck - 1990	15	Persistent Construction	Truck	Rack Truck	No location available	Self Mobile
R-4 - International 4400 Rack Truck - 2009	113	Persistent Construction	Truck	Rack Truck	No location available	Self Mobile
RENT - CAT 289 Compact Track Loader	216	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile
RENT - CAT 725 End Dump	2004	Persistent Construction	Truck	Dump Truck	No location available	Self Mobile
RENT - CAT D6K Dozer	2005	Persistent Construction	Dozer	Dozer	No location available	Self Mobile
RENT - Excavator CAT 305 Class	203	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
RENT - Excavator CAT 308 Class	204	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
RENT - Excavator CAT 315 Class	2003	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
RENT - Excavator CAT 315 Class W/ Hammer	211	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
RENT - Excavator CAT 325 Class	2001	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
RENT - Excavator CAT 336 Class W/ Hammer	202	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
RENT - Excavator CAT 349 Class	215	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
RENT - Excavator Deere 250 GLC 60' Long Reach	224	Persistent Construction	Excavator	Excavator	No location available	Self Mobile
RENT - Frac Tank 18 K	217	Persistent Construction	Misc	Field Equipment	No location available	Requires Move
RENT - Hydraulic Rock Splitter	220	Persistent Construction	Misc	Power Tools	No location available	Self Mobile
RENT - Triaxle	201	Persistent Construction	Truck	Dump Truck	No location available	Self Mobile
RENT - UTV Site Vehicle	2002	Persistent Construction	Truck	Utility Truck	No location available	Self Mobile
RENT 20 x 8 Trench Box	1101	Persistent Construction			No location available	Requires Move
RENT High Clearance Arch Trench Box 6' X 8'	1103	Persistent Construction			No location available	Requires Move
Rock Drill and Splitter	208	Persistent Construction	Misc	Air Compressor	No location available	Requires Move
RS36-1 - Target 36' Pro Series Road Saw - 1998	61	Persistent Construction	Saw	Saw	No location available	Self Mobile
SC172-1 - Bomag Soil Compactor - 1999	82	Persistent Construction	Compactor	Compactor	No location available	Self Mobile
SC56-1 - CAT CS56 Soil Compactor 84" - 2008	84	Persistent Construction	Compactor	Compactor	No location available	Self Mobile
SC56-2 - CAT CS56 Soil Compactor 84" - 2015	166	Persistent Construction	Compactor	Compactor	No location available	Self Mobile
SCR-2 - Honda Screenshot 7070 - 2014	1002	Persistent Construction	Misc	Field Equipment	No location available	Self Mobile

SM-1 - Ford F350 - 1999 (Snowman 1)	138	Persistent Construction	Truck	Pick Up Truck	No location available	Self Mobile
SP-1 - Protech 8' Skid Steer Snow Pusher - 2016	132	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile
SP-1 - Snow Plow Angle/11x36	168	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-10 - 10' Snow Plow/Frame/Hyd Pump	189	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-11 - 8' Western Pro Plus Snowplow	196	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-12 - 8' Western Pro Plus Snowplow	197	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-13 - 8' Western Pro Plus Snowplow	198	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-2 - Protech 14' Loader Snow Pusher - 2016	133	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile
SP-2 - Snow Plow Angle/11x36	169	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP2-1 - Flygt 2" Submersible Pump - 2013	55	Persistent Construction	Pump	Pump	No location available	Self Mobile
SP2-2 - Flygt 2" Submersible Pump - 2013	56	Persistent Construction	Pump	Pump	No location available	Self Mobile
SP2-3 - Flygt 2" Submersible Pump - 2013	57	Persistent Construction	Pump	Pump	No location available	Self Mobile
SP2-4 - Flygt 2" Submersible Pump - 2013	58	Persistent Construction	Pump	Pump	No location available	Self Mobile
SP-3 - Protech 14' Loader Snow Pusher - 2016	134	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile
SP-3 - Snow Plow Angle/11x36	170	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP3-1 - Flygt 3" Submersible Pump - 2015	59	Persistent Construction	Pump	Pump	No location available	Self Mobile
SP-4 - Protech 14' Loader Snow Pusher - 2016	135	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile
SP-4 - Snow Plow Angle/11x36	171	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-5 - Protech 14' Loader Snow Pusher - 2016	136	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile
SP-5 - Snow Plow Angle/11x36	172	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-6 - Protech 14' Loader Snow Pusher - 2016	137	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile
SP-6 - Snow Plow Angle/11x36	173	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-7 - Snow Plow Angle/11x36	174	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-7 - Wheel Loader Snow Pusher - 2016	1007	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile
SP-8 - Snow Plow Angle/11x36	175	Persistent Construction	Snow	Snow Plow	No location available	Self Mobile
SP-8 - Under Trailer Plow w/Brackets - 2016	1008	Persistent Construction	Skid Steer	Skid Steer	No location available	Self Mobile

SP-9 - 10' Snow Plow/Frame/Hyd Pump	188	Persistent	Snow	Snow Plow	No location available	Self Mobile
SR-321 - CAT SR321 Snow Blower Attachment	165	Persistent	Snow	Snow Blower	No location available	Self Mobile
SS-1 - CAT 262B Skid Steer Loader - 2003	69	Persistent	Skid Steer	Skid Steer	No location available	Self Mobile
SS-2 - CAT 262B Skid Steer Loader - 2005	70	Persistent	Skid Steer	Skid Steer	No location available	Self Mobile
ST-2 - International S2554 Salt Truck - 1994	128	Persistent	Truck	Dump Truck	No location available	Self Mobile
SUV-7 - Ford Explorer - 2020 (Dom)	199	Persistent	SUV	SUV	No location available	Self Mobile
TAT-3 - Eager Beaver 20XP Trailer - 2015	108	Persistent	Trailer	Trailer	No location available	Self Mobile
TAT-4 - Reid Dingo Trailer - 2005	1006	Persistent	Trailer	Trailer	No location available	Self Mobile
TAT-5 - Eager Beaver 20XPT Trailer - 2022	212	Persistent	Trailer	Trailer	No location available	Self Mobile
TAT-6 - Bueghling 3 Ton Yellow Tilt Trailer - 1986	214	Persistent	Trailer	Trailer	No location available	Self Mobile
TC-3 - Ingersoll Rand Trench Compactor - 2008	35	Persistent	Compactor	Compactor	No location available	Self Mobile
TC-4 - Wacker Trench Compactor - 2017	177	Persistent	Compactor	Compactor	No location available	Self Mobile
TC-5 - Wacker Compactor - 2020	183	Persistent	Compactor	Compactor	No location available	Self Mobile
TP-1 - Tar Pot Propane - 2010	68	Persistent	Misc	Power Tools	No location available	Self Mobile
TP3-1 - Wacker 3" Pump Trash - 2012	47	Persistent	Pump	Pump	No location available	Self Mobile
TP3-3 - Wacker 3" Pump Trash - 2012	49	Persistent	Pump	Pump	No location available	Self Mobile
TP3-4 - Wacker 3" Pump Trash - 2012	50	Persistent	Pump	Pump	No location available	Self Mobile
TP3-5 - Wacker 3" Pump Trash - 2012	51	Persistent	Pump	Pump	No location available	Self Mobile
TP6-1 - Goodwin 6" Pump Trash - 2001	46	Persistent	Pump	Pump	No location available	Self Mobile
Trench Box - 20 x 6	1100	Persistent			No location available	Requires Move
TX525-1 - Toro Dingo 525 - 2007	124	Persistent	Misc	Field Equipment	No location available	Self Mobile
U-1 - Ford F350 Utility Truck - 2012	1	Persistent	Truck	Utility Truck	No location available	Self Mobile
U-3 - Ford F350 Utility Truck - 2016	119	Persistent	Truck	Utility Truck	No location available	Self Mobile
U-6 - Ford F350 Utility Truck - 2015	110	Persistent	Truck	Utility Truck	No location available	Self Mobile
U-7 - Ford F350 Utility Truck - 2022	206	Persistent	Truck	Utility Truck	No location available	Self Mobile
W200-1 - Lincoln Classic Welder - 1961	60	Persistent	Misc	Welder	No location available	Self Mobile

Wacker Power Buggie 3001	209	Persistent Construction	Concrete	Concrete Equipment	No location available	Self Mobile
WL250-1 - Komatsu WA 250 Wheel Loader - 2000	71	Persistent Construction	Loader	Wheel Loader	No location available	Self Mobile
WL380-1 - Komatsu WA380 Wheel Loader	72	Persistent Construction	Loader	Wheel Loader	No location available	Self Mobile
WL938H-3 - CAT 938H Wheel Loader - 2012	92	Persistent Construction	Loader	Wheel Loader	No location available	Self Mobile
WL938K-2 - CAT 938K Wheel Loader - 2014	159	Persistent Construction	Loader	Wheel Loader	No location available	Self Mobile
WL950E-1 - CAT 950E Loader Backhoe - 1988	195	Persistent Construction	Loader	Wheel Loader	No location available	Self Mobile
WL950M-2 - CAT 950M Wheel Loader - 2022	223	Persistent Construction	Loader	Wheel Loader	No location available	Self Mobile
WT-1 - Kenworth T300 Water Truck 2,500 Gallon - 2007	23	Persistent Construction	Truck	Water Truck	No location available	Self Mobile
WT-2 - International 4400 Water Truck 4,000 Gallon - 2011	167	Persistent Construction	Truck	Water Truck	No location available	Self Mobile

Certification **29544**

RENEWAL

CERTIFICATE OF EMPLOYEE INFORMATION REPORT

This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et. seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of **15-Apr-2025 to 15-Apr-2032**

PERSISTENT CONSTRUCTION, INC.

58 INDUSTRIAL AVE.

FAIRVIEW

NJ 07022



A handwritten signature in black ink, appearing to read "Elizabeth Maher Muoio".

ELIZABETH MAHER MUOIO

State Treasurer

PERSISTENT CONSTRUCTION INC
58 INDUSTRIAL AVE
FAIRVIEW, NJ 07022

State of New Jersey



**DEPARTMENT OF THE TREASURY
DIVISION OF PROPERTY MANAGEMENT AND
CONSTRUCTION
33 WEST STATE STREET - P.O. BOX 034
TRENTON, NEW JERSEY 08625-0034**



NOTICE OF CLASSIFICATION

In accordance with N.J.S.A. 18A:18A-27 et seq (Department of Education) and N.J.S.A. 52:35-1 (Department of the Treasury) and any rules and regulations issued pursuant hereto, you are hereby notified of your classification to do State work for the Department (s) as previously noted.

Aggregate Amount	Trade(s) & License(s)	Effective Date	Expiration Date
\$15,000,000	C019 -CONCRETE/FOUND. FOOTINGS/MASONRY WORK C059 -ROAD CONSTRUCTION & PAVING C056 -SEWER PIPING & STORM DRAINS C054 -SITE WORK C058 -UNDERGROUND WATER & UTILITIES	07/29/2025 07/29/2025 07/29/2025 07/29/2025 07/29/2025	07/28/2027

- Licenses associated with certain trades are on file with the Division of Property Management & Construction (DPMC).
- Current license information must be verified prior to bid award.
- A copy of the DPMC 701 Form (Total Amount of Uncompleted Projects) may be accessed from the DPMC website at <https://www.nj.gov/treasury/dpmc/Assets/Files/DPMC701.pdf>.

ANY ATTEMPT BY A CONTRACTOR TO ALTER OR MISREPRESENT ANY INFORMATION CONTAINED IN THIS FORM MAY RESULT IN PROSECUTION AND/OR DEBARMENT, SUSPENSION OR DISQUALIFICATION. INFORMATION ON AGGREGATE AMOUNTS CAN BE VERIFIED ON THE [DPMC WEB SITE](#).

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
Sordani Construction 1 Pluckemin Way, 1st Floor Bedminster, NJ 07921		The Plaza At Woodbridge, Woodbridge - Mass Excavation, Foundation Excavation and Backfill and Site Utilities		
OWNER CONTACT NAME:	Michael Rodriguez			
OWNER PHONE NO.:	908-432-3724			
OWNER EMAIL ADDRESS:	Michael.Rodriguez@sordaniconstruction.com			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 951,792	3. Grading & Paving 4G. Foundation Excavation		
DATE COMPLETED (MM/YY):	1/25/2021	8. General Concrete 22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				
Zigarelli Plumbing & Heating 18 Pine Brook Road Towaco, NJ 07082		Caven Point 8. General Concrete 22. Underground Utilities 24. Maintenance & Protection Of Traffic		
OWNER CONTACT NAME:	Vincent Zigarelli			
OWNER PHONE NO.:	973-316-8748			
OWNER EMAIL ADDRESS:				
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 53,387			
DATE COMPLETED (MM/YY):	1/31/2021			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				
Morris County Municipal Utilities Authority 214A Center Grove Rd Randolph, NJ 07869		Par/Troy Transfer Station Reconstruction, Parsippany-Troy Hills - Site Work and Underground Utilities		
OWNER CONTACT NAME:	James E Deacon			
OWNER PHONE NO.:	(973)285-4391			
OWNER EMAIL ADDRESS:	jdeacon@co.morris.nj.us			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 1,962,140	1. Grading 3. Grading & Paving		
DATE COMPLETED (MM/YY):	1/31/2021	8. General Concrete 22. Underground Utilities		
ENGINEER IN CHARGE:	Richard A. Alaimo Engineering Company			
ENGINEER PHONE NO.:	(609) 267-831 0			
ENGINEER EMAIL ADDRESS:				
City Of Jersey City Municipal Utilities Authority 550 Route 440 Jersey City, NJ 07305		JCMUA Monmouth Ave, Jersey City - Excavation, Supply, and Installation Of Screening Equipment		
OWNER CONTACT NAME:	Paul Russo			
OWNER PHONE NO.:	201-547-4561			
OWNER EMAIL ADDRESS:	prusso@icnl.org			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 859,876	1. Grading 3. Grading & Paving		
DATE COMPLETED (MM/YY):	1/31/2021	8. General Concrete 22. Underground Utilities		
ENGINEER IN CHARGE:	Paul Russo			
ENGINEER PHONE NO.:	201-547-4561			
ENGINEER EMAIL ADDRESS:	prusso@icnl.org			
BNE Real Estate Group 16 Microclub Rd, Suite A Livingston, NJ 07039		100 Hoboken Rd, Jersey City - Site Work & Utilities		
OWNER CONTACT NAME:	Aytan Gabai			
OWNER PHONE NO.:	973-650-1383			
OWNER EMAIL ADDRESS:	aygabai@bne realestate.com			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 1,000,382	1. Grading 3. Grading & Paving		
DATE COMPLETED (MM/YY):	1/31/2021	8. General Concrete 22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER: Claremont Construction Group 3 East Slow Rd Marlton, NJ 08053		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): Somerset Brownstone, Somerset - Site Work & Underground Utilities		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Philip Valente					
OWNER PHONE NO.: 908-638-3900					
OWNER EMAIL ADDRESS: pvalente@archidlg.com					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 641,994					
DATE COMPLETED (MM/YY): 3/25/2021					
ENGINEER IN CHARGE: 22. Underground Utilities					
ENGINEER PHONE NO.:					
ENGINEER EMAIL ADDRESS:					

NAME AND COMPLETE ADDRESS OF OWNER: Sordoni Construction 1 Pluckemin Way, 1st Floor Bedminster, NJ 07921		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): The Opus Rev 1, North Arlington - Mass Excavation, Foundation Excavation & Backfill & Site Utilities		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Michael Rodriguez					
OWNER PHONE NO.: 908-432-3724					
OWNER EMAIL ADDRESS: michael.rodriguez@sordonicconstruction.com					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 479,630					
DATE COMPLETED (MM/YY): 3/31/2021					
ENGINEER IN CHARGE: 3. Grading & Paving 4G. Foundation Excavation 8. General Concrete 22. Underground Utilities					
ENGINEER PHONE NO.:					
ENGINEER EMAIL ADDRESS:					

NAME AND COMPLETE ADDRESS OF OWNER: BNE Real Estate Group 16 Microlab Rd, Suite A Livingston, NJ 07039		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): Van Leer North, Jersey City - Site Work And Utilities		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Ayan Gabai					
OWNER PHONE NO.: 973-650-1383					
OWNER EMAIL ADDRESS: ayanai@bneralestate.com					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 2,776,899					
DATE COMPLETED (MM/YY): 4/30/2021					
ENGINEER IN CHARGE: 1. Grading 3. Grading & Paving 8. General Concrete 22. Underground Utilities					
ENGINEER PHONE NO.:					
ENGINEER EMAIL ADDRESS:					

NAME AND COMPLETE ADDRESS OF OWNER: The Verrichia Company 329 South Main St, Suite B Doylestown, PA 18901		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): WaWa, North Bergen - Site Work & Underground Utilities		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Jamie Graziano					
OWNER PHONE NO.: 215-230-8080					
OWNER EMAIL ADDRESS: Prime					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 2,637,734					
DATE COMPLETED (MM/YY): 7/31/2021					
ENGINEER IN CHARGE: Mark Whitaker 24. Maintenance & Protection Of Traffic					
ENGINEER PHONE NO.:					
ENGINEER EMAIL ADDRESS:					

NAME AND COMPLETE ADDRESS OF OWNER: Reggio Construction 1575 West Street Fort Lee, NJ 07024		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): Newark Ave Pedestrian Plaza - Foundation Excavation & Backfill & Site Utilities		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Brian Bigler					
OWNER PHONE NO.: 201-330-2089					
OWNER EMAIL ADDRESS: bbbigler@secaucus.net					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 224,648					
DATE COMPLETED (MM/YY): 8/31/2021					
ENGINEER IN CHARGE: 3. Grading & Paving 4G. Foundation Excavation 8. General Concrete 22. Underground Utilities					
ENGINEER PHONE NO.:					
ENGINEER EMAIL ADDRESS:					

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER: Lefrak Organization Newport Infrastructure Corporation 111 Townsquare Pl, 15th Floor Jersey City, NJ 07310		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): The Wave Sitework, Jersey City - Site Work, Excavation, Backfill, Underground Utilities, Paving and Stripping		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Melissa Barron					
OWNER PHONE NO.: 201-626-4256					
OWNER EMAIL ADDRESS: mbarron@newportconstruction.com					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 3,000,099					
DATE COMPLETED (MM/YY): 9/30/2021					
ENGINEER IN CHARGE: 					
ENGINEER PHONE NO.: 					
ENGINEER EMAIL ADDRESS: 					

NAME AND COMPLETE ADDRESS OF OWNER: Control Services 84 Harbor Drive Jersey City, NJ 07306		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): Controlled Emergency 22. Underground Utilities		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Joseph Bolowski					
OWNER PHONE NO.: 					
OWNER EMAIL ADDRESS: jbolowski@controldemo.net					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 55,980					
DATE COMPLETED (MM/YY): 10/31/2021					
ENGINEER IN CHARGE: 					
ENGINEER PHONE NO.: 					
ENGINEER EMAIL ADDRESS: 					

NAME AND COMPLETE ADDRESS OF OWNER: Suez PO Box 1069 Paramus, NJ 07652		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): Newark Ave Pedestrian Plaza - Mass Excavation, Foundation Excavation & Backfill and Site Utilities 3. Grading & Paving 4G. Foundation Excavation 8. General Concrete 22. Underground Utilities		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Dennis Davis					
OWNER PHONE NO.: 201-364-9419					
OWNER EMAIL ADDRESS: 					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 854,066					
DATE COMPLETED (MM/YY): 11/30/2021					
ENGINEER IN CHARGE: 					
ENGINEER PHONE NO.: 					
ENGINEER EMAIL ADDRESS: 					

NAME AND COMPLETE ADDRESS OF OWNER: Sordoni Construction 1 Pluckemin Way, 1st Floor Bedminster, NJ 07921		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION): Plaza At Woodbridge Phase 2 2. Paving 3. Grading & Paving 8. General Concrete 22. Underground Utilities		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? NO	
OWNER CONTACT NAME: Keith Vastola					
OWNER PHONE NO.: 908-209-7393					
OWNER EMAIL ADDRESS: keith.vastola@sordonicconstruction.com					
PRIME OR SUB-CONTRACTOR? Prime					
CONTRACT PRICE: \$ 753,528					
DATE COMPLETED (MM/YY): 11/30/2021					
ENGINEER IN CHARGE: 					
ENGINEER PHONE NO.: 					
ENGINEER EMAIL ADDRESS: 					

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Del-Sano Contracting 40 Monmouth Park Hwy West Long Branch, NJ 07764	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Khesler Magano	NJIT Green		
OWNER PHONE NO.:	908-688-8891			
OWNER EMAIL ADDRESS:	kmagano@del-sano.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 694,466	7. Electrical		
DATE COMPLETED (MM/YY):	11/30/2021	8. General Concrete		
ENGINEER IN CHARGE:		22. Underground Utilities		
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Sordoni Construction 1 Pluckemin Way, 1st Floor Bedminster, NJ 07921	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Dayton Pierce	Essex Green Starbucks		
OWNER PHONE NO.:	908-285-1739			
OWNER EMAIL ADDRESS:	dayton.pierce@sordoniconstruction.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 731,349	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2021	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Secaucus Municipal Utilities Authority 1100 Koelle Blvd Secaucus, NJ 07094	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Brian Bigler	Secaucus MUA 2020-2021		
OWNER PHONE NO.:	201-330-2089			
OWNER EMAIL ADDRESS:	bbigler@secaucus.net	22. Underground Utilities		
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 245,168			
DATE COMPLETED (MM/YY):	12/31/2021			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	North Hudson Sewerage Authority 1600 Adams Street Hoboken, NJ 07030	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Belissa Vega	Green Infrastructure Project		
OWNER PHONE NO.:	201-963-6043 ext. 210			
OWNER EMAIL ADDRESS:	bvega@nhdsonsa.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 385,050	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2021	22. Underground Utilities		
ENGINEER IN CHARGE:	Kevin P. Wynn			
ENGINEER PHONE NO.:	973-912-2537			
ENGINEER EMAIL ADDRESS:	kevin.wynn@mottmac.com			

NAME AND COMPLETE ADDRESS OF OWNER:	NADC Realty Group Realty Operations Group PO Box 2010 Hazlet, PA 16701	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Melissa Barron	Pier 199 Hardscope		
OWNER PHONE NO.:	201-626-4256			
OWNER EMAIL ADDRESS:	mbarron@newportconstruction.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 1,677,949	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2021	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME: Molba Construction 392 Liberty Street Little Ferry, NJ 07643 OWNER PHONE NO.: Dina Manchini/Michelle Altamura 201-488-6555 Ext. 304 OWNER EMAIL ADDRESS: dina@molbaconstruction.com PRIME OR SUB-CONTRACTOR? Prime CONTRACT PRICE: \$ 424,780 DATE COMPLETED (MM/YY): 12/31/2021 ENGINEER IN CHARGE: ENGINEER PHONE NO.: ENGINEER EMAIL ADDRESS:	Maayanot Yeshiva High School 3. Grading & Paving 8. General Concrete 22. Underground Utilities		
OWNER CONTACT NAME: City Of Bayonne 630 Ave C Bayonne, NJ 07022 OWNER PHONE NO.: Nicholas DeCottis 973-240-1800 OWNER EMAIL ADDRESS: ndcottis@mnwwe.com PRIME OR SUB-CONTRACTOR? Prime CONTRACT PRICE: \$ 984,414 DATE COMPLETED (MM/YY): 12/31/2021 ENGINEER IN CHARGE: ENGINEER PHONE NO.: ENGINEER EMAIL ADDRESS:	Bayonne Veterans Park, Bayonne - Site Work & Underground Utilities 3. Grading & Paving 8. General Concrete 22. Underground Utilities 29. Sampling & Analysis		
OWNER CONTACT NAME: Sordom Construction 1 Pluckemin Way, 1st Floor Bedminster, NJ 07921 OWNER PHONE NO.: Dayton Pierce 908-285-1739 OWNER EMAIL ADDRESS: dayton.pierce@sordomconstruction.com PRIME OR SUB-CONTRACTOR? Prime CONTRACT PRICE: \$ 591,829 DATE COMPLETED (MM/YY): 2/28/2022 ENGINEER IN CHARGE: ENGINEER PHONE NO.: ENGINEER EMAIL ADDRESS:	The Grand & Parking Garage 1. Grading 8. General Concrete 22. Underground Utilities		
OWNER CONTACT NAME: Plaza Construction 1065 Avenue Of The Americas New York, NY 10018 OWNER PHONE NO.: Jesus Pacanins 201-354-1991 OWNER EMAIL ADDRESS: jpacanins@hlazaconstruction.com PRIME OR SUB-CONTRACTOR? Prime CONTRACT PRICE: \$ 126,979 DATE COMPLETED (MM/YY): 2/28/2022 ENGINEER IN CHARGE: MARCHETTO HIGGINS STIEVE ENGINEER PHONE NO.: ENGINEER EMAIL ADDRESS:	One Grove 3. Grading & Paving 8. General Concrete 22. Underground Utilities		
OWNER CONTACT NAME: BNE Real Estate Group 16 Microlab Rd, Suite A Livingston, NJ 07039 OWNER PHONE NO.: Ayran Gabai 973-650-1383 OWNER EMAIL ADDRESS: agabai@bnearealestate.com PRIME OR SUB-CONTRACTOR? Prime CONTRACT PRICE: \$ 2,669,886 DATE COMPLETED (MM/YY): 2/28/2022 ENGINEER IN CHARGE: ENGINEER PHONE NO.: ENGINEER EMAIL ADDRESS:	Parkings Apartments, Fairfield - Mass Excavation, Foundation Excavation and Backfill and Site Utilities 1. Grading 3. Grading & Paving 4G. Foundation Excavation 8. General Concrete 22. Underground Utilities		

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
Noble Construction Group 1 Harmon Plaza Secaucus, NJ 07094	413 Summit Ave, Jersey City		
OWNER CONTACT NAME:	Melanie Leonard		
OWNER PHONE NO.:	201-770-1120		
OWNER EMAIL ADDRESS:			
PRIME OR SUB-CONTRACTOR?	Prime		
CONTRACT PRICE:	\$ 583,818		
DATE COMPLETED (MM/YY):	4/30/2022		
ENGINEER IN CHARGE:	Posen Architects, LLC		
ENGINEER PHONE NO.:			
ENGINEER EMAIL ADDRESS:			
NAME AND COMPLETE ADDRESS OF OWNER:	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
Plaza Construction 1065 Avenue Of The Americas New York, NY 10018	Gateway Plaza Site Work SOV		
OWNER CONTACT NAME:	David Kwesela		
OWNER PHONE NO.:	347-498-4056		
OWNER EMAIL ADDRESS:	dkwesela@plazaconstruction.com		
PRIME OR SUB-CONTRACTOR?	Prime		
CONTRACT PRICE:	\$ 982,771		
DATE COMPLETED (MM/YY):	5/31/2022		
ENGINEER IN CHARGE:			
ENGINEER PHONE NO.:			
ENGINEER EMAIL ADDRESS:			
NAME AND COMPLETE ADDRESS OF OWNER:	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
Vose Ave Apts Urban Renewal Urban Renewal LLC 447 Northfield Ave, Suite 200 West Orange, NJ 07052	Vose Apartments		
OWNER CONTACT NAME:	Tino Calinda		
OWNER PHONE NO.:	732-803-5937		
OWNER EMAIL ADDRESS:	tinocalinda@mcchruusa.com		
PRIME OR SUB-CONTRACTOR?	Prime		
CONTRACT PRICE:	\$ 1,560,294		
DATE COMPLETED (MM/YY):	6/30/2022		
ENGINEER IN CHARGE:			
ENGINEER PHONE NO.:			
ENGINEER EMAIL ADDRESS:			
NAME AND COMPLETE ADDRESS OF OWNER:	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
Stavola Newark Terminal LLC 175 Drift Road Tinton Falls, NJ 07724	330 Doremus Ave		
OWNER CONTACT NAME:	Christine Amoroso		
OWNER PHONE NO.:	973-760-7982		
OWNER EMAIL ADDRESS:	gamoroso@surepathconstruction.com		
PRIME OR SUB-CONTRACTOR?	Prime		
CONTRACT PRICE:	\$ 2,334,511		
DATE COMPLETED (MM/YY):	6/30/2022		
ENGINEER IN CHARGE:	McLaren Engineering Group		
ENGINEER PHONE NO.:			
ENGINEER EMAIL ADDRESS:			
NAME AND COMPLETE ADDRESS OF OWNER:	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
Jersey City Municipal Utilities Authority 555 Route 440 Jersey City, NJ 07305	Newark Ave Pedestrian Plaza - Extended Scope		
OWNER CONTACT NAME:	Antonio Cunha		
OWNER PHONE NO.:	201-432-1150		
OWNER EMAIL ADDRESS:	a.cunha@jcmua.com		
PRIME OR SUB-CONTRACTOR?	Prime		
CONTRACT PRICE:	\$ 1,428,137		
DATE COMPLETED (MM/YY):	6/30/2022		
ENGINEER IN CHARGE:			
ENGINEER PHONE NO.:			
ENGINEER EMAIL ADDRESS:			

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:		Ave Building Partners 32 Mount Kemble Ave Morristown, NJ 07960		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:		NO	
OWNER CONTACT NAME:		Dana Garfinkel		St. Lucy's Shelter					
OWNER PHONE NO.:		908-658-3900							
OWNER EMAIL ADDRESS:		dgarfinkel@arcblldg.com		1. Grading					
PRIME OR SUB-CONTRACTOR?		Prime		3. Grading & Paving					
CONTRACT PRICE:		\$ 552,304		8. General Concrete					
DATE COMPLETED (MM/YY):		7/31/2022		22. Underground Utilities					
ENGINEER IN CHARGE:									
ENGINEER PHONE NO.:									
ENGINEER EMAIL ADDRESS:									

NAME AND COMPLETE ADDRESS OF OWNER:		Sordoni Construction 1 Pluckemin Way, 1st Floor Bedminster, NJ 07921		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:		NO	
OWNER CONTACT NAME:		Dayton Pierce		The Grand Utilities & Silework					
OWNER PHONE NO.:		(908)-285-1739							
OWNER EMAIL ADDRESS:		dayton.pierce@sordoniconstruction.com		1. Grading					
PRIME OR SUB-CONTRACTOR?		Prime		3. Grading & Paving					
CONTRACT PRICE:		\$ 1,613,444		8. General Concrete					
DATE COMPLETED (MM/YY):		12/31/2022		22. Underground Utilities					
ENGINEER IN CHARGE:		Costa Engineering Corp							
ENGINEER PHONE NO.:									
ENGINEER EMAIL ADDRESS:									

NAME AND COMPLETE ADDRESS OF OWNER:		NADC Realty Group Realty Operations Group PO Box 2010 Hawdston, PA 18201		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:		NO	
OWNER CONTACT NAME:		Melissa Barron		The Wave 2					
OWNER PHONE NO.:		201-626-4256							
OWNER EMAIL ADDRESS:		mbarron@newportconstructionnj.com		3. Grading & Paving					
PRIME OR SUB-CONTRACTOR?		Prime		8. General Concrete					
CONTRACT PRICE:		\$ 147,515		22. Underground Utilities					
DATE COMPLETED (MM/YY):		12/31/2022							
ENGINEER IN CHARGE:									
ENGINEER PHONE NO.:									
ENGINEER EMAIL ADDRESS:									

NAME AND COMPLETE ADDRESS OF OWNER:		Jersey City Municipal Utilities Authority 555 Route 440 Jersey City, NJ 07305		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:		NO	
OWNER CONTACT NAME:		Antonio Cunha		JCMUA Brunswick St Repairs					
OWNER PHONE NO.:		201-432-1150							
OWNER EMAIL ADDRESS:		a.cunha@jcmua.com		1. Grading					
PRIME OR SUB-CONTRACTOR?		Prime		3. Grading & Paving					
CONTRACT PRICE:		\$ 2,395,150		8. General Concrete					
DATE COMPLETED (MM/YY):		13/21/2022		22. Underground Utilities					
ENGINEER IN CHARGE:									
ENGINEER PHONE NO.:									
ENGINEER EMAIL ADDRESS:									

NAME AND COMPLETE ADDRESS OF OWNER:		ARC Building Partners 32 Mount Kemble Ave Morristown, NJ 07960		DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):		WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:		NO	
OWNER CONTACT NAME:		Jane Puleo		Bayonne Ave G - Phase 3					
OWNER PHONE NO.:		908-658-3900							
OWNER EMAIL ADDRESS:		jpuleo@arcblldg.com		1. Grading					
PRIME OR SUB-CONTRACTOR?		Prime		3. Grading & Paving					
CONTRACT PRICE:		\$ 1,648,234		8. General Concrete					
DATE COMPLETED (MM/YY):		12/31/2022		22. Underground Utilities					
ENGINEER IN CHARGE:									
ENGINEER PHONE NO.:									
ENGINEER EMAIL ADDRESS:									

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Jersey City Municipal Utilities Authority 555 Route 440 Jersey City, NJ 07305	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Antonio Curbao	Bartholdi Street, Jersey City		
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.curbao@icmua.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$	8. General Concrete		
DATE COMPLETED (MM/YY):	2,272,911 12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Del-Sano Contracting 40 Monmouth Park Hwy West Long Branch, NJ 07764	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Bob Montesano	District 15 Fifteen Sitework		
OWNER PHONE NO.:	908-688-8891			
OWNER EMAIL ADDRESS:	bmontesano@delsano.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$	8. General Concrete		
DATE COMPLETED (MM/YY):	10,224,125 12/31/2024	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Atlantic c/o Realty Operations Group 30 W 57th Street New York, NY 10019	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Melissa Barron	Atlantic Curb Valve Replacement		
OWNER PHONE NO.:	201-626-4256			
OWNER EMAIL ADDRESS:	mbarron@newportconstruction.com	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$	22. Underground Utilities		
DATE COMPLETED (MM/YY):	26,692 12/31/2023			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Morris County Municipal Utilities Authority 214A Center Grove Rd Randolph, NJ 07869	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	James E Deacon	ParTroy Transfer Station Site Repairs		
OWNER PHONE NO.:	973-285-8391			
OWNER EMAIL ADDRESS:	jdeacon@co.morris.nj.us	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$	22. Underground Utilities		
DATE COMPLETED (MM/YY):	1,649,199 12/31/2022			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Plaza Construction 1065 Avenue Of The Americas New York, NY 10018	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Anthony Cosenza	One Grove Sitework		
OWNER PHONE NO.:	201-354-1995			
OWNER EMAIL ADDRESS:	ACosenza@PlazaConstruction.com	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$	22. Underground Utilities		
DATE COMPLETED (MM/YY):	371,195 12/31/2023			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Claremont Construction Group 49 US-202 Far Hills, NJ 07931	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED?	NO
OWNER CONTACT NAME:	Pat Cox	101 Main Street Warehouse	IF YES, PLEASE EXPLAIN:	
OWNER PHONE NO.:	908-658-3900			
OWNER EMAIL ADDRESS:	pat@clarecon.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 1,679,344	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Morris County Municipal Utilities Authority 214A Center Grove Rd Randolph, NJ 07869	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED?	NO
OWNER CONTACT NAME:	James E Deacon	Mount Olive Tipping Floor Restoration	IF YES, PLEASE EXPLAIN:	
OWNER PHONE NO.:	973-285-8391			
OWNER EMAIL ADDRESS:	jdeacon@co.morris.nj.us	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 1,998,150	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	NADC Realty Group Realty Operations Group PO Box 2010 Hazellton, PA 18201	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED?	NO
OWNER CONTACT NAME:	Melissa Barron	Site 4BC Sitework - The Wave	IF YES, PLEASE EXPLAIN:	
OWNER PHONE NO.:	201-626-4256			
OWNER EMAIL ADDRESS:	mbarron@newportconstructionnj.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 619,500	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Del-Sano Contracting 40 Monmouth Park Hwy West Long Branch, NJ 07764	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED?	NO
OWNER CONTACT NAME:	Divya Haritha Katari	The Braddock	IF YES, PLEASE EXPLAIN:	
OWNER PHONE NO.:	908-688-8891			
OWNER EMAIL ADDRESS:	dkatari@delisano.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 581,435	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Jersey City Municipal Utilities Authority 555 Route 440 Jersey City, NJ 07305	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED?	NO
OWNER CONTACT NAME:	Antonio Cunha	DPW Linden Ave Emergency Work	IF YES, PLEASE EXPLAIN:	
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.cunha@jcmua.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 802,920	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Stavola Newark Terminal LLC 175 Drift Road Tinton Falls, NJ 07724	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Christine Amoresano	25 Ton 60' Long Reach Excavator Rental		
OWNER PHONE NO.:	973-760-7982			
OWNER EMAIL ADDRESS:	camoresano@surepathconstruction.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 92,850	8. General Concrete		
DATE COMPLETED (MM/YY):	6/30/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Stavola Newark Terminal LLC 175 Drift Road Tinton Falls, NJ 07724	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Christine Amoresano	Scale Pad at Brick Asphalt		
OWNER PHONE NO.:	973-760-7982			
OWNER EMAIL ADDRESS:	camoresano@surepathconstruction.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 63,300	8. General Concrete		
DATE COMPLETED (MM/YY):	6/30/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Hudson County Improvement Authority 830 Bergen Ave Jersey City, NJ 07306	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Norman Guerra	Hudson County Infrastructure Improvement		
OWNER PHONE NO.:	201-795-4555			
OWNER EMAIL ADDRESS:	norman@hcia.org	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$ 6,060,415	22. Underground Utilities		
DATE COMPLETED (MM/YY):	6/30/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Township of Teaneck 818 Teaneck Rd Teaneck, NJ 07666	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Travon Romeo	Teaneck Repairs 2022		
OWNER PHONE NO.:	201-837-1600			
OWNER EMAIL ADDRESS:	T.Romeo@TeaneckNJ.gov	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$ 39,990	22. Underground Utilities		
DATE COMPLETED (MM/YY):	6/30/2022			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	ZDG Construction Management 192 Lexington Ave New York, NY 10016	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	James Titolo	Slip Avenue Water Valve Leak		
OWNER PHONE NO.:	646-795-1719			
OWNER EMAIL ADDRESS:	jtitolo@zdgllc.com	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$ 12,574	22. Underground Utilities		
DATE COMPLETED (MM/YY):	3/31/2023			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Slavola Newark Terminal LLC 175 Drift Road Tinton Falls, NJ 07724	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Christine Amoresano	Slavola Plant Maintenance		
OWNER PHONE NO.:	973-760-7982			
OWNER EMAIL ADDRESS:	camoresano@surepathconstruction.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 35,955	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	NJ DOT PO Box 600 Trenton, NJ 08625	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Chris Beyer	CSX 2022-2023		
OWNER PHONE NO.:	973-274-2495			
OWNER EMAIL ADDRESS:	chris.beyer@csx.com			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 918,098			
DATE COMPLETED (MM/YY):	12/31/2023			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	NADC Realty Group Realty Operations Group PO Box 2010 Hidolton, PA 18201	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Melissa Barron	Towers of America		
OWNER PHONE NO.:	201-626-4256			
OWNER EMAIL ADDRESS:	mbarron@newportconstructionll.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 2,643,874	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Pavonia Construction Corp 111 Town Square Place Suite 300 Jersey City, NJ 07310	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Melissa Barron	Lincoln Lot Site Work & Utilities		
OWNER PHONE NO.:	201-626-4256			
OWNER EMAIL ADDRESS:	mbarron@newportconstructionll.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 821,950	8. General Concrete		
DATE COMPLETED (MM/YY):	11/30/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Sevenson Environmental Services, Inc. 195 Morse St #1 Hamden, CT 06517	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Marc Rizzo	Unimatic		
OWNER PHONE NO.:	716-284-0431			
OWNER EMAIL ADDRESS:	MRizzo@sevenson.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 255,888	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Borough of Madison 50 Kings Rd Madison, NJ 07940	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Robert Vogel	Memorial Park Foot Bridge Repair		
OWNER PHONE NO.:	973-593-3060			
OWNER EMAIL ADDRESS:	vojelr@rosenet.org			
PRIME OR SUB-CONTRACTOR?	Prime	1. Grading 3. Grading & Paving 8. General Concrete		
CONTRACT PRICE:	\$ 39,774			
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Waterware 92 Research Dr Stamford, CT 06906	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Kevin Byrnes	Insertion Valve @ Bergen & Sip		
OWNER PHONE NO.:	215-426-5225			
OWNER EMAIL ADDRESS:	kevinb@waterwarecorp.com			
PRIME OR SUB-CONTRACTOR?	Prime	1. Grading 3. Grading & Paving 8. General Concrete		
CONTRACT PRICE:	\$ 89,195			
DATE COMPLETED (MM/YY):	12/31/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	F.W. Webb Company 2350 12th Ave New York, NY 10031	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Brett Chwyski	FW Webb Piscataway Floor Repairs		
OWNER PHONE NO.:	732-545-1018			
OWNER EMAIL ADDRESS:				
PRIME OR SUB-CONTRACTOR?	Prime	1. Grading 3. Grading & Paving 8. General Concrete		
CONTRACT PRICE:	\$ 6,075			
DATE COMPLETED (MM/YY):	9/1/2023	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	County of Bergen One Bergen County Plaza Hackensack, NJ 07601	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Joseph Femia	Utility Construction, Bridge & Culvert Repairs		
OWNER PHONE NO.:	201-336-6805			
OWNER EMAIL ADDRESS:	femia@co.bergen.nj.us			
PRIME OR SUB-CONTRACTOR?	Prime	1. Grading 3. Grading & Paving 8. General Concrete		
CONTRACT PRICE:	\$ 2,000,000			
DATE COMPLETED (MM/YY):	12/31/2024	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Consigli Construction 1441 Broadway New York, NY 10018	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Parker Hansen	Hudson Exchange Phase II		
OWNER PHONE NO.:	332-205-2341			
OWNER EMAIL ADDRESS:	phansen@consigli.com			
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete 22. Underground Utilities		
CONTRACT PRICE:	\$ 932,855			
DATE COMPLETED (MM/YY):	6/30/2025			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Hudson County Community College 26 Journal Square Jersey City, NJ 07306	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Troy Marziotti	119 Newkirk Street		
OWNER PHONE NO.:	973-837-1515			
OWNER EMAIL ADDRESS:	marziotti@masconstruction.com	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$	22. Underground Utilities		
DATE COMPLETED (MM/YY):	10/31/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Jersey City Municipal Utilities Authority 13-15 Linden Ave E Jersey City, NJ 07305	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Antonio Cunha	Newark & Grove Watermain		
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.cunha@icmua.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$	8. General Concrete		
DATE COMPLETED (MM/YY):	284.418 6/30/2024	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	City of Jersey City 280 Grove Street Jersey City, NJ 07302	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Chris Charas	Reservoir #3 Jefferson Ave Bridge		
OWNER PHONE NO.:	201-547-5500			
OWNER EMAIL ADDRESS:	charasc@icnj.org	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$	8. General Concrete		
DATE COMPLETED (MM/YY):	417.360 6/30/2024	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Sordoni Construction 1 Pluckemin Way Bedminster, NJ 07921	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Daniel Sager	1075 West Side Square Project		
OWNER PHONE NO.:	908-879-1130			
OWNER EMAIL ADDRESS:	daniel.sager@sordonicconstruction.com	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$	22. Underground Utilities		
DATE COMPLETED (MM/YY):	6,155.158 10/31/2025			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Waterware Corp 2502 Edgemont St Philadelphia, PA 19125	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Antonio Cunha	Waterware (Ridge Rd)		
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.cunha@icmua.com	8. General Concrete		
PRIME OR SUB-CONTRACTOR?	Prime	22. Underground Utilities		
CONTRACT PRICE:	\$			
DATE COMPLETED (MM/YY):	1,020.085 11/30/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Sordoni Construction 1 Pluckemin Way Bedminster, NJ 07921	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Daniel Sager	Garden State Plaza		
OWNER PHONE NO.:	908-879-1130			
OWNER EMAIL ADDRESS:	daniel.sager@sordonicconstruction.com			
PRIME OR SUB-CONTRACTOR?	Prime	1. Grading 3. Grading & Paving 8. General Concrete 22. Underground Utilities		
CONTRACT PRICE:	\$ 13,500,000			
DATE COMPLETED (MM/YY):	2/29/26			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	NADC Realty Group Realty Operations Group PO Box 2010 Hazleton, PA 18201	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Melissa Barron	Site 4BC - Roof Curbs		
OWNER PHONE NO.:	201-626-4256			
OWNER EMAIL ADDRESS:	mbarron@newportconstruction.com	3. Grading & Paving 8. General Concrete 22. Underground Utilities		
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 390,000			
DATE COMPLETED (MM/YY):	12/31/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	The Town Of West New York 428 - 60th Street West New York, NJ 07093	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Jonathan Castañeda	West New York - Snow Removal		
OWNER PHONE NO.:	201-295-5119			
OWNER EMAIL ADDRESS:	jcastaneda@westnewyorknj.org			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 93,000			
DATE COMPLETED (MM/YY):	10/31/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	City Of Jersey City 280 Grove Street Jersey City, NJ 07302	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Chris Charas	Jersey City Snow Removal		
OWNER PHONE NO.:	201-547-5900			
OWNER EMAIL ADDRESS:	CharasC@cityofjersey.org			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 6,465			
DATE COMPLETED (MM/YY):	12/31/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Secaucus Municipal Utilities Authority 1100 Koelle Blvd Secaucus, NJ 07094	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Brian Bialer	SMUA Emergency Contract 2024-2025		
OWNER PHONE NO.:	201-330-2089	22. Underground Utilities		
OWNER EMAIL ADDRESS:	bbialer@secaucus.net			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 1,005,874			
DATE COMPLETED (MM/YY):	12/31/2025			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Jersey City Municipal Utilities Authority 13-15 Linden Ave E Jersey City, NJ 07305	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Antonio Cunha	18 & Monmouth - Roof Chamber Repairs		
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.cunha@cmua.com	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$ 253,200	22. Underground Utilities		
DATE COMPLETED (MM/YY):				
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Jersey City Municipal Utilities Authority 13-15 Linden Ave E Jersey City, NJ 07305	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Antonio Cunha	Outfall Repair At St. Paul's Ave		
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.cunha@cmua.com	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 227,500	8. General Concrete		
DATE COMPLETED (MM/YY):	12/31/2024	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Office of the County Counsel County of Union 10 Elizabethown Plaza Elizabeth, NJ 07207	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Emilie T. Ngo	Passaic Ave Bridge Over Passaic River		
OWNER PHONE NO.:	908-527-4250			
OWNER EMAIL ADDRESS:	engo@ucnj.org	1. Grading		
PRIME OR SUB-CONTRACTOR?	Prime	3. Grading & Paving		
CONTRACT PRICE:	\$ 3,434,250	8. General Concrete		
DATE COMPLETED (MM/YY):	10/31/2025	22. Underground Utilities		
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Jersey City Municipal Utilities Authority 13-15 Linden Ave E Jersey City, NJ 07305	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Antonio Cunha	Newark And Grove Water Main Replacement		
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.cunha@cmua.com	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$ 1,695,580	22. Underground Utilities		
DATE COMPLETED (MM/YY):	5/31/2025			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

NAME AND COMPLETE ADDRESS OF OWNER:	Brandt Hospitality Group 2640 47th St S Fargo, ND 58104	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Josh Ramberg	Participant Residence Inn		
OWNER PHONE NO.:	701-551-4910			
OWNER EMAIL ADDRESS:	Josh.Ramberg@BrandtHG.com	3. Grading & Paving		
PRIME OR SUB-CONTRACTOR?	Prime	8. General Concrete		
CONTRACT PRICE:	\$ 1,200,000	22. Underground Utilities		
DATE COMPLETED (MM/YY):	11/1/2025			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				

5 PERFORMANCE RECORD FOR THE PAST FOUR (4) YEARS. LIST ALL CONTRACTS COMPLETED BY YOU DURING THE PAST FOUR (4) YEARS. INCLUDE PROPORTIONATE SHARE OF JOINT VENTURE CONTRACTS AND IDENTIFY OTHER FIRMS IN JOINT VENTURE.

NAME AND COMPLETE ADDRESS OF OWNER:	Jersey City Municipal Utilities Authority 13-15 Linden Ave E Jersey City, NJ 07305	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Antonio Cunha	Johnston & Halladay Emergency Sewer Repair 1. Grading 3. Grading & Paving 8. General Concrete 22. Underground Utilities		
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.cunha@icmua.com			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 588,630			
DATE COMPLETED (MM/YY):	8/31/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				
NAME AND COMPLETE ADDRESS OF OWNER:	Jersey City Municipal Utilities Authority 13-15 Linden Ave E Jersey City, NJ 07305	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Antonio Cunha	Recon Of St. Paul's Outfall 1. Grading 3. Grading & Paving 8. General Concrete 22. Underground Utilities		
OWNER PHONE NO.:	201-432-1150			
OWNER EMAIL ADDRESS:	a.cunha@icmua.com			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 1,300,000			
DATE COMPLETED (MM/YY):	9/30/2025			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				
NAME AND COMPLETE ADDRESS OF OWNER:	Waterware 2502 Edgemont Street Philadelphia, PA 19125	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Kevin Byrnes	Ridge Road Fire Hydrants 3. Grading & Paving 8. General Concrete		
OWNER PHONE NO.:	215-426-5225			
OWNER EMAIL ADDRESS:	Kevinb@waterwarecorp.com			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 832,420			
DATE COMPLETED (MM/YY):	9/30/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				
NAME AND COMPLETE ADDRESS OF OWNER:	Skyway Golf Course 1515 Duncan Ave Jersey City, NJ 07306	DETAILED DESCRIPTION OF PROJECT (SEE PG. 14-21 FOR WORK TYPE NUMBERS AND DESCRIPTION):	WERE THERE ANY TIME EXTENSIONS, PENALTIES, OR LIENS IMPOSED? IF YES, PLEASE EXPLAIN:	NO
OWNER CONTACT NAME:	Stephen Mills	Skyway Concrete Pad 1. Grading 3. Grading & Paving		
OWNER PHONE NO.:	201-763-7520			
OWNER EMAIL ADDRESS:	smills@kempersports.com			
PRIME OR SUB-CONTRACTOR?	Prime			
CONTRACT PRICE:	\$ 28,125			
DATE COMPLETED (MM/YY):	5/31/2024			
ENGINEER IN CHARGE:				
ENGINEER PHONE NO.:				
ENGINEER EMAIL ADDRESS:				



State of New Jersey

DEPARTMENT OF THE TREASURY
DIVISION OF REVENUE & ENTERPRISE SERVICES
P.O. BOX 026

TRENTON, NJ 08625-026
PHONE: 609-292-2146 FAX: 609-984-6679

PHIL MURPHY
Governor

TAHESHA WAY, ESQ.
Lt. Governor

ELIZABETH MAHER MUOIO
State Treasurer

5-YEAR RECERTIFICATION

APPROVED

under the

Small Business Set-Aside Act

This certificate acknowledges PERSISTENT CONSTRUCTION, INC. as a Category 5 Approved Small Business Enterprise (SBE) that has met the criteria established by N.J.A.C. 17:13.

In order for this certification to remain in effect **throughout the 5 year certification period**, the business **must submit annual verification statements** attesting that there has been no change in ownership, control, or any other factor of the business affecting eligibility for certification as a small business. The verification statements must be submitted **not more than 60 days** prior to the anniversary of the certification approval.

If the business fails to submit the annual verification statement by the anniversary date, or a renewal by its expiration date, the certification will lapse and the business will be removed from the system (SAVI) that lists small business entities. If the business seeks to be certified again, it will have to reapply by submitting a new application.



Peter Lowicki
Deputy Director

Issued: 9/8/2023

Certification Number: A0399-54

***Expiration: 9/8/2028**

***As noted above, in order to maintain its certification status, the business must submit verification statements for each of the five years.**

**Request for Taxpayer
Identification Number and Certification**

Go to www.irs.gov/FormW9 for instructions and the latest information.

**Give form to the
requester. Do not
send to the IRS.**

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See Specific Instructions on page 3.	1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.) Persistent Construction, Inc.	
	2 Business name/disregarded entity name, if different from above. Same As Above.	
	3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C corporation <input checked="" type="checkbox"/> S corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____ Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____ (Applies to accounts maintained outside the United States.)
	3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions _____ <input type="checkbox"/>	
	5 Address (number, street, and apt. or suite no.). See instructions. 58 Industrial Ave 6 City, state, and ZIP code Fairview, NJ 07022 7 List account number(s) here (optional)	Requester's name and address (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number								
			-					
or								
Employer identification number								
2	2		-	3	5	2	0	1 0 9

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person <i>Olga Liapis</i>
------------------	--

Date *01/01/25*

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

must obtain your correct taxpayer identification number (TIN), which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid).
- Form 1099-DIV (dividends, including those from stocks or mutual funds).
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds).
- Form 1099-NEC (nonemployee compensation).
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers).
- Form 1099-S (proceeds from real estate transactions).
- Form 1099-K (merchant card and third-party network transactions).
- Form 1098 (home mortgage interest), 1098-E (student loan interest), and 1098-T (tuition).
- Form 1099-C (canceled debt).
- Form 1099-A (acquisition or abandonment of secured property).

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

Caution: If you don't return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding*, later.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued);
2. Certify that you are not subject to backup withholding; or
3. Claim exemption from backup withholding if you are a U.S. exempt payee; and
4. Certify to your non-foreign status for purposes of withholding under chapter 3 or 4 of the Code (if applicable); and
5. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting is correct. See *What Is FATCA Reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding. Payments made to foreign persons, including certain distributions, allocations of income, or transfers of sales proceeds, may be subject to withholding under chapter 3 or chapter 4 of the Code (sections 1441–1474). Under those rules, if a Form W-9 or other certification of non-foreign status has not been received, a withholding agent, transferee, or partnership (payor) generally applies presumption rules that may require the payor to withhold applicable tax from the recipient, owner, transferor, or partner (payee). See Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*.

The following persons must provide Form W-9 to the payor for purposes of establishing its non-foreign status.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the disregarded entity.
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the grantor trust.
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust and not the beneficiaries of the trust.

See Pub. 515 for more information on providing a Form W-9 or a certification of non-foreign status to avoid withholding.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person (under Regulations section 1.1441-1(b)(2)(iv) or other applicable section for chapter 3 or 4 purposes), do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515). If you are a qualified foreign pension fund under Regulations section 1.897(l)-1(d), or a partnership that is wholly owned by qualified foreign pension funds, that is treated as a non-foreign person for purposes of section 1445 withholding, do not use Form W-9. Instead, use Form W-8EXP (or other certification of non-foreign status).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a saving clause. Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.–China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if their stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.–China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first Protocol) and is relying on this exception to claim an exemption from tax on their scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called “backup withholding.” Payments that may be subject to backup withholding include, but are not limited to, interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third-party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester;
2. You do not certify your TIN when required (see the instructions for Part II for details);
3. The IRS tells the requester that you furnished an incorrect TIN;
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only); or
5. You do not certify to the requester that you are not subject to backup withholding, as described in item 4 under “*By signing the filled-out form*” above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

See also *Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding*, earlier.

What Is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all U.S. account holders that are specified U.S. persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you are no longer tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account, for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

• **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note for ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040 you filed with your application.

• **Sole proprietor.** Enter your individual name as shown on your Form 1040 on line 1. Enter your business, trade, or "doing business as" (DBA) name on line 2.

• **Partnership, C corporation, S corporation, or LLC, other than a disregarded entity.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

• **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. Enter any business, trade, or DBA name on line 2.

• **Disregarded entity.** In general, a business entity that has a single owner, including an LLC, and is not a corporation, is disregarded as an entity separate from its owner (a disregarded entity). See Regulations section 301.7701-2(c)(2). A disregarded entity should check the appropriate box for the tax classification of its owner. Enter the owner's name on line 1. The name of the owner entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For

example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2. If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, enter it on line 2.

Line 3a

Check the appropriate box on line 3a for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3a.

IF the entity/individual on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation.
• Individual or	Individual/sole proprietor.
• Sole proprietorship	
• LLC classified as a partnership for U.S. federal tax purposes or	Limited liability company and enter the appropriate tax classification:
• LLC that has filed Form 8832 or 2553 electing to be taxed as a corporation	P = Partnership, C = C corporation, or S = S corporation.
• Partnership	Partnership.
• Trust/estate	Trust/estate.

Line 3b

Check this box if you are a partnership (including an LLC classified as a partnership for U.S. federal tax purposes), trust, or estate that has any foreign partners, owners, or beneficiaries, and you are providing this form to a partnership, trust, or estate, in which you have an ownership interest. You must check the box on line 3b if you receive a Form W-8 (or documentary evidence) from any partner, owner, or beneficiary establishing foreign status or if you receive a Form W-9 from any partner, owner, or beneficiary that has checked the box on line 3b.

Note: A partnership that provides a Form W-9 and checks box 3b may be required to complete Schedules K-2 and K-3 (Form 1065). For more information, see the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

If you are required to complete line 3b but fail to do so, you may not receive the information necessary to file a correct information return with the IRS or furnish a correct payee statement to your partners or beneficiaries. See, for example, sections 6698, 6722, and 6724 for penalties that may apply.

Line 4 Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third-party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space on line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2).

- 2—The United States or any of its agencies or instrumentalities.
- 3—A state, the District of Columbia, a U.S. commonwealth or territory, or any of their political subdivisions or instrumentalities.
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities.
- 5—A corporation.
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or territory.
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission.
- 8—A real estate investment trust.
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940.
- 10—A common trust fund operated by a bank under section 584(a).
- 11—A financial institution as defined under section 581.
- 12—A middleman known in the investment community as a nominee or custodian.
- 13—A trust exempt from tax under section 664 or described in section 4947.

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
• Interest and dividend payments	All exempt payees except for 7.
• Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
• Barter exchange transactions and patronage dividends	Exempt payees 1 through 4.
• Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5. ²
• Payments made in settlement of payment card or third-party network transactions	Exempt payees 1 through 4.

¹See Form 1099-MISC, Miscellaneous Information, and its instructions.

²However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) entered on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37).

B—The United States or any of its agencies or instrumentalities.

C—A state, the District of Columbia, a U.S. commonwealth or territory, or any of their political subdivisions or instrumentalities.

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i).

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i).

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state.

G—A real estate investment trust.

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940.

I—A common trust fund as defined in section 584(a).

J—A bank as defined in section 581.

K—A broker.

L—A trust exempt from tax under section 664 or described in section 4947(a)(1).

M—A tax-exempt trust under a section 403(b) plan or section 457(g) plan.

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, enter "NEW" at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have, and are not eligible to get, an SSN, your TIN is your IRS ITIN. Enter it in the entry space for the Social security number. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/EIN. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or Form SS-4 mailed to you within 15 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and enter "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, you will generally have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon. See also *Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding*, earlier, for when you may instead be subject to withholding under chapter 3 or 4 of the Code.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third-party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor ²
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
b. So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
6. Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))**	The grantor ⁴

For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing Form 1041 or under the Optional Filing Method 2, requiring Form 1099 (see Regulations section 1.671-4(b)(2)(i)(B))**	The trust

¹List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

²Circle the minor's name and furnish the minor's SSN.

³You must show your individual name on line 1, and enter your business or DBA name, if any, on line 2. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.)

Note: The grantor must also provide a Form W-9 to the trustee of the trust.

******For more information on optional filing methods for grantor trusts, see the Instructions for Form 1041.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information, such as your name, SSN, or other identifying information, without your permission to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax return preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity, or a questionable credit report, contact the IRS Identity Theft Hotline at 800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 877-777-4778 or TTY/TDD 800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 800-366-4484. You can forward suspicious emails to the Federal Trade Commission at spam@uce.gov or report them at www.ftc.gov/complaint. You can contact the FTC at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see www.IdentityTheft.gov and Pub. 5027.

Go to www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and territories for use in administering their laws. The information may also be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payors must generally withhold a percentage of taxable interest, dividends, and certain other payments to a payee who does not give a TIN to the payor. Certain penalties may also apply for providing false or fraudulent information.



STATE OF NEW JERSEY BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name: INFRASTRUCTURE REPAIR SERVICE, L.L.C.

Trade Name:

Address: 62 BOG & VLY RD
LINCOLN PARK, NJ 07035

Certificate Number: 0084692

Effective Date: May 03, 1996

Date of Issuance: June 14, 2010

For Office Use Only:

20100614110221688

Certificate Number
603937

Registration Date: 06/24/2024
Expiration Date: 06/23/2026



State of New Jersey

Department of Labor and Workforce Development Division of Wage and Hour Compliance

Public Works Contractor Registration Act

Pursuant to N.J.S.A. 34:11-56.48, et seq. of the Public Works Contractor Registration Act, this certificate of registration is issued for purposes of bidding on any contract for public work or for engaging in the performance of any public work to:

Responsible Representative(s):
Joseph Salomone, Member
Paul Salomone, Member

Responsible Representative(s):
Otto De Jager, Member

Infrastructure Repair Service LLC
2024

A handwritten signature in black ink, reading "RA Angelo".

Robert Asaro-Angelo, Commissioner
Department of Labor and Workforce Development

NON TRANSFERABLE

This certificate may not be transferred or assigned and may be revoked for cause by the Commissioner of Labor and Workforce Development.

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Notice is hereby given by the Morris County Municipal Utilities Authority ("MCMUA") that sealed bids will be received by the Morris County Municipal Utilities Authority ("MCMUA") on **Friday, November 21, 2025, at 10:00 a.m.** prevailing time in the Morris County Municipal Utilities Authority ("MCMUA") office located at 370 Richard Mine Rd. Wharton, NJ 07885 at which time and place the sealed bids will be opened publicly and read for the following:

BID#2025-SW06 PAR/TROY TRANSFER STATION NORTH TIPPING FLOOR RESTORATION

Obtaining Proposal Documents:

- Bid Documents shall be made available on Friday, October 17, 2025
- Alaimo Group
Willowbrook Center
201 Willowbrook Blvd., Suite 501
Wayne, NJ 07470
(973) 523-6200
- Bidders will be furnished with a copy of the Specifications, Plans and Proposal by the ENGINEER at the cost of preparation thereof, \$85.00, nonrefundable; plus \$10.00 postage and handling if mailed. Checks shall be made payable to RICHARD A. ALAIMO ASSOCIATES.

Submission of Bid:

- A non-mandatory site inspection of the Par/Troy Transfer Station Facility is scheduled for Monday, October 27, 2025. The deadline for submission of written questions regarding the bid documents is due Friday, November 7, 2025.
- In lieu of submitting bids in person, bids may be submitted via certified mail or overnight delivery to the following address, provided that they are received by the MCMUA prior to the scheduled bid opening time:

370 Richard Mine Rd.
Wharton, NJ 07885
Attn: Shana O'Mara
Re: Bid #2025-SW06 Par/Troy Transfer Station North Tipping Floor Restoration
- The bid opening at the MCMUA will be conducted in-person and for bidders choosing not to attend in person, remote meeting software will be made available to the public with both video and audio capability. Members of the public are invited to participate in the bid opening either in person or using the provided video and audio-conferencing services. A telephone number with conference call access number to join the bid opening as well as a web link to join the live bid opening will be posted on the MCMUA's website at <http://mcmua.com> 48 hours prior to the opening.

- All bids will be scanned and available for viewing within 24 hours of the bid opening on the MCMUA website; www.MCMUA.com.
- All bids must be submitted on the bid proposal forms approved and provided for by the bid documents in order to be considered.
- Bid proposals must be accompanied by a bid security, by way of a certified check, cashier's check, or bid bond, in the amount of ten percent (10%) of the total amount of the bid, but not in excess of twenty thousand (\$20,000) dollars, made payable to the Morris County Municipal Utilities Authority ("MCMUA")

Bidder Requirements:

- Bidder must comply with the requirements of NJSA 10:5-31 et seq., and NJAC 17:27.
- Other requirements as well as those described above are fully detailed in the bid document.

Additional Information:

- Prospective Bidders are cautioned not to rely solely on this Notice to Bidders in preparing their Bids, but to read the Bid Documents in their entirety and comply with all bidding requirements set forth therein. Any questions concerning the Bid Documents should be in writing and forwarded to the MCMUA, Attention: James E. Deacon – JDeacon@co.morris.nj.us.
- In the event that a potential bidder obtains the bid documents in any manner other than as specified herein, the Morris County Municipal Utilities Authority will not have the contact information of the potential bidder for purposes of issuing bid addenda, if any. The non-receipt of any addenda (in the event that any addenda are issued) and the failure of the bidder to acknowledge the receipt of any and all addenda at the time of receipt of bid shall be considered a material defect in such bidder's submission and said bid shall be rejected. Therefore, if a potential bidder obtains the bid documents in any manner other than as specified herein, said bidder shall promptly provide written notice of their contact information to the Morris County Municipal Utilities Authority.

The MCMUA reserves the right, in accordance with applicable law, to reject any and all proposals that substantially or materially deviate from the specifications and other required bid documents and further reserves the right to waive immaterial irregularities and informalities in the proposals in accordance with applicable law.

This bid has been advertised in accordance with the "Fair and Open" laws and nothing further shall be required under N.J.S.A. 19:44A-20.4.

Shana O'Mara, QPA
MCMUA

MORRIS COUNTY MUA

Administrative Documents

- A. Failure to submit the following documents at the time of bid opening is a MANDATORY cause for rejection of the bid in accordance with N.J.S.A. 40A:11-23.2.

Owner's Checkmarks		Bidder's Initials
X	Bid Security by way of a certified check, cashier's check, or bid bond	
X	Consent of Surety	
X	Statement of Ownership Disclosure	
X	Subcontractor Utilization Form	
X	Acknowledgement of receipt of any notice(s) or revision(s) or addenda to an advertisement, specifications or bid document(s)	
X	Non-Collusion Affidavit	

- B. Failure to submit the following documents at the time of bid opening may be cause for rejection of the bid.

Owner's Checkmarks		Bidder's Initials
X	Administrative Documents Acknowledgement	
X	Price Proposal Table	
X	Price Proposal Signature Form	
X	Questionnaire	
X	Mandatory EEO Language	
X	AA-201 Form – Initial Project Workforce Report - Construction	
X	N.J. Anti-Discrimination Form	
X	Pay to Play Advisory Notice	
X	Americans with Disability Act of 1990	
X	Affidavit of Non-Debarred Status	

MORRIS COUNTY MUA

Administrative Documents

Owner's Checkmarks		Bidder's Initials
X	Surety Acknowledgement	A
X	Surety Disclosure Statement & Certification	A
X	Corporate Acknowledgement	J
X	Acknowledgement of Contractor, if Bidder is a Partnership	D
X	Acknowledgement of Contractor, if Bidder is an Individual	A
X	Acknowledgement of Contractor, LLC	A
X	Certified Copy of Resolution of Board of Directors, if Bidder is a Corporation	A
X	W-9	A
X	Applicable Licenses	A

C. The following documents are to be submitted prior to contract award.

Owner's Checkmarks		Bidder's Initials
X	New Jersey Business Registration Certificate	A
X	Disclosure of Investment Activities in Iran	A
X	Certification of Non-Involvement in Prohibited Activities in Russia or Belarus	A
X	Performance Bond & Payment	A
X	Certificate of Insurance	A
X	Lowest Bidder Prevailing Wage Certification	A
X	Public Works Contractor Registration	A
X	Non-Debarment Certification – Federal Level	D

MORRIS COUNTY MUA

Administrative Documents

D. The following documents shall be submitted during the duration of the project

X	Certified Payroll
X	AA-202 Monthly Project Workforce Report - Construction

E. The following documents are to be submitted prior to the start of construction

X	Project Work Schedule (Time Line)
X	AA-201 Initial Project Workforce Report
X	Pre-Construction Photographs or Video
X	Shop Drawings, Material Certifications

F. The following documents are to be submitted at the completion and acceptance of the project.

X	Maintenance Bond (100% Of Final Contract Price) ¹
X	Final Release and Indemnity Agreement
X	Project Guarantees/Warranties (If Applicable)
X	Instruction and O & M Manuals (If Applicable)

G. The undersigned hereby acknowledges and has submitted the above required documents.

Business Name: Persistent Construction, Inc

Representative's Name: Anthony Grano, President

Representative's Signature: 

Date: 11/21/25

Phone: 201-941-9888

MORRIS COUNTY MUA

Acknowledgement of Receipt of Addenda

Pursuant to the NJSA 40A:11-23.1a, the undersigned Bidder hereby acknowledges receipt of the following notices, revisions or addenda to the Bid Advertisement, Bid Specifications or Bid Documents. By indicating date of receipt, Bidder acknowledges the submitted Bid takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of proper notice to Bidders, per NJSA 40A:11-23(c), shall take precedence and Bidder's failure to acknowledge receipt of addenda shall result in rejection of Bid.

Title of Addendum/Revision	Received Via (email, fax, etc.)	Date Received

☒ No Addenda Issued Initials _____

ACKNOWLEDGEMENT OF BIDDER

Name of Bidder: Persistent Construction, Inc

Bidder's Signature: 

Printed Name & Title: Anthony Grano, President

Date: 11/21/25

MORRIS COUNTY MUA

Price Proposal

MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY PAR/TROY TRANSFER STATION NORTH TIPPING FLOOR RESTORATION

BID NO. 2025-SW06

TO MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY

The undersigned hereby declares that he/she has carefully examined the specifications, plans and form of contract for the project named above; that he/she has carefully examined the site of the project; and that he/she will contract to carry out and complete said project as specified and delineated at the price per unit measure or lump sum for each scheduled item of work stated in the Schedule of Prices following.

It is understood that the Total Price for the entire contract stated by the undersigned in the Schedule is based on the estimated quantities and will control in the awarding of the contract. It is further understood that the quantities stated in this Schedule of Prices for the various items are estimated only and may be increased or decreased. Payment will be made only for the actual quantity of authorized work done under each scheduled item.

It is further understood that the following procedure will be used to correct numerical discrepancies found in the Schedule of Prices following:

1. All Unit Prices and the Total Price for the entire contract shall be expressed in both words and figures, and in case of discrepancy, the written price shall govern over the price stated in figures.
2. If based on the above, it is found that the written Total Price for the entire contract is found to have been incorrectly computed, then changes will be made in any or all unit prices so as to attain conformity with said Total Price before the contract is executed.

When alternate bid items are listed in the Proposal, the determination of which bidder's response to a request for bids offers the lowest price shall be made on the basis of the price of: (i) the base bid items plus the price of any selected alternate bid item; or (ii) a choice of alternate bid items within the limit of funds that may be available for a project. If the OWNER provides for more than one alternate bid item, the OWNER shall specify the ranked order in which the alternate bid items are to be selected and included in the award of the contract, provided that this requirement shall only apply to a project with a total estimated cost, including alternate bid items, of greater than \$500,000. (N.J.S.A.40A:11-23.1d)

The undersigned proposes to furnish all labor, materials and equipment required to construct and complete the structures and do other work complete in every detail, in accordance with plans, specifications and other contract documents prepared by Richard A. Alaimo Associates, Consulting Engineers, at and for the following Lump Sum Prices and Unit Prices:

MORRIS COUNTY MUA

Price Proposal

PROPOSAL TO:

Morris County Municipal Utilities Authority

PROPOSAL FOR:

"Par/Troy Transfer Station North Tipping Floor Restoration"

<u>Item No.</u>	<u>Description</u>	<u>Unit Price</u>	<u>Total Price</u>
1.	Mobilization. (See Section 01 22 00) LUMP SUM PRICE Fifty Three Thousand Four Hundred Fifty Dollars and Zero Cents		\$ 53,450.00
2.	Concrete Floor Topping, including an as built Drawing, top surface demolition, and preparation of existing slab. LUMP SUM PRICE Nine Hundred Seventy Three Thousand Nine Hundred Dollars and Zero Cents		\$ 973,900.00
3.	Demolition, disposal and construction of new custom Concrete Precast Trench Drain, with Floor Topping, custom Top Grate, Outlet Basin and custom Catch Basket, including demolition and new concrete floor installation as shown on Plans. LUMP SUM PRICE One Hundred Sixty Seven Thousand Five Hundred Dollars and Zero Cents		\$ 167,500.00

MORRIS COUNTY MUA

Price Proposal

<u>Item No.</u>	<u>Description</u>	<u>Unit Price</u>	<u>Total Price</u>
4.	All work associated with demolition and installation of new Concrete Apron with Floor Topping, including Asphalt Paving Restorations as shown on Plans. LUMP SUM PRICE One Hundred Seventy Thousand Eight Hundred Dollars and Zero Cents		\$ 170,800.00
5.	31 UNITS Removable Pipe Bollards. UNIT PRICE One Thousand Two Hundred Eighty Dollars and Zero Cents	\$ 1,280.00	\$ 39,680.00
6.	4 UNITS Concrete Protection Blocks. UNIT PRICE Nine Thousand Forty Dollars and Zero Cents	\$ 9,040.00	\$ 36,160.00
7.	600 LINEAR FEET Concrete Crack Repair – Epoxy Injection, if and where directed. UNIT PRICE PER LINEAR FOOT One Hundred Thirty Dollars and Zero Cents	\$ 130.00	\$ 78,000.00

MORRIS COUNTY MUA

Price Proposal

<u>Item No.</u>	<u>Description</u>	<u>Unit Price</u>	<u>Total Price</u>
8.	All work associated with installation of new 6" Gate Valves, including excavation, demolition and installation of New Piping, Concrete Slab, modification to Manhole Top Slab and Asphalt Paving Restorations as shown on Plans. LUMP SUM PRICE Seventy Four Thousand Six Hundred _____ Dollars and Zero _____ Cents		\$ 74,600.00
9.	All work associated with modification to Office Access Stair, Top Foundation Wall (Sloped Masonry Grout), and Loading Bay Concrete Wall as shown on Plans. LUMP SUM PRICE Eleven Thousand Two Hundred _____ Dollars and Zero _____ Cents		\$ 11,200.00
10.	All work associated with securing, and reconnecting existing roof leader drain at floor level, including demolition existing methane pipe risers with pipe cap installation at floor level. LUMP SUM PRICE Seven Thousand Two Hundred Ten _____ Dollars and Zero _____ Cents		\$ 7,210.00

MORRIS COUNTY MUA

Price Proposal

<u>Item No.</u>	<u>Description</u>	<u>Unit Price</u>	<u>Total Price</u>
11.	Water Distribution, Valves, Valve box, Yard Hydrant and Appurtenances.		
LUMP SUM PRICE			
Twenty Two Thousand Six Hundred		Dollars	
and	Zero	Cents	\$ 22,600.00

TOTAL PRICE BID
BID NO. 2025-SW06
ITEM NOS. 1 THROUGH 11

One Million Six Hundred Thirty Five Thousand One Hundred Dollars
and Zero Cents \$ 1,635,100.00

MORRIS COUNTY MUA

Schedule of Events

Schedule of Events.

Provided below is the tentative schedule of events related to the Request for Bids and award of the Contract:

- Publication of Notice to Bidders: Friday, October 17, 2025
- Non-Mandatory Site Tour: Monday, October 27, 2025
- Deadline for Submission of Written Questions Regarding Bid Documents: Friday, November 7, 2025
- Bids Due: Friday, November 21, 2025
- Contract Award: Anticipated on Tuesday, December 9, 2025

Date and Place of Bid Opening

The MCMUA shall receive sealed Bids on Friday, November 21, 2025, at 10:00 a.m. prevailing time at the MCMUA's office located at 370 Richard Mine Rd. Wharton, NJ 07885

The bid opening at the MCMUA will be conducted in-person and for bidders choosing not to attend in person, remote meeting software will be made available to the public with both video and audio capability. Members of the public are invited to participate in the bid opening either in person or using the provided video and audio-conferencing services. A telephone number with conference call access number to join the bid opening as well as a web link to join the live bid opening will be posted on the MCMUA's website at <http://mcmua.com> 48 hours prior to the opening.

Non-Mandatory Site Tour Information

There will be a Non-Mandatory Site Tour on Monday, October 27, 2025, at 11:00 a.m. prevailing time at the MCMUA Parsippany Transfer Station Facility located at 1100 Edwards Rd. Parsippany, NJ 07054. All Bidders attending the site tours shall be required to check in and sign in at the scalehouse of the Parsippany-Troy Hills Transfer Station no later than 11:00 a.m. prevailing time for the commencement of the site tour. The site tour of the Parsippany-Troy Hills Transfer Station is scheduled to take place between 11:00 a.m. and 12:00 p.m. prevailing time. Bidders are required to provide their own transportation to and from the MCMUA Transfer Station Facilities.

Bidders shall not be permitted to ask questions about the MCMUA Transfer Station Facilities while on the site tours and the MCMUA will not respond to any such questions during the site tours. There will not be a question and answer portion to the tour.

The MCMUA will accept questions regarding the Bid in writing no later than 3:00 p.m. prevailing time on Friday, November 7, 2025. All questions may be submitted to James Deacon at JDeacon@co.morris.nj.us. Based on the questions submitted, the MCMUA may at its own discretion provide answers in the form of an addendum to the Bid Documents. The MCMUA reserves the right to modify or change any of the Bid Specifications by the issuance of addenda to the Bid Specifications.

Potential bidders/respondents and their agents must not communicate in any way with the MCMUA Officers, Board of Commissioners, or any MCMUA staff other than James Deacon in reference or relation to this solicitation.

MORRIS COUNTY MUA

Price Proposal Signature Form

From: Persistent Construction, Inc
58 Industrial Ave, Fairview, NJ 07022

Vendor: The undersigned has reviewed the proposal submitted in response Bid#2025-SW06 –
Par/Troy Transfer Station North Tipping Floor Restoration issued by the MCMUA.

We affirm that the contents of the proposal (which proposal is incorporated herein by reference) is accurate, factual and complete to the best of our knowledge and belief, and that the proposal is submitted in good faith upon express understanding that any false statements may result in the disqualification of our proposal.

The undersigned hereby agrees to furnish all labor, materials, supplies, supervision, equipment and other means as necessary to perform all the work and furnish all the materials in accordance with the Contract Documents at the proposed prices within the time constraints of Contract Documents:

Business Name: Persistent Construction, Inc

Representative's Name (print): Anthony Grano

Representative's Signature: 

Title: President

Complete Address: 58 Industrial Ave, Fairview, NJ 07022

Affix Seal if Corporation:

MORRIS COUNTY MUA

Questionnaire

This questionnaire should be filled out and submitted as a part of the Bid. Failure to complete this form or to provide any of the requested information may be grounds for the rejection of the bid. If additional space is required, the respondent should add additional sheets, which identify the question being answered.

Number of years in business under present name & address:

28 Years. 58 Industrial Ave, Fairview, NJ 07022

If less than 5 years, list previous names and address:

N/A

Within the last 5 years has the business or any officer/partner failed to complete a contract awarded to them: No. If yes, provide the details in on a separate page.

Have any liens and lawsuits been filed against the company in the past 5 years: No.

If yes, please provide details:

List similar services you are now providing for which you have signed contract, but not yet started work:

See Attached.

List all major subcontractors to be used to complete the service and the area of their responsibility:
Infrastructure Repair Service - Specialized Concrete Repair

Please provide at least 3 references below:

Name: JCMUA

Phone: 201-432-1150

MORRIS COUNTY MUA

Questionnaire

Address: 13-15 Linden Ave, Jersey City, NJ 07305

Equipment/Service Provided: Site Work

Contract Amount: \$3,000,000.00

Name: Newport Construction, LLC

Phone: 201-626-4256

Address: 111 Town Square Place, Jersey City, NJ 07310

Equipment/Service Provided: Site Work

Contract Amount: \$3,107,518.00

Name: Del-Sano Contracting Corp.

Phone: 908-688-8891

Address: Rt 36 East, West Long Branch, NJ 07764

Equipment/Service Provided: Site Work

Contract Amount: \$10,224,125.00

Name:

Phone:

Address:

Equipment/Service Provided:

Contract Amount:

MORRIS COUNTY MUA

Definitions

The attention of all Bidders is directed to the Definitions section contained in this Information for Bidders and Requirements of Bid for definitions. Definitions shall apply to any such term(s) not otherwise defined in this Information for Bidders and Requirements of Bid. In the case of any term(s) not specifically defined in this Information for Bidders and Requirements of Bid, or any other document in the Bid Documents, said term(s) shall have the meaning normally ascribed to them in the trade, profession or business with which they are associated. The terms "herein", "hereunder", "hereby", "hereto", "hereof", and similar terms, refer to this Contract and the term "heretofore" means before the Contract Date and the term "hereafter" means after the Contract Date. Words importing the masculine gender include the feminine gender or the neuter and vice versa, as the case may be. Words importing the singular number include the plural number and vice versa.

Certain terms are used in the Proposal Documents and shall be defined as follows:

Addenda means supplemental written specifications or drawings issued prior to the bid submission date (as such date may be amended), which modify or interpret the Proposal Documents by addition, deletion, clarification or corrections.

Affiliate means a person controlling, controlled by, or under common control with the person in question. For purposes of this definition, "control" and similar terms means either direct or indirect majority ownership or the power to direct the day-to-day management decisions of a person, whether through ownership of voting stock or interests, status as a managing member of managing general partner, by contract or otherwise.

A.R.O. means After Receipt of Order

Authority, MCMUA or Owner means the Morris County Municipal Utilities Authority.

Bid means all documents, proposal forms, affidavits, certificates, certifications, statements and Bid Security submitted by the Bidder at the time of the Bid opening.

Bid Documents means all documents in this Request for Bids (including any appendices, exhibits, or schedules attached hereto) which may be subsequently supplemented, amended or otherwise modified during the procurement process, which documents shall be incorporated by reference into the Contract executed by the Authority and the Successful Bidder, as if fully set forth therein.

Bid Security means the bid bond, cashier's check or certified check submitted as part of the Bid, payable to the MCMUA, ensuring that the Successful Bidder will enter into the Contract.

Bid Specifications means the directions, provisions and requirements contained herein.

Bidder means any person, firm or entity which submits a Bid in response to this Request for Bids and who are collectively referred to herein as "Bidders."

Broom Clean means free of any debris, materials, equipment, and/or possessions of the contractor; to restore the property to the condition to which it was found.

Contract means the written agreement executed by and between the successful bidder and the MCMUA and shall include the Contract Documents.

MORRIS COUNTY MUA

Definitions

Contract Documents consist of the Information to Bidders, Instructions to Bidders, Price Proposal Form, General Information, Contract, General Specifications, Technical Specifications, Detailed Specifications, Contract Drawings, Schedules and addenda, if any and the Bid Documents.

Contract Drawings means all sketches, blueprints, plans, surveys, reproductions of drawings pertaining to performing the work required under the Contract.

Contract Price means the prices proposed in Table P-1 and accepted by the MCMUA.

Contractor means the Successful Bidder who enters into the Contract to perform the Work as described herein, which term shall include subcontractors, equipment and material suppliers and their respective employees.

Contractor's Plant and Equipment means equipment, supplies and all other items, except labor, brought onto the site by the Contractor to carry out the work, but not to be incorporated in the work.

County refers to the County of Morris, a municipal corporation of the State of New Jersey.

Direct shall refer to action of the MCMUA by which the Contractor is ordered to perform or refrain from performing work under the contract.

Directive shall refer to written documentation of the actions of the Owner in directing the Contractor.

Extra Work means any work required by the MCMUA, which in the judgment of the Owner involves changes, reductions or additions to the work required by the Contract Documents.

Furnish means to deliver to the job site or other specified location any time, equipment or material.

Guarantor means the parent corporation or other such third-party, and its successors and assigns, which has in each case guaranteed the performance by the Contractor of each of the Contractor's obligations under the terms of the Contract. Such Guaranty shall be evidenced by an agreement executed by the Guarantor, the form of which is set forth in the Bid Documents and submitted at the time of the Bid.

Lowest Responsible Bidder means the bidder whose response to a request for bids offers the lowest price and is responsive and is responsible, in accordance with the Local Public Contracts Law, N.J.S.A. 40A:11-1 et. Seq.

May refers to permissive actions.

MCMUA means the Morris County Municipal Utilities Authority.

Notice to Proceed or NTP means the document issued to the Contractor designating the official commencement date of the performance under the Contract.

Owner means an authorized representative of the MCMUA.

Plans means the same as Contract Drawings.

Price Proposal Forms means those forms that must be utilized by all Bidders to set forth the prices for services to be provided under the Contract.

MORRIS COUNTY MUA

Definitions

Responsible means able to complete the contract in accordance with its requirements, including but not limited to requirements pertaining to experience, moral integrity, operating capacity, financial capacity, credit, workforce, equipment and facilities availability.

Responsive means conforming in all material respects to the terms and conditions, specifications, legal requirements and other provisions of the request.

Shall refers to actions by either the Contractor or the Owner and means the Contractor or Owner has entered into a covenant with the other party to do or perform the action.

Specifications means the directions, provisions and requirements, contained herein.

Specify refers to information described, shown, noted or presented in any manner in any part of the Contract.

Subcontractor means those having a direct contract with the Contractor to perform any of the Work required under the Contract.

Successful Bidder means the Bidder to which the Contract is awarded by the MCMUA.

Suppliers means those having a direct contract with the Contractor to perform any of the work required under the Contract.

Surety means the corporate body which is bound with and for the Contractor and which engages to be responsible for the Contractor's payment of all debts pertaining to and for the Contractor's acceptable performance of the Work for which the Contractor has contracted. Said Surety shall be duly certified to conduct business in the State of New Jersey and qualified to issue bonds in the amount and of the type and character required by the Bid Documents.

Total Bid Price shall refer to that amount identified in Table P-1 of the Proposal Section of the within bid.

Uncontrollable Circumstances shall have the meaning set forth in the Contract.

Will refers to actions entered into by the Contractor or the MCMUA as a covenant with the other party to do or to perform the action.

Work means all labor, materials, supplies, tools and equipment, insurance, bonds and other such items necessary to perform the services required under the Contract in accordance with all Applicable Laws and the Bid Documents.

Written Notice means electronic or written documentation. This is sent by one party to the other as specified in the Contract Documents.

MORRIS COUNTY MUA

Instructions for Completing the Initial Project Workforce Report AA201

INSTRUCTIONS FOR COMPLETING THE INITIAL PROJECT WORKFORCE REPORT - CONSTRUCTION (AA201)

DO NOT COMPLETE THIS FORM FOR GOODS AND/OR SERVICE CONTRACTS

1. Enter the Federal Identification Number assigned to the contractor by the Internal Revenue Service, or if a Federal Employer Identification Number has been applied for but not yet issued, or if your business is such that you have not or will not receive a Federal Identification Number, enter the social security number assigned to the single owner or one partner, in the case of a partnership.
2. Note: The Division of CC/EEO will assign a contractor ID number to your company. This number will be your permanently assigned contractor ID number that must be on all correspondence and reports submitted to this office.
3. Enter the prime contractor's name, address and zip code number.
4. Check box if Company is Minority Owned or Woman Owned
5. Enter the complete name and address of the Public Agency awarding the contract. Include the contract number, date of award and dollar amount of the contract.
6. Enter the name and address of the project, including the county in which the project is located.
7. Note: A project contract ID number will be assigned to your firm upon receipt of the completed Initial Project Workforce Report (AA201) for this contract. This number must be indicated on all correspondence and reports submitted to this office relating to this contract.
8. Check "Yes" or "No" to indicate whether a Project Labor Agreement (PLA) was established with the labor organization(s) for this project.
9. Under the Projected Total Number of Employees in each trade or craft and at each level of classification, enter the total composite workforce of the prime contractor and all subcontractors projected to work on the project. Under Projected Employees enter total minority and female employees of the prime contractor and all subcontractors projected to work on the project. Minority employees include Black, Hispanic, American Indian and Asian, (J=Journeyworker, AP=Apprentice). Include projected phase-in and completion dates.

MORRIS COUNTY MUA

Instructions for Completing the Initial Project Workforce Report AA201

10. Print or type the name of the company official or authorized Equal Employment Opportunity (EEO) official include signature and title, phone number and date the report is submitted.

This report must be submitted to the Public Agency that awards the contract and the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts no later than three (3) days after the contractor signs the contract.

THE CONTRACTOR IS TO RETAIN THE FOURTH AND FINAL COPY MARKED "CONTRACTOR", SUBMIT THE THIRD COPY MARKED "PUBLIC AGENCY" TO THE PUBLIC AGENCY AWARDED THE CONTRACT AND FORWARD THE REMAINING TWO (2) COPIES TO:
NEW JERSEY DEPARTMENT OF THE TREASURY
DIVISION OF CONTRACT COMPLIANCE & EQUAL EMPLOYMENT
OPPORTUNITY IN PUBLIC CONTRACTS

P.O. BOX 200
TRNETON, NJ 08625-0209
(609) 292-9550

MORRIS COUNTY MUA

Instructions for Completing the Initial Project Workforce Report AA201

FORMAA-101
Revised 10/03

STATE OF NEW JERSEY
DIVISION OF CONTRACT COMPLIANCE
EQUAL EMPLOYMENT OPPORTUNITY IN PUBLIC CONTRACTS
INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

Official Use Only

Assignment

Code

READ INSTRUCTIONS ON THE BACK CAREFULLY BEFORE THE COMPLETION AND DISTRIBUTION OF THIS FORM.
PLEASE TYPE OR PRINT IN BLACK OR BLUE INK.

1. FID NUMBER		2. CONTRACTOR ID NUMBER		5. NAME AND ADDRESS OF PUBLIC AGENCY AWARDED CONTRACT											
3. NAME AND ADDRESS OF PRIME CONTRACTOR				CONTRACT NUMBER DATE OF AWARD DOLLAR AMOUNT OF AWARD											
(Name)															
(Street Address)				6. NAME AND ADDRESS OF PROJECT											
(City) (State) (Zip Code)				COUNTY											
4. IS THIS COMPANY MINORITY OWNED [] OR WOMAN OWNED []				7. PROJECT NUMBER											
9. TRADE OR CRAFT				PROJECTED TOTAL EMPLOYEES				PROJECTED MINORITY EMPLOYEES				8. IS THIS PROJECT COVERED BY A PROJECT LABOR AGREEMENT (PLA)? <input type="checkbox"/> YES <input type="checkbox"/> NO			
				MALE		FEMALE		MALE		FEMALE		PROJECTED PHASE-IN DATE		PROJECTED COMPLETION DATE	
				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															

MORRIS COUNTY MUA

Instructions for Completing the Initial Project Workforce Report AA201

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)

MORRIS COUNTY MUA

Mandatory Equal Employment Opportunity Language

EXHIBIT B

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 applicant's 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 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

MORRIS COUNTY MUA

Mandatory Equal Employment Opportunity Language

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;

(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 nondiscrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

MORRIS COUNTY MUA

Mandatory Equal Employment Opportunity Language

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

The contractor or subcontractor shall interview the referred minority or women worker.

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.

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.

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 worker's 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.

(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

MORRIS COUNTY MUA

Mandatory Equal Employment Opportunity Language

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.

MORRIS COUNTY MUA

Mandatory Equal Employment Opportunity Language

Additional Mandatory Construction Contract Language For State Agencies, Independent Authorities, Colleges and Universities Only

Executive Order 51 (Corzine, August 28, 2009) and P.L.2009, c.335 include a provision which require all state agencies, independent authorities and colleges and universities to include additional mandatory equal employment and affirmative action language in its construction contracts.

It is important to note that this language is in addition to and does not replace the mandatory contract language and good faith efforts requirements for construction contracts required by N.J.A.C. 17:27-3.6, 3.7 and 3.8, also known as Exhibit B. The additional mandatory equal employment and affirmative action language is as follows:

It is the policy of the [Reporting Agency] that its contracts should create a workforce that reflects the diversity of the State of New Jersey. Therefore, contractors engaged by the [Reporting Agency] to perform under a construction contract shall put forth a good faith effort to engage in recruitment and employment practices that further the goal of fostering equal opportunities to minorities and women.

The contractor must demonstrate to the [Reporting Agency's] satisfaction that a good faith effort was made to ensure that minorities and women have been afforded equal opportunity to gain employment under the [Reporting Agency's] contract with the contractor. Payment may be withheld from a contractor's contract for failure to comply with these provisions.

Evidence of a "good faith effort" includes, but is not limited to:

1. The Contractor shall recruit prospective employees through the State Job bank website, managed by the Department of Labor and Workforce Development, available online at <http://NJ.gov/JobCentralNJ>;
2. The Contractor shall keep specific records of its efforts, including records of all individuals interviewed and hired, including the specific numbers of minorities and women;
3. The Contractor shall actively solicit and shall provide the [Reporting Agency] with proof of solicitations for employment, including but not limited to advertisements in general circulation media, professional service publications and electronic media; and
4. The Contractor shall provide evidence of efforts described at 2 above to the [Reporting Agency] no less frequently than once every 12 months.

MORRIS COUNTY MUA

Mandatory Equal Employment Opportunity Language

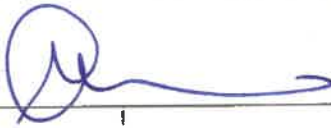
5. The Contractor shall comply with the requirements set forth at N.J.A.C. 17:27-1.1 et seq.

To ensure successful implementation of the Executive Order and Law, state agencies, independent authorities and colleges and universities must forward an Initial Project Workforce Report (AA-201) for any projects funded with ARRA money to the Dept. of LWD, Construction EEO Monitoring Program immediately upon notification of award but prior to execution of the contract.

Business Name: Persistent Construction, Inc

Representative's Name (print): Anthony Grano, President

Representative's Signature:



Date: 11/21/25

MORRIS COUNTY MUA

Information to Bidders

SECTION I - SUBMISSION OF BIDS

- Morris County Municipal Utilities Authority, The County of Morris, New Jersey (hereinafter referred to as "MCMUA" or "OWNER") invites sealed bids pursuant to the Notice to Prospective bidders. Said Notice to Prospective bidders is to be attached to and is considered as a part of these Information to Bidders.
- Sealed bids will be received by the Qualified Purchasing Agent or his/her designee of the MCMUA at the time and place stated in the Notice to Prospective bidders, and at such time and place will publicly open and read aloud all bids received.
- Bid proposals as defined herein, shall be reassembled into book form. The Prospective bidders shall use ring binders (loose-leaf) or spiral binders to reassemble the Bid Documents.
- A total of Bid proposal shall be submitted at the time of the Bid opening.
- On all copies of the Bid proposals the Price Proposal page must be tabbed separately.
- It is the bidder's responsibility to see that the bid is presented to the MCMUA on time and at the place designated.
- Bids received after the designated time and date will be returned unopened
- The bid proposal form shall be submitted on the prescribed form with appropriate spaces properly filled in and with all required supporting documentation, in a sealed envelope.
- Bids may be hand delivered or mailed; however, **the MCMUA disclaims any responsibility for bids forwarded by regular or overnight mail.**
- All mailed bids must be delivered and signed for by the MCMUA Staff ONLY
- The following should be reflected on the face of the envelope the bid documents are submitted in:
 1. Addressed to the Morris County Municipal Utilities Authority ("MCMUA")
 2. Bearing the name and address of the bidder written on the face of the envelope
 3. Clearly marked "BID" with the contract title and/or BID # being identified
- Where additional sheets are necessary to satisfy the requirements of the Bid Documents, they shall be placed immediately following such form or table which the additional sheets supplement. If the number of additional sheets submitted exceeds twenty-five (25), then they shall be included as an attachment to the Bid together with a list identifying the attachments, which list shall be placed immediately following the appropriate section in the Bid submission.
- Prospective bidders may collaborate with other firms to submit Bid proposals for the Contract, however, the MCMUA will enter into a Contract with only one (1) entity and that entity shall have full responsibility to conduct the Work, as that term is defined in the Contract Documents, in

MORRIS COUNTY MUA

Information to Bidders

accordance with the Contract Documents and Applicable Laws.

- Bid proposals shall be signed by (1) principal executive officer in the case of a corporation, (2) general partners in the case of a partnership or three (3) the proprietor in the case of a sole proprietorship. Bid proposals may be signed by a duly authorized representative of the Bidder if the authorization is established in writing by the person described in (1), (2) or (3) above, as applicable and said authorization specifies a particular individual or a position having responsibility for overall operations of the business of the Bidder.
- Sealed bids forwarded to the MCMUA before the time of opening of bids may be withdrawn upon written application of the bidder who shall be required to produce evidence showing that the individual is or represents the principal or principals involved in the bid. Once bids have been opened, they must remain firm for a period of sixty (60) calendar days.
- Bids containing any conditions, omissions, unexplained erasures or alternation, items not called for in the bid proposal form, attachment of additive information not required by the specifications, or irregularities of any kind, maybe rejected by the MCMUA. Any changes, whiteouts, strikeouts, etc. on the proposal page must be initialed in ink by the person responsible for signing the bid.
- Each bid proposal form must give the full business address of the bidder and be signed by an authorized representative. Bids by partnerships must be signed in the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and designation of the person signing. Bids by corporations must be signed in the legal name of the corporation, and must contain the signature and designation of the president, secretary or other person authorized to bind the corporation in the matter. When requested, satisfactory evidence of the authority of the officer signing shall be furnished.
- Prospective bidders must insert prices for furnishing of the specified equipment, materials or supplies, or for all of the materials and/or labor required by these specifications. Prices shall be net, including any charges for packing, crating, containers, etc. All transportation charges shall be fully prepaid by the contractor F.O.B. destination and placement at locations specified by the MCMUA. As specified, placement may require inside deliveries. No additional charges will be allowed for any transportation costs resulting from partial shipments made at the contractor's convenience.
- Amongst other items to be submitted as set forth in the Bid Documents (See Administrative Documents Checklist), each Bidder must submit with its Bid a signed Equipment and Vehicle Certification stating that it owns, leases or controls all the necessary equipment required to accomplish the Work in accordance with the Bid Documents, together with an executed Bidder's Agreement to Provide Equipment and Vehicles. Should the Bidder not be the actual owner or lessee of any such equipment required, its Equipment and Vehicle Certification shall state the source from which the equipment will be obtained, and in addition, shall be accompanied by a signed certification from the owner or person in control of the equipment required stating that in the event the Bidder is awarded the Contract, it shall provide Bidder with the equipment, together with an executed Third Party Equipment and Vehicle Owner's Agreement to Provide Bidder with Equipment and Vehicles.

MORRIS COUNTY MUA

Information to Bidders

- The vendor shall guarantee any or all materials and services supplied under these specifications. Defective or inferior items shall be placed at the expense of the vendor. In case of rejected materials, the vendor will be responsible for return freight charges.
- Bidder should be aware of the following statutes that represent "Truth in Contracting" laws:
 - N.J.S.A. 2C:21-34, et seq. governs false claims and representations by Prospective bidders. It is a serious crime for the bidder to knowingly submit a false claim and/or knowingly make material misrepresentation.
 - N.J.S.A. 2C:27-10 provides that a person commits a crime if said person offers a benefit to a public servant for an official act performed or to be performed by a public servant, which is a violation of official duty.
 - N.J.S.A. 2C:27-11 provides that a bidder commits a crime if said person, directly or indirectly, confers or agrees to confer any benefit not allowed by law to a public servant.
 - Bidder should consult the statutes or legal counsel for further information.

SECTION II – BID SECURITY/CONTRACT SECURITY

- The following provisions if indicated by an (X) shall be applicable to this bid and be made a part of the bidding documents:

- Bid Guarantee X

Bidder shall submit with the bid a certified check, cashier's check or bid bond in the amount of ten percent (10%) of the total price bid, but not in excess of \$20,000, payable unconditionally to the MCMUA. When submitting a Bid Bond, it shall contain Power of Attorney for full amount of Bid Bond from a surety company authorized to do business in the State of New Jersey and acceptable to the MCMUA. The check or bond of the unsuccessful bidder(s) shall be returned as prescribed by law. The check or bond of the bidder to whom the contract is awarded shall be retained until a contract is executed and the required performance bond or other security is submitted. The check or bond of the successful bidder shall be forfeited if the bidder fails to enter into a contract pursuant to N.J.S.A. 40A: 11-21. **Must be submitted at the time of bid opening, failure to do so is a mandatory cause for rejection of bid in accordance with N.J.S.A. 40A:11-23.2.**

- Consent of Surety X

Bidder should submit with the bid proposal a Certificate (Consent of Surety) to guarantee that the surety company will furnish the MCMUA with the bonds required by the contract documents within the time periods and in the amounts so specified. The surety should be authorized to do business in the State of New Jersey Department of Banking and Insurance. The Consent of Surety should be in a form acceptable to the MCMUA and accompanied by (a) Surety Disclosure Statement and Certification in the form required by N.J.S.A. 2A:44-143. (b) duly executed acknowledgements of the respective parties; (c) a duly certified copy of a Power of Attorney (where the Consent of Surety is executed by an agent or other representative of the surety); (d) a duly certified extract from the By-Laws or resolutions of Surety under which the Power of Attorney was issued; and (e) a

MORRIS COUNTY MUA

Information to Bidders

duly certified copy of latest published financial statement of asset and liabilities of Surety. **Must be submitted at the time of bid opening, failure to do so is a mandatory cause for rejection of bid in accordance with N.J.S.A. 40A:11-23.2.**

- Performance & Payment Bond ☒ X ☐

The successful bidder should execute and deliver to the MCMUA within ten (10) days after notification of award of the contract, a satisfactory surety bond or bonds in an amount equal to 100% of the contract prices, upon the statutory form required by N.J.S.A. 2A:44-147 with such surety companies as sureties as should be approved, qualified and authorized to do business under the laws of the State of New Jersey Department of Banking and Insurance. The performance bond provided should not be released by the MCMUA until final acceptance of the whole work and then only if any liens or claims have been satisfied and any maintenance bonds required have been executed and approved by the OWNER.

- Maintenance Bond ☐ ☒ X ☐

Successful bidder shall upon acceptance of the work submit a maintenance bond in the amount of 100% guaranteeing against defective quality of work or materials for the period of:

☐ 1 year ☒ X ☐ 2 years

The performance bond provided shall not be released until final acceptance of the whole work and then only if any liens or claims have been satisfied and any maintenance bonds required have been executed and approved by the OWNER.

If required, failure to deliver this with the performance bond shall be cause for declaring the contract null and void. The surety on such bond or bonds shall be a duly authorized surety company authorized to do business in the State of New Jersey N.J.S.A. 17:31-5.

SECTION III – INTERPRETATION & ADDENDA – BIDDER’S RESPONSIBILITIES

- The bidder understands and agrees that its bid is submitted on the basis of the specifications prepared by the MCMUA. The bidder accepts the obligation to become familiar with these specifications.
- All interpretations, clarifications and any supplemental instructions will be in the form of written addenda to the specifications and will be distributed to all prospective bidders. All addenda so issued shall become part of the specification and bid documents and shall be acknowledged by the bidder in the bid by completing the Acknowledgement of Receipt of Addenda form. The owner’s interpretations or corrections thereof shall be final.
- Pursuant to N.J.S.A. 40A:11-23(c)(1) when issuing addenda, the owner shall provide required notice prior to the official receipt of bids to any person who has submitted a bid or who has received a bid package. Such notice will be sent from SOMara@co.morris.nj.us.

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- Prospective bidders are expected to examine the specifications and related documents with care and observe all their requirements. Ambiguities, errors or omissions noted by Prospective bidders should be promptly reported in writing to the appropriate MCMUA official. In the event the bidder fails to notify the MCMUA of such ambiguities, errors or omissions, the bidder shall be bound by the bid.
- No oral interpretation of the meaning of the specifications will be made to any bidder. Every request for an interpretation shall be in writing, addressed to the MCMUA's representative stipulated in the bid. In order to be given consideration, written requests for interpretation must be received at least seven (7) days prior to the date fixed for the opening of the bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications, and will be distributed to all prospective bidders, in accordance with N.J.S.A. 40A: 11-23. All addenda so issued shall become part of the contract documents and shall be acknowledged by the bidder in the bid. The MCMUA's interpretations or corrections thereof shall be final.

- **Discrepancies in the Bid**

- If the amount shown in words and its equivalent in figures do not agree, the written words shall be binding. Ditto marks are not considered writing or printing and shall not be used.
- In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In the event there is an error of the summation of the extended totals, the computation by the MCMUA of the extended totals shall govern.
- All prices and amounts must be written in ink or preferably typewritten in a word format on the bid form provided. Any discrepancies between the words and numbers, the written word price shall prevail.

- **Non-Mandatory Pre-Bid Conference/Site Visit**

Pre-Bid meetings and site tours are encouraged but *not* mandatory. All Prospective bidders are strongly encouraged to attend Pre-Bid Conference/Site Tour as outlined in the schedule of events if applicable.

- **Site Investigation & Representation**

The bidder acknowledges that he has satisfied himself as to the nature and location of the work, the general and local conditions, particularly those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, physical conditions at the site, the conformation and condition of the ground, the character, quality and quantity of surface and sub-surface materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work and all other matters which can in any way affect the work or the cost thereof under this contract. Any failure by the bidder to acquaint himself with all the available information concerning these conditions shall not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work

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- Excavating for foundations of surface structure: buildings, bridges, tanks, towers, retaining walls and other types of surface structures. The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the owner by written notice of subsurface or latent physical conditions at the site differing materially from those indicated in the contract documents.

Or unknown physical conditions at the site of unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for the contract documents.

The Owner shall promptly investigate the conditions, and if it is found that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the work, an equitable adjustment shall be made and the contract documents shall be modified by a change order. Any claim of the Contractor for adjustment hereinafter shall not be allowed unless the required written notice has been given; provided that the Owner may, if the Owner determines the facts so justify consider and adjust any such claims asserted before the date of the final payment.

Excavating for below-surface structures: water mains, sewers, power and telephone cables and other types of below surface structures.

No extra compensation will be paid for rock excavation or varying geologic features encountered on the project, unless so shown as a bid item in the Bid Schedule for bid.

- **Deviations**

All Prospective Bidders should clearly identify any deviations from the specifications at the time the bids are opened and examined. Any deviation however, may result in the rejection of the Bid. After the contract has been entered into, no consideration should be given for any misunderstanding as to work, materials set forth therein specified and indicated on drawings, it being mutually understood that tender of a proposal carries with it an agreement to this and other obligations set forth in the contract and further implies full understanding of the contract document.

SECTION IV - PREPARATION OF BIDS

- The MCMUA is exempt from any local, state or federal sales, use or excise tax. Exemption certificates will be provided when required
- Estimated Quantities (Open-end Contracts)

The MCMUA has attempted to identify the item(s) and the estimated amounts of each item bid to cover its requirements; however, past experience shows that the amount ordered may be different than that submitted for bidding. The right is reserved to decrease or increase the quantities specified in the specifications pursuant to N.J. A.C.5:34-4.9. NO MINIMUM PURCHASE IS

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IMPLIED OR GUARANTEED.

- Successful bidder shall be responsible for obtaining any applicable permits or licenses from any government entity that has jurisdiction to require the same. All bids submitted shall include this cost in the bid price agreement, unless stated specifically otherwise in the Technical Specifications.

SECTION V – BRAND NAMES, PATENTS & STANDARD OF QUALITY

- Brand names and/or descriptions used in this bid 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 standard described and be of the same quality of work. Variations between materials described and the materials offered are to be fully identified and described by the bidder on a separate sheet and submitted with the bid proposal form. Vendor's literature WILL NOT suffice in explaining exceptions to these specifications. In the absence of any changes by the bidder, it will be presumed and required that materials as described in the proposal be delivered.
- It is the responsibility of the bidder to demonstrate the equivalency of item(s) offered. The MCMUA reserves the right to evaluate the equivalency of an item(s) which, in its deliberations, meets its requirements.
- In submitting its bid, the bidder certifies that the merchandise to be furnished will not infringe upon any valid patent or trademark and that the successful bidder shall, at its own expense, defend any and all actions or suits charging such infringement, and will save the MCMUA harmless from any damages resulting from such infringement.
- Only manufactured and farm products of the United States, wherever available, shall be used on this contract pursuant to N.J.S.A. 40A: 11-18.
- Wherever practical and economical to the MCMUA, it is desired that recycled or recyclable products be provided. Please indicate when recycled products are being offered.
- All workmanship shall be in every respect in accordance with the best current practice. Only skilled craftsmen, fully qualified in the various disciplines required, shall be used in this project.
- The contractor shall guarantee any or all goods and services supplied under these specifications. Defective or inferior goods shall be replaced at the expense of the contractor. The contractor will be responsible for return freight or restocking charges.

SECTION VI - BID OPENING / ANALYSIS & AWARD

- Acceptance of Bids

The MCMUA reserves the right to waive any immaterial defect or informality in any bid. The MCMUA also reserves the right to reject any or all bids in accordance with the Local Public Contracts Law. Any bid received after the time and date specified shall not be considered.

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- **Bid Opening**

All Prospective Bidders or their authorized agents are invited to be present when the bids are opened and read publicly. All bids may be inspected at that time. Once opened, all bids become the property of the MCMUA, and will not be returned to the Prospective Bidders. No bid may be withdrawn after the specified opening time and date, unless a request is made in writing and sent via certified or registered mail to MCMUA within five (5) business days of bid opening, due to a mistake of such great consequence that it relates to a material feature of the bid, notwithstanding reasonable care in preparation of the bid, and provided that enforcement of the contract, if actually made, would be unconscionable in accordance with the requirements of N.J.S.A. 40A:11-23.3. Any written request for bid withdrawal due to such mistake must include any pertinent documents, demonstrating that the above conditions occurred.

The MCMUA may award the work on the basis of the Base Bid, or the base bid combined with such Alternates as selected, until a net amount is reached which is within the funds available.

If the award is to be made on the basis of Base Bids only, it will be made to that responsible bidder who's Base Bid, therefore, is the lowest. If the award is to be made on the basis of a combination of a Base Bid with Alternates, it will be made to that responsible bidder whose net bid on such combination is the lowest.

- **Contract Award**

Should the MCMUA decide to award the contract, it shall notify the successful bidder in writing within sixty (60) days of receipt of bids unless otherwise extended in accordance with the Local Public Contracts Law 40A:11-1 et. Seq. Should a successful bidder fail or refuse to execute and deliver such contract, certificates of insurance, required stated documentation and bonds within ten (10) days after receipt of Notice of Award, or within such other time period as specified in the technical specifications, the MCMUA may revoke the acceptance of his proposal and the bidder shall become liable for any difference in the proposal awarded and the amount of the contract which the MCMUA may be obliged to award to another because of the refusal or omission of a successful bidder to execute and deliver the contract and bonds aforementioned, together with any sums which the MCMUA may be obliged to spend by reason for the default of the bidder

The successful bidder will not assign any interest in this bid and shall not transfer any interest in the same without the prior written consent of the MCMUA.

Prior to commencing the Work, the Contractor and the MCMUA shall perform a facility walk through inspection, the purpose of which shall be to inspect and confirm the site conditions at the beginning of the Contract Term.

SECTION VII - REJECTION OF BIDS

Bids may be rejected for any of the following reasons:

- All bids pursuant to N.J.S.A. 40A:11-13.2;

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- The lowest bid substantially exceeds the cost estimates for the goods and services.
 - The lowest bid substantially exceeds the contracting unit's appropriation for the goods or services
 - The governing body of the contracting unit decides to abandon the project for the provision or performance of the goods or services.
 - The contracting unit wants to substantially revise the specifications for the goods or services
 - The purposes or provisions or both of N.J.S.A. 40A:11-1 et seq. are being violated
 - The governing body of the contracting unit decides to use the State authorized contract.
- If more than one bid is received from an individual, firm or partnership, corporation or association under the same name;
 - Multiple bids from an agent representing competing bidders;
 - The bid is inappropriately unbalanced;
 - The bidder is determined to possess, pursuant to N.J.S.A. 40A:11-4b, Prior Negative Experience;
 - The bid contains a material defect;
 - The bid is conditional; or
 - If the successful bidder fails to enter into a contract within 21 days, Sundays and holidays excepted, or as otherwise agreed upon by the parties to the contract. In this case at its option, the owner may accept the bid of the next lowest responsible bidder. (N.J.S.A. 40A:11-24b)

SECTION VIII – PERMISSION FOR BIDDER TO WITHDRAW BID

- N.J.S.A. 40A:11-23.3 authorizes a bidder to request withdrawal of public works bid due to a mistake on the part of the bidder. A mistake is defined by N.J.S.A. 40A:11-2(42) as a clerical error that is an unintentional and substantial computational error or an unintentional omission of a substantial quantity of labor, material, or both from the final bid computation.
- A bidder claiming a mistake under N.J.S.A. 40A:11-23.3 must submit a request for withdrawal in writing, by certified mail or registered mail to the Qualified Purchasing Agent. The bidder must request withdrawal of a bid due to a mistake, as defined by the law, within five (5) business days after the receipt and opening of the bids. Since the bid withdrawal request shall be effective as of the postmark of the certified or registered mailing, the Qualified Purchasing Agent may contact

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all bidders, after bids are opened, to ascertain if any bidder wishes to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

- A bidder's request to withdraw the bid shall contain evidence, including any pertinent documents, demonstrating that a mistake was made. Such documents and relevant written information shall be reviewed and evaluated by the public owner's designated staff pursuant to the statutory criteria of N.J.S.A. 40A:11-23.3.
- The public owner will not consider any written requests for a bid withdrawal for a mistake, as defined by N.J.S.A. 40A:11-2(42), by a bidder in preparation of a bid proposal unless the postmark of the certified or registered mailing is within five (5) business days following the opening of bids.

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Headings

The captions and headings in this Contract are for convenience and ease of reference only and in no way define, limit or describe the scope or intent of this Contract and such headings do not in any way constitute a part of this Contract.

Perspective Bidders General Description

This Request for Bids solicits proposals from qualified vendors to provide Tipping Floor restorations for the Parsippany-Troy Hills Transfer Station.

Locations

Parsippany Transfer Station is located at 1100 Edwards Rd. Parsippany, NJ 07054.

Notices

Any notice or other communication which is required to be given hereunder shall be in writing and shall be deemed to have been validly given if facsimiled to the telephone number set forth below, delivered in person or mailed by certified or registered mail, postage prepaid, addressed as follows:

<u>If to Authority:</u>	The Morris County Municipal Utilities Authority
By mail and/or by hand:	370 Richard Mine Rd. Wharton, NJ 07885

If such notice is sent by facsimile or similar transmission, the original executed copy of such notice shall be mailed or delivered as provided above.

Changes in the respective addresses to which such notices may be directed may be made from time to time by any party by written notice to the other party.

The MCMUA reserves the right to reject any and all proposals that substantially or materially deviate from the specifications and other required documents, and further reserves the right to waive minor irregularities and immaterial variances and formalities in the proposals in accordance with applicable law.

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A-1. JOINT VENTURE CONTRACTOR

In the event the contractor is a joint venture of two or more contractors, the grants, covenants, provisos and claims, rights, power, privileges and liabilities of the contract shall be construed and held to be several as well as joint. Any notice, order, direct request or any communication required to be or that may be given by the Owner to the Contractor under this contract, shall be well and sufficiently given to all persons being the Contractor if given to any one or more of such persons. Any notice, request or other communication given by any one of such persons to the Owner under this contract shall be deemed to have been given by and shall bind all persons being the Contractor.

A-2. CONTRACT REQUIREMENTS

A. SUCCESSORS' OBLIGATIONS:

The grants, covenants, provisos and claims, rights, powers, privileges and liabilities contained in the contract documents shall be read and held as made by and with, and granted to and imposed upon, the Contractor and the MCMUA and their respective heirs, executors, administrators, successors and assigns.

B. ASSIGNMENT OF CONTRACT:

The contract shall not be assigned in whole or in part without the written consent of the MCMUA. Involuntary assignment of the contract as caused by the Contractor being adjudged bankrupt, assignment of the contract for the benefit of Contractor's creditors or appointment of a receiver on account of Contractor's insolvency shall be considered as failure to comply with the provisions of the contract and subject to the dismissal provisions contained herein.

C. WAIVER OF RIGHTS:

Except as herein provided, no action or want of action on the part of the Contractor, or MCMUA at any time with respect to the exercise of any right or remedies conferred upon them under this contract shall be deemed to be a waiver on the part of the Contractor or MCMUA of any of their rights or remedies. No waiver shall be effective except in writing by the party to be charged. No waiver of one right or remedy shall act as a waiver of any other right or remedy or as a subsequent waiver of the same right or remedy.

D. AMENDMENT OF GENERAL CONDITIONS:

These general conditions may be amended only by mutual consent of the MCMUA and the Contractor in writing.

A-3. LAWS, REGULATIONS AND PERMITS

The Contractor shall give the notices required by law and comply with all laws, ordinances, rules and regulations pertaining to the conduct of the work. The Contractor shall be liable for violations of the law in connection with work provided by the Contractor. If the Contractor observes that the specifications or other portions of the Contract Documents are at variance with any laws, ordinances, rules or regulations,

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he shall promptly notify the Owner in writing of such variance. The MCMUA shall promptly review the matter and, if necessary, shall issue a change order or take other action necessary to bring about compliance with the law, ordinance, rule or regulation in question. Contractor agrees not to perform work known to be contrary to any laws, ordinances, rules or regulations.

Unless otherwise specified herein, permits and licenses from governmental agencies which are necessary for and during the prosecution of the work and the subsequent guarantee period shall be secured and paid for by the Contractor.

A-4. CONTRACTOR REFERRED TO LAWS AND SAFETY

Contractors shall familiarize themselves with the provisions of Federal, State, County and Municipal Ordinances, laws, statutes and regulations that may apply to the work.

In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions in, on or near the job site, including safety of all persons and property affected directly or indirectly by operations during performance of the work. This requirement applies continuously 24 hours a day and shall not be limited to normal working hours.

The duty of the Engineer to observe the work during construction is not intended to include review of the adequacy of the Contractor's safety measures, in, on or near the construction site.

A-5. APPROVAL OF OUTSIDE AGENCIES

Certain work to be done within the Scope of this Contract may be required to meet the specifications of persons, municipalities or authorities other than the Owner. The Contractor shall be responsible for obtaining the permits, approval and acceptance of this work by such persons, municipalities or authorities. Such work may include, but shall not be restricted to, structures, replacement of sidewalks, curbs, pavement, utilities and other incidental work required to complete the Contract.

A-6. LANDS AND RIGHTS-OF-WAY

The Owner will provide the lands and/or rights-of-way shown in Appendix B, the tax map showing the Morris County Municipal Utility Authority property. If the lack of rights-of-way delays the Contractor from completing the project within the Contract time, the Owner shall grant an extension of time equivalent to the delay. Any land not specifically shown to be furnished by the Owner, that may be required for temporary construction facilities or for storage of materials, shall be acquired by the Contractor at his expense.

A-7. SUBCONTRACTS

The Contractor shall perform with his own organization not less than one-half of the work and shall not sublet to one subcontractor more than one-third of the work without the previous written consent of the MCMUA. See Proposal section for listing of subcontractors.

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A-8. LABOR STANDARDS

A. WAGES:

1. GENERAL: The Contractor and each subcontractor engaged in the work shall pay each employee an amount not less than the rate established for each trade or occupation listed by the Department of Labor of the State of New Jersey. An employee whose type of work is not covered by any of the classified wage rates shall be paid not less than the rate of wage listed for the classification which most nearly corresponds to the type of work to be performed.

2. STATE WAGE RATES: The MCMUA has obtained from the Department of Labor the general prevailing rate of wages in the vicinity of the work to be performed under this contract. These wage rates are maintained on file by the MCMUA.

B. RESIDENT CITIZENS TO BE PREFERRED IN EMPLOYMENT ON PUBLIC WORKS:

The Contractor's attention is directed to State Statute 34: 9-2. requiring that preference in employment shall be given to citizens of the State of New Jersey who have resided and maintained domiciles within the state for a period of not less than one year immediately prior to such employment. Persons other than citizens of the state may be employed when such citizens are not available.

If this section is not complied with, the contract shall be voidable at the instance of the State, County or Municipality.

The contractor shall keep a list of his or its employees, stating whether they are native born citizens or naturalized citizens, and in case of naturalization, the date thereof and the name of the court in which granted.

SECTION B OWNER-CONTRACTOR RELATIONS

B-1. AUTHORITY OF MCMUA

A. GENERAL:

The MCMUA, acting through the Engineer, shall have the authority to act as the sole judge of the work and materials with respect to both quantity and quality as set forth in the contract. It is expressly stipulated that the specifications and other contract documents set forth the requirements as to the nature of the completed work and do not purport to control the method of performing work except in those instances where the nature of the completed work is dependent on the method of performance.

B. INSPECTION OF WORK:

The Owner shall have the right to inspect all materials and work performed during any phase of construction and the Contractor shall provide all reasonable facilities and means for safe and convenient access for such inspection.

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If the specifications, the instructions of the Owner, laws, ordinances or any public authority require any work to be specifically tested or approved, the Contractor shall give the Owner timely notice of its readiness for inspection. If the inspection is by an authority other than the Engineer, the Contractor shall advise the Owner of the date fixed for such inspection. Inspections by the Engineer shall be made promptly and, where practicable, at the source of supply.

Piping, wiring, ducts, and other concealed work shall not be covered before proper inspection, approval and certificates, if required, are issued. Should any work that is designated for inspection be covered without approval or consent of the Engineer, it must be uncovered by the Contractor at his expense when examination is ordered by the Owner.

Re-examination of questioned work must be ordered by the Owner by a written order, and if found not in accordance with the Contract Documents, the Contractor shall pay the cost of re-examination and replacement. The MCMUA shall not be responsible for or bear the cost of any re-examination and replacement occasioned by defects in the work caused by other contractors. The MCMUA shall bear the cost of re-examination and replacement only when work is found to be in accordance with the Contract and the Engineer orders the re-examination and replacement by written order.

The inspection of the work shall not relieve the Contractor of any obligations under the Contract.

B-2 MCMUA'S RESPONSIBILITY

The MCMUA shall be responsible for the ownership of lands, easements, or slope rights upon which the proposed work is to be constructed. The MCMUA shall not be responsible for lands used for storage of the Contractor's equipment. If the Contractor desires temporary use of other land during construction, the Contractor shall secure written permission from the Property Owner and shall file a duplicate copy of such permission with the MCMUA.

B-3 RESPONSIBILITIES OF CONTRACTOR

A. CONTRACTOR'S SUPERVISION:

The Contractor shall give efficient and continuous supervision to the work, using his best skill and attention. The Contractor shall provide a competent superintendent and any necessary assistants, all satisfactory to the Owner. The superintendent shall not be changed except with the concurrence of the Owner unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor. Important directions shall be confirmed in writing to the Contractor. Other directions shall be so confirmed upon written request by the Contractor in each case.

B. CHARACTER OF WORKMEN:

None but skilled foremen and workmen shall be employed on work requiring special qualifications. When requested in writing by the Owner, the Contractor shall discharge any person who commits trespass or is, in the opinion of the Owner, disorderly, dangerous, insubordinate incompetent or otherwise objectionable.

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The Contractor shall save the MCMUA harmless for damages of claims for compensation that may occur in the enforcement of this requirement.

C. SANITATION:

The Contractor shall provide and erect suitable portable toilet facilities for the use of employees on the project at locations determined by the Owner. The Contractor shall remove and efface all visual evidence of the provided portable toilet facilities immediately upon completion of the project.

D. ENVIRONMENTAL COMPLIANCE:

The Contractor shall comply with all applicable Federal, State and Local laws, regulations and ordinances pertaining to the environment and shall be responsible for any discharge to the environment that violates applicable laws.

E. PROTECTION OF THE WORK:

The Contractor shall be responsible for the protection of all work until its completion and final acceptance, and he shall, at his own expense, replace damaged or lost material, or repair damaged parts of the work. He shall take all risks from floods and casualties and shall make no claim for damages for delay from such causes. He may, however, be allowed a reasonable extension of time on account of such delays, subject to the conditions hereinbefore specified.

F. WATER, PUBLIC UTILITIES:

The Contractor shall supply safe drinking water for all employees on the work.

It is the Contractor's duty to maintain service to existing public utility consumers during construction by means of temporary connections or by rapid cut overs made in such manner as to keep customer inconvenience to a minimum. All valve shutoffs and notifications to consumers of temporary shutoffs shall be made by the Contractor.

G. EMERGENCIES:

In an emergency affecting the safety of life or of the work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act at his own discretion to prevent threatened loss or injury. Any limitation claimed by the Contractor on account of emergency work shall be determined by agreement or arbitration.

Emergencies may arise during the progress of the work which may require special effort or require extra shifts of men to continue the work beyond normal working hours. The Contractor shall be prepared in case of such emergencies, from whatever cause, to do all necessary work promptly.

The Contractor shall file with the Owner the names, addresses, and telephone numbers of his agents who can be contacted at any time in case of emergency. These representatives shall be fully authorized and equipped to correct unsafe or excessively inconvenient conditions on short notice.

H. PROTECTION OF PERSONS AND PROPERTY:

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The Contractor shall adopt every practical means to minimize interference with traffic and inconvenience, discomfort, or damage to the public. Unless otherwise expressly specified, the Contractor shall prevent injury to all pipes, sewers, conduits, or other structures, public or private; lawns, gardens, shrubbery and trees encountered in the work; and shall save the MCMUA harmless from costs, claims and damages for any injury done to such pipes, structures or to property during the course of the work.

The Contractor shall take all necessary precautions for the safety of employees on the work, and shall comply with all applicable provisions of Federal, State and Municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the work is being performed. He shall erect and properly maintain at all times, as required by the conditions and progress of the work, all necessary safeguards for the protection of workmen and the public and shall post danger signs warning against the hazards created by such features of construction as excavations, well holes, hatchways, scaffolding, window openings, stairways and falling materials.

I. DAMAGE TO PERSONS AND PROPERTY:

In addition to the liability imposed by law upon the Contractor on account of bodily injury or death suffered through the Contractor's negligence, which liability is not impaired or otherwise affected hereby, the Contractor agrees to indemnify and hold harmless the MCMUA, the County of Morris, its officers, boards, commissions, employees and agents (including the Engineer) against and from any and all claims, demands, causes of action, suits and proceedings, regardless of the merits of the same and from damages (including damages to MCMUA property), liability, costs or expenses of every type, all or any part thereof which arise by reason of any injury to any person or persons, including death or property damage, resulting from any act or omission of the Contractor or any subcontractor or anyone directly or indirectly employed by either of them in the prosecution of any work included in the Contract.

J. MATERIALS, SERVICES AND FACILITIES:

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, fuel, tools, equipment, freight, transportation, all other facilities including water, gas and electric services and all costs and expenses of every kind necessary for the execution, completion and delivery of the work within the specified time.

K. COMPLIANCE WITH SPECIFICATIONS OF MATERIALS:

Unless otherwise specifically provided elsewhere, all workmanship, equipment, materials and parts incorporated in the work covered by this Contract are to be equivalent to those specified in the technical portion of the Specifications.

Whenever the words "AS MAY BE DIRECTED," "SUITABLE," "OR EQUAL," "AS APPROVED," or other words of similar intent and meaning are used implying that judgment, discretion or decision is to be exercised, it is understood that it is the judgment, discretion or decision of the Engineer to which reference is made. All materials and articles of any kind necessary for the work are subject to the approval of the Engineer.

The Contractor will be held to furnish under the base bid all work as specified except as the Specifications may be modified prior to the opening of the bids by addenda and/or written approvals of equal items of equipment or material as provided for in the Information to Bidders. After execution of the

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Contract, changes of brand names, trade names, trademarked, patented articles, or any other substitutions will be allowed only by written order signed by the Engineer.

L. INSPECTION AND TESTING OF MATERIALS:

1. All equipment and materials used in the construction of project, especially those upon which the strength and durability of the structure may depend, will be subject to inspection and testing, in accordance with accepted standards, to establish conformance with specifications and suitability for the use intended as determined by the Engineer.
2. The performance of tests and the engagement of the testing laboratory or agency shall have the prior approval of the Engineer.

M. ROYALTIES AND PATENTS:

The Contractor shall pay all royalties and license fees. The Contractor shall indemnify, keep and save harmless the MCMUA from all liabilities, judgments, costs, damages and expenses which may result from infringement of any patent by reason of the use of any proprietary materials, devices, equipment, or processes incorporated in or used in the performance of the work under the Contract. The Contractor shall furnish the MCMUA, before the completion of the Contract, satisfactory evidence that suppliers of proprietary materials, equipment, devices, or processes furnished or used in the performance of the work under this Contract have indemnified the Contractor from all liabilities, judgments, costs, damages and expenses which may arise from the use of such proprietary materials, equipment, devices or processes, furnished to the Contractor for incorporation in or use in performance of the work under this Contract and its operation by the MCMUA after acceptance of the work. Such satisfactory evidence shall consist of patent licenses or patent releases covering proprietary materials, equipment, devices or processes. The MCMUA, however, shall be responsible for all such loss when a particular process or the product of a particular manufacturer or manufacturers is required, but if the Contractor has information that the process or article specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Owner.

N. CUTTING, PATCHING AND DIGGING:

The Contractor shall do all cutting, fitting, or patching for the work as required to make it come together properly. The Contractor shall not endanger any work by cutting, digging, or otherwise, and shall not cut or alter the work of any other contractor except with the written consent of the Owner. Any cost caused by defective or ill-timed work shall be borne by the contractor responsible therefore as determined by the Owner.

O. CLEANING UP:

The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by his employees and work, and at the completion of the work, he shall remove all his rubbish, tools, scaffolding and surplus materials from the project and shall leave his work "broom clean" or its equivalent, unless more exactly specified.

MORRIS COUNTY MUA

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P. USE OF PREMISES:

The Contractor shall confine his apparatus, the storage of materials and the operations of his workmen to the limits indicated by easements, rights of way, permits, or directions of the Owner and shall not unreasonably encumber the premises with his materials. The Contractor shall not load or permit any part of a structure to be loaded with a weight that will endanger the safety of workmen or the integrity of the structure. The Contractor shall enforce the terms and conditions of all easement agreements between the Owner and third parties as related to this project.

B-4 OWNER-CONTRACTOR COORDINATION

A. SERVICE OF NOTICE:

Notice, order, direction, request or other communication given by the Owner to the Contractor shall be deemed to be well and sufficiently given to the Contractor if left at any office used by the Contractor or delivered to any of his officers, clerks or employees or posted at the site of the work or mailed to any post office addressed to the Contractor at the address given in the contract document or mailed to the Contractor's last known place of business. If mailed by first-class mail, any form of communication shall be deemed to have been given to and received by the Contractor.

B. SUGGESTIONS TO CONTRACTOR:

Plan or method of work suggested by the Owner to the Contractor but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor. The MCMUA and its Engineer assume no responsibility, therefore, and in no way will be held liable for any defects in the work which may result from or be caused by use of such plan or method of work.

C. COOPERATION:

The Contractor agrees to permit entry to the site of the work by MCMUA personnel or other contractors performing work on behalf of the MCMUA. The Contractor shall afford MCMUA personnel or other contractors and their employees, reasonable access and shall not interfere with their activities upon the site of the work. The Contractor shall join his work to that of others and perform his work in proper sequence in relation to the work of others.

If requested by the Contractor, the Owner shall arrange meetings with other contractors performing work on behalf of the MCMUA to plan coordination of construction activities. The Owner shall keep the Contractor informed of the planned activities of other contractors.

Differences or conflicts arising between the Contractor and other contractors employed by the MCMUA or between the Contractor and MCMUA personnel with regard to their work, shall be submitted to the Owner for decision in the matter. If the work of the Contractor is affected or delayed because of any act or omission of other contractors or of the MCMUA, the Contractor may submit for the Owner's consideration, a documented request for a change order.

D. DEVIATION FROM CONTRACTOR:

MORRIS COUNTY MUA

General Information

Neither the Contractor nor the MCMUA shall make an alteration or variation in, addition to, or deviation or omission from the terms of this contract without the written consent of the other party.

E. DIFFERING SITE CONDITIONS:

The Contractor shall promptly and before such conditions are disturbed, notify the Owner in writing of:

1. Subsurface or latent physical conditions at the site differing materially from those indicated in this contract.
2. Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract.

The Engineer shall promptly investigate the conditions. If he finds that such conditions do materially differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made by the MCMUA and the contract modified in writing accordingly.

No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required, except that the MCMUA may extend the prescribed time.

No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

F. CLAIMS:

1. **DETERMINATION BY ENGINEER:** Questions regarding meaning and intent of the contract documents shall be referred by the Contractor in writing to the Engineer for his decision. The Engineer shall respond to the Contractor in writing with his decision. If the Contractor disagrees with the Engineer's decision or considers that the decision requires extra work, he shall, within five calendar days, notify the Engineer in writing of the disagreement or of the claimed extra work involved and of the estimated cost of said work.

SECTION C - SPECIFICATIONS

C-1. SUBMITTALS

Where required by the specifications, the Contractor shall submit specified information which will enable the Engineer to determine whether the Contractor's proposed materials or equipment are in general conformance to the design concept and in compliance with the Specifications.

C-2. INFORMATION PROVIDED BY CONTRACTOR

Information required for constructing, testing, operating or maintaining parts of the work shall be provided by the Contractor when specified. Unless otherwise specified, such information shall be provided

MORRIS COUNTY MUA

General Information

at the time the referenced material or equipment is delivered to the job site. Information provided shall be as specified and includes such items as shop drawings, erection drawings, reinforcing steel schedules, testing and adjusting instructions, operations manuals, maintenance procedures, parts lists and record drawings. Such information is to be provided as part of the work under this contract and its acceptability determined under normal inspection procedures.

SECTION D - MATERIAL, EQUIPMENT AND WORKMANSHIP

D-1. GENERAL QUALITY

Unless otherwise specifically stated in the contract documents, the Contractor shall provide and pay for materials, labor, tools, equipment, fuel, freight, transportation, supervision and temporary construction of any nature and other services and facilities of any nature, whatsoever necessary, to execute, complete and deliver the work within the specified time. Material and equipment to be incorporated into the work shall be new and of a quality equal to that specified. Equipment offered shall be current models which have been in successful regular operation under comparable conditions. This requirement does not apply to minor details, nor to thoroughly demonstrated improvements in design or in materials of construction. Construction work shall be executed in conformity with the standard practice of the trade. Equipment shall meet all OSHA, F.M. Standards and be U.L. listed.

D-2. QUALITY IN ABSENCE OF DETAILED SPECIFICATIONS

Where the contract requires that materials or equipment be provided or that construction work be performed and detailed specifications of such materials, equipment or construction work are not set forth, the Contractor shall perform the work using materials and equipment that meet the standards of the trade in quality and workmanship, obtained from reputable suppliers, and installed following standard practices for performance of construction work.

In cases where quality compliance of materials or equipment is not readily determinable through inspection, the Engineer shall request that the Contractor provide properly authenticated documents, certificates or other satisfactory proof of quality. These documents, certifications and proofs shall establish performance characteristics, materials of construction and the physical or chemical characteristics of materials.

D-3. DEFECTIVE WORK

A. CORRECTION OF DEFECTIVE WORK

When the Engineer determines through inspection or otherwise, that material, equipment or workmanship incorporated in the project do not meet the requirements of the contract, the Engineer shall give written notice of the non-compliance to the Contractor. Within five days from the receipt of such notice, the Contractor shall undertake the work necessary to correct the deficiencies, and to comply with the contract. Failure of the Contractor to correct defective work is grounds for the MCMUA to take any appropriate corrective action and deduct the cost from monies due the Contractor.

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B. RETENTION OF DEFECTIVE WORK:

Prior to acceptance of the project, the MCMUA may, at its option, retain work which is not in compliance with the contract if the Engineer determines that such defective work is not of sufficient magnitude or importance to make the work dangerous or undesirable. The MCMUA also may retain defective work if in the opinion of the Engineer removal of such work is impractical or will create conditions which are dangerous or undesirable. Just and reasonable value for such defective work shall be judged by the MCMUA and appropriate deductions shall be made in the payments due or to become due the Contractor. Final acceptance shall not act as a waiver of the MCMUA's right to recover from the Contractor an amount representing the deduction for retention of defective work.

SECTION E – PROGRESS AND COMPLETION

E-1 CONTRACT TIME

A. GENERAL:

During periods when weather or other conditions are unfavorable for construction, the Contractor shall pursue only such portions of the work as shall not be damaged thereby. No portions of the work where acceptable quality or efficiency will be affected by unfavorable conditions shall be constructed while those conditions exist. It is expressly understood and agreed by and between the Contractor and the MCMUA that the contract time for completion of the work described herein is a reasonable time taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

B. DELAYS:

1. NOTICE OF DELAYS: When the Contractor foresees a delay in the prosecution of the work and in any event immediately upon the occurrence of a delay which the Contractor regards as unavoidable, he shall notify the Owner in writing of the occurrence of such delay and its cause. The Contractor shall then take immediate steps to prevent continuance of the delay. If this cannot be done, the Owner shall determine how long the delay shall continue and to what extent the prosecution and completion of the work are being delayed thereby. He shall also determine whether the delay is to be considered avoidable or unavoidable and shall notify the Contractor of his determination. The Contractor agrees that no claim shall be made for delays which are not called to the attention of the Owner at the time of their occurrence.

2. AVOIDABLE DELAYS: Avoidable delays in the prosecution of the work shall include delays which could have been averted by the exercise of care, prudence, foresight and diligence on the part of the Contractor or his subcontractors.

3. UNAVOIDABLE DELAYS: Unavoidable delays in the prosecution or completion of the work shall include delays which result from causes beyond the control of the Contractor and which could not have been averted by the exercise of care, prudence, foresight and diligence on the part of the Contractor or his subcontractors. Delays in completion of the work of other contractors employed by the MCMUA will be considered unavoidable delays insofar as they interfere with the Contractor's completion of work.. Delays due to normal weather conditions shall not be regarded as unavoidable as the

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Contractor agrees to plan his work with allowances for interference by normal weather conditions.

C. EXTENSION OF TIME:

1. **AVOIDABLE DELAYS:** In case the work is not completed in the time specified, including extension of time as may have been granted for unavoidable delays, the Contractor will be assessed damages for those costs incurred by the MCMUA which are attributable to the fact that the work was not completed on schedule.

The MCMUA may grant an extension of time for avoidable delay if it deems it in its best interest. If the MCMUA grants an extension of time for avoidable delay, the Contractor agrees to pay actual costs including charges for engineering inspection and administration as specified in Section A-6 incurred during the extension.

2. **UNAVOIDABLE DELAYS:** For delays which the Contractor considers to be unavoidable, he shall submit to the Owner complete information demonstrating the effect of the delay on the controlling operation in his construction schedule. The submission shall be made within 30 calendar days of the occurrence which is claimed to be responsible for the unavoidable delay. The Owner shall review the Contractor's submission and determine the number of days of unavoidable delay and the effect of such unavoidable delay on controlling operations of the work. The MCMUA agrees to grant an extension of time to the extent that unavoidable delays affect controlling operations in the construction schedule. During such extension of time, neither extra compensation or engineering inspection and administration nor damages for delay will be charged to the Contractor. It is understood and agreed by the Contractor and MCMUA that time extensions delay involve controlling operations which would prevent completion of the whole work within the specified contract time.

E-2 SUSPENSION PROCEDURES

The MCMUA may, at its convenience and at any time and without cause, suspend, delay or interrupt all or any part of the work for a period of not more than 90 days by notice in writing to the Contractor. The MCMUA shall fix the date on which the work shall be resumed. The work shall be resumed by the Contractor within 10 days after receiving written notice from the MCMUA to do so. The Contractor will be allowed an increase in the contract price or an extension of contract time or both directly attributable to any suspension if he makes a claim therefore as provided in the paragraphs related to change of contract price and change of contract time.

E-3 USE OF COMPLETED PORTIONS OF THE WORK

The MCMUA shall have the right to take possession of and use completed or partially completed portions of the work notwithstanding the time for completing the work or such portions may not have expired. Such taking possession and use shall not be deemed as completion or acceptance of parts of the work. If such prior possession or use increases the cost of the work, the Contractor shall be entitled to claim for extra compensation within five calendar days of each occurrence. The amount of extra compensation shall be determined in accordance with the procedures given herein for determination of change order cost. The Contractor shall not claim extra compensation for possession of portions of the work specifically required by the contract.

SECTION F - MEASUREMENT AND PAYMENT

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General Information

F-1 CHANGES IN THE WORK

The MCMUA may order extra work or make changes by altering, adding or deducting from the work without invalidating the Contract. All such work shall be executed under the conditions of the original Contract, except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

The value of such extra work shall be determined by one of the following means:

1. By estimate and acceptance in a lump sum, with a schedule of values.
2. By unit prices named in the Contract or subsequently agreed upon.
3. By cost and percentage or by cost plus a fixed fee.

It is understood that the MCMUA reserves the right to have any extra work done by any person, persons, or corporation other than the Contractor if an agreement upon the prices to paid for such extra work cannot be promptly reached between the MCMUA and the Contractor. The Contractor agrees to make no claim for damages or for any privileges or rights other than that provided in the Contract by reason of such work by others.

If the Contractor shall claim compensation for any alleged damages sustained by reason of acts of the MCMUA or its agents, the Contractor shall immediately notify the Owner so that a proper appraisal can be made. Within five (5) days thereafter, the Contractor shall submit to the Owner a written statement as to the nature of the damage and an itemized statement of the amount claimed for such damage. No such claims shall be entitled to payment unless as hereinbefore specified.

F-2 EXTENSION OF TIME

The MCMUA shall have the right to defer the beginning or to suspend the whole or any part of the work herein specified to be done whenever, in the opinion of the Engineer, it may be necessary or expedient for the MCMUA so to do. And, if the Contractor be delayed in the completion of the work by any act or neglect of the MCMUA, or any other contractor employed by the MCMUA, or by changes in the work, or by strikes, lockouts, fire, unusual delay by carriers, unavoidable casualties, or any cause beyond the Contractor's control or by any cause which the Engineer shall decide to justify the delay, then for all such delays and suspensions, the Contractor shall be allowed one day additional to the time herein stated for each and every day of such delay so caused in the completion of the work, the same to be ascertained by the Engineer and a similar allowance of extra time will be made for such other delays as the Engineer may find to have been caused by the MCMUA. No such extension shall be made for any reason unless within ten (10) days after the beginning of such delay, a written request for additional time shall be filed with the Owner.

F-3. COMPENSATION TO MCMUA FOR TIME EXTENSION

The MCMUA, in exchange for granting an extension of time for avoidable delay, shall be compensated by the Contractor for the actual costs to the MCMUA of engineering, inspection, general

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General Information

supervision and overhead expenses which are directly chargeable to the work and which accrue during the period of such extension. The actual costs do not include charges for final inspection and preparation of the final estimate by the Owner.

F-4. ACCEPTANCE OF WORK.

Upon Completion of the work, or a portion thereof, the Contractor shall so notify the Engineer in writing. Upon receipt of the notification, the Engineer will promptly, by personal inspection, determine the actual status of the work in accordance with the terms of the contract. If he finds materials, equipment or workmanship which do not meet the terms of the contract, he shall prepare a punch list of such items and submit it to the Contractor. Following completion of the corrective work by the Contractor, the Engineer shall notify the MCMUA that the work has been completed in accordance with the Contract. Final determination of the acceptability shall be made by the MCMUA Board pursuant to written resolution. The maintenance bond shall commence on the date that the MCMUA adopts a resolution accepting the work.

CONTRACTUAL GENERAL CONDITIONS

CONTRACT

MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY
PAR/TROY TRANSFER STATION
NORTH TIPPING FLOOR RESTORATION

THIS AGREEMENT ("Agreement" or "Contract") is entered into as of the ____ day of _____ 202_, by and between the Morris County Municipal Utilities Authority, located at 370 Richard Mine Road, Wharton, New Jersey 07885, hereinafter called the OWNER and/or MCMUA and _____, with principal offices located at _____, hereinafter called the "Contractor."

WITNESSETH: That the said Contractor has agreed and by these presents does agree with the OWNER for the prices stipulated in the proposal herein contained or hereunto annexed and under the penalty expressed in bonds bearing even date with these presents, and herein contained or hereunto annexed, to furnish at his own cost and expense all the necessary materials, labor, superintendence, tools and appliances and shall execute, construct and finish and test in an expeditious and workmanlike manner, the

BID#2025-SW06 PAR/TROY TRANSFER STATION NORTH TIPPING FLOOR RESTORATION

In the Amount not to exceed the of \$_____ in accordance with the Bid from the Contractor dated _____

and appurtenances commencing the work within ten (10) days from the date of notice from the MCMUA to commence work and executing the same within the time and in the

manner specified and in conformity with the requirements set forth in the specifications herein contained or hereunto attached and in accordance with the contract drawings of said work on file in the office of the OWNER and all to the acceptance of the said OWNER. The Contractor shall proceed with the said work in a prompt and diligent manner and shall do the several parts thereof at such times in such order as the OWNER or its ENGINEER may direct.

The undersigned hereby agrees that the work will be Complete and ready for final payment within the number of calendar days indicated below from the date of Notice to Proceed.

CONTRACT	CALENDAR DAYS TO FINAL COMPLETION	LIQUIDATED DAMAGES
Bid No. 2025-SW06	90 Days	\$2,500/day

CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified above, plus any extensions thereof allowed in accordance with the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding, the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER in the manner stipulated the amount stated above for each and every calendar day (Sunday and legal holidays excepted) that expires after the time specified for Completion until the Work is complete.

The OWNER shall not be liable to the Contractor for any neglect, default, delay or interference of or by any other contractor, nor shall any such neglect, default, delay or interference of any other contractor, or alteration which may be required in said work, release the Contractor from the obligation to finish the said work within the time aforesaid or from the damages to be paid in default thereof.

The status of the Contractor in the work to be performed by him under the Contract is that of an independent contractor. As such, the work, in every respect, from the execution of the Contract and during progress of the work thereunder, and until final acceptance, shall be under the charge and in care of the Contractor and at his risk. He shall be solely responsible for site safety and the implementation, discharge and monitoring of all safety standards or practices and shall properly safeguard against any or all injury to the public, the public and private property, materials and things, and, as such, the Contractor alone shall be responsible for any and all damage, loss or injury to persons or property that may arise, or be incurred in, or during the conduct or progress of said work without regard to whether the Contractor, his subcontractors, agents or employees, have been negligent. The Contractor shall keep the OWNER and ENGINEER free and discharged of any and all responsibility and liability therefore of any sort or kind whatsoever. The Contractor shall assume all responsibility for risks and casualties of every description and for any or all damage, loss or injury to persons or property arising out of the nature of the work from the action of the elements, or from any unforeseen or unusual difficulty or circumstance. The Contractor shall assume and be liable for all blame and loss of whatsoever nature by reason of neglect or violation

of any State, County or local laws, statutes, ordinances or any and all rules and regulations promulgated thereunder. The Contractor shall indemnify and save harmless the OWNER and ENGINEER and all of the respective officers, agents and employees from all liability or suits or actions at law or in equity of any kind whatsoever arising from the failure of the Contractor to comply with terms and conditions of the Contract, the plans and specifications or State statutes or local ordinances or any rules and regulations promulgated, in accordance with the provisions of such statutes or ordinances by the State of New Jersey or any municipality thereof or by any department or agency of any or all thereof, and the Contractor shall, if required by the OWNER or ENGINEER, produce evidence of settlement of any such action before final payment under the Contract shall be made by the OWNER.

The Contractor shall, unless otherwise specified, maintain and pay for such insurance, issued in the name of the OWNER and ENGINEER as will protect the OWNER and ENGINEER from contingent liability under this Contract and the OWNER's and ENGINEER's right to enforce against the Contractor any provision of this article shall be contingent upon the full compliance by the OWNER and ENGINEER with the terms of such insurance policy or policies, a copy of which shall be deposited with the OWNER and ENGINEER.

Subject to the applicable provisions of the law, this Contract shall be in full force and effect as a contract from and after the date when a fully executed and approved counterpart hereof is delivered to the Contractor.

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GENERAL CONDITIONS (Continued)

1. DEFINITIONS

- A. Wherever the term "OWNER" is used herein, it shall refer to the Morris County Municipal Utilities Authority, 370 Richard Mine Road, Wharton, New Jersey 07885 the party of the first part to this Agreement.
- B. Whenever the term "Contractor" is used herein, it shall refer to and designate the party of the second part to this Agreement, or his or their legal representative, successors or assigns.
- C. Whenever the term "ENGINEER" is used herein, it shall refer to the OWNER's engineer or such other person authorized by the OWNER to serve as the OWNER's representative for this Contract.
- D. Wherever the term "As Designated" is used herein, it shall be held to refer to information or directions indicated on the Contract Drawings or in the specifications covering the construction of the improvements contemplated herein.
- E. Wherever the term "Approved" is used herein, it shall be held, unless otherwise specified, to mean as approved by the OWNER or ENGINEER. Similar use will be made of the terms "Directed," "Required," "Permitted" and words or like import.
- F. The Contract Documents consist of Contractual General Conditions, Supplementary Conditions, Specifications, the Contractor's Bid, Contract, Wage Rate Determination and Plans, including all modifications incorporated in the documents before their execution and any Change Orders that are issued by the Owner.
- G. The term "Subcontractor" as employed herein, includes only those having a direct contract with the Contractor, and it includes one who furnishes material worked to a special design according to the Plans and Specifications of this work, but does not include one who merely furnishes material not so worked.
- H. "Written Notice" shall be deemed to have been duly served if delivered in person to the authorized agent of the Contractor, such as superintendent or foreman in charge of work or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered mail to the last business address known to him who given the notice.
- I. "Section" shall refer to either the specification section of these specifications in which case it will be followed by the term "of these specifications" or a

GENERAL CONDITIONS (Continued)

specified section of the Standard Specifications in which case it will be followed by the term "of the STANDARD SPECIFICATIONS".

2. EXTENT OF CONTRACT

- A. The Contractor's Bid, Bonds, Specifications and Contract Drawings, and Contract Documents as defined above are, and shall be taken to be a part of this contract. All work and materials mentioned in the specifications and not shown on the drawings, and all work and materials shown on the Drawings and not mentioned in the specifications, and all work and materials necessary for the completion of the work according to the true intent and meaning of the Contract Drawings and specifications, shall be furnished, performed and done as if the same were both mentioned in the specifications and shown on the drawings. In case of disagreement between the plans and specifications, the OWNER or its ENGINEER will decide which shall prevail and the Contractor shall proceed in accordance with the OWNER or its ENGINEER's decision at no change in contract price.
- B. Should anything be omitted from the Contract Drawings or specifications which is necessary to a clear understanding of the work, or should any error appear either in any of the various instruments furnished or in the work done by other contractors affecting the work included under this contract, the Contractor shall promptly notify the OWNER or its ENGINEER of such omission or errors and in the event of the Contractor's failure to do so, he shall make good any damage to or defect in his work caused thereby. He will not be allowed to take advantage of any error or omission on the Contract Drawings, as full instructions will be furnished by the OWNER or its ENGINEER. Should such error or omission be discovered, the Contractor shall carry out such instructions as if originally specified.
- C. Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein, and this contract shall be read and enforced as though it were included herein, and if through mere mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.
- D. Each clause of these specifications is to be followed wherever it may apply throughout the work irrespective of the section or subdivision of the specifications in which the clause may appear.

3. OBLIGATION OF CONTRACTOR

GENERAL CONDITIONS (Continued)

- A. The Contractor shall, at his own cost and expense, and in strict conformity with the hereinafter contained or hereto annexed specifications and the contract drawings, furnish all the materials and labor and all tools, tackle, implements, machinery and appliances of very kind necessary or proper for the purpose, and in good substantial and workmanlike manner and within the time hereinafter specified, perform and complete the work required under this contract. He shall complete the entire work to the satisfaction and approval of the OWNER, and shall accept in consideration thereof, and as full compensation therefore, the sums set opposite the respective classes of work and materials named in the contract and proposal herein contained or hereto annexed, the said sums being the amounts at which the contract therefore was awarded to the Contractor at the public letting thereof.
- B. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as CONTRACTOR and OWNER may otherwise agree in writing.

4. ABSENCE OF CONTRACTOR

- A. In the absence of the Contractor there shall at all times be a duly authorized representative on the work, who shall receive and execute all orders given by the OWNER or its ENGINEER, and such orders so given to and received by said representative, shall be deemed to have been given to and received by the Contractor. Whenever the Contractor or his representative is not present at any place on the work where it may be necessary to give orders or directions, they will be given by the OWNER or its ENGINEER and his assistants, and shall be received and promptly obeyed by the superintendent or the foremen who may have immediate charge of the men employed on the particular work in relation to which the order may be given.

5. NOTICE TO CONTRACTOR

- A. The residence or place of business given in the bid or proposal upon which this contract is founded is hereby designated as the place where all notices, letters and other communications shall be served, mailed to or delivered. Any notice, letter or other communication addressed to the Contractor and delivered at the above named place or deposited in a postpaid wrapper in any post office box regularly maintained by the United States Post Office. Department shall be deemed sufficient service thereof upon the Contractor, and the date of mailing shall be the date of service. The place named may be changed at any time by an instrument in writing, executed and acknowledged by the Contractor and delivered to the OWNER.

GENERAL CONDITIONS (Continued)

- B. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter or other communication upon the Contractor personally.

6. OBSERVATION

- A. The work is subject to observation by the ENGINEER or his appointed representative to provide the OWNER a greater degree of confidence that the work is in conformance with the Contract Documents. The Engineer's Representative is not authorized to change any provision of the Contract Documents without written authorization of the OWNER, nor shall the presence or absence of the Engineer's Representative relieve the Contractor from any requirements of the Contract. Should the CONTRACTOR desire to work in excess of 40 hours per week, he shall pay for all costs associated with maintaining the ENGINEER's Representative on-site for observation of the work at the same rates paid to the ENGINEER by the OWNER for similar work..
- B. The ENGINEER or his authorized representative will observe the materials furnished and the work done under this contract, and he is also hereby authorized and empowered to reject and refuse all work and materials and the method of application of any part thereof, under or in fulfillment of this contract, that does not comply in kind, quality, quantity, time or place with the specifications and the Contract Drawings. The observations, approval or acceptance of any part of the work herein contracted for, or the materials used therein, or any payment on account thereof, shall not prevent the rejection of said work or materials at any time thereafter during the existence of this contract and prior to the payment of the final estimate, should said work or materials be found to be defective or not in accordance with the requirements of this contract.
- C. As soon as practicable after the completion of the entire work, or any divisible part thereof as may be designated in these Contract Documents an examination thereof will be made by the ENGINEER at the site of the work. If such work is found to comply with the requirements of the contract, it will be accepted, and final payment therefore will be made in accordance with the clause of the contract entitled, "Estimates and Payment."

7. ENGINEER'S STATUS

- A. The ENGINEER is the agent of the OWNER to the extent provided in the Contract Documents and in special instances he shall, upon request, show the Contractor written authority.
- B. As the ENGINEER is, in the first instance, the interpreter of the conditions of the contract and the judge of its performance, he shall side neither with the OWNER

GENERAL CONDITIONS (Continued)

nor with the Contractor, but shall use his powers under the contract to enforce its faithful performance by both.

- C. In case of termination of the employment of the ENGINEER, the OWNER shall appoint a capable and reputable Engineer against whom the Contractor makes no reasonable objection, whose status under the contract shall be that to the former Engineer.

8. ENGINEER'S DECISION

- A. The ENGINEER shall, in all cases, determine the amount, quality, acceptability and fitness of the several kinds of work, materials and equipment which are to be paid for under this contract. He shall also determine all questions in relation to said work and the performance thereof, and decide every question which may arise relative to the fulfillment of this contract on the part of the Contractor, except as provided herein. The determinations of the ENGINEER as to work, materials and equipment shall be subject to the final approval of the OWNER.
- B. All decisions of the ENGINEER shall be final except in cases where time and/or financial considerations are involved which, of no agreement in regard thereto is reached, shall be subject to appeal by the OWNER.
- C. In carrying out the provisions of this Contract or in exercising any power of authority granted them by their position there shall be no liability upon the appointed officials, the Engineer or their authorized representatives or assistants, either personally or as officials of the Owner, it being understood that in such matters they act as agents and representatives of the Owner.

9. ACCESS TO WORK

- A. The Contractor shall at all times give access to the work to the OWNER, to its ENGINEER and the assistants and inspectors under him, and to representatives of governmental agencies with jurisdictional interest. The Contractor shall furnish all the necessary facilities for determining both on the work and at the places of manufacture, that all work to be done and all materials to be furnished under this contract is being performed and are being made strictly in accordance with the terms of the contract and with the Contract Drawings and specifications. The Contractor shall notify the OWNER or its ENGINEER in writing at least seven (7) days previous to the commencement of the manufacture of any materials, of the time and place where the manufacture is to take place, in order that a representative of the OWNER may be present to inspect the manufacture, should it be so desired.

10. COMPETENT PERSONS TO BE EMPLOYED

GENERAL CONDITIONS (Continued)

- A. The Contractor shall employ only competent and skill full persons to do the work, and whenever the ENGINEER shall notify the Contractor in writing that any person on the work is, in his opinion, incompetent, disorderly, or otherwise unsatisfactory, the Contractor, on receiving such notice, shall forthwith remove from the site such person and shall not allow back on-site without the written consent of the ENGINEER.

11. LAW AND ORDINANCES

- A. The Contractor shall keep himself fully informed of, and shall carefully observe and comply with all State, County and local laws, ordinances and regulations which in any manner affect the conduct of the work, and all such orders or decrees as exist at present and those which may be enacted later, of bodies having any jurisdiction or authority over the work, and shall indemnify and save harmless the OWNER and all its officers, agents and servants against any claim or liability arising from or based upon the violation of any such law, ordinance, regulation, order or decree, whether by himself of his employees.

12. PERMITS

- A. Those Permits required to be obtained, by the OWNER have been or will be obtained. Those Permits required to be obtained by the Contractor shall be obtained and paid for the by Contractor. Any charge or fee for Permits issued by the OWNER shall be borne by the OWNER. The OWNER will be reimbursed by the Contractor for the cost of inspection of the work under this contract required by public authority other than the OWNER, such as other public agencies. The Contractor shall comply with all requirements of N.J.S.A. 12:190-7.7 and N.J.A.C. 12:190-7.7 regarding blasting in the vicinity of underground and above ground utility lines.

13. LABOR-EMPLOYMENT-WAGE HOURS

- A. The Contractor shall comply with all requirements of the labor laws of the State applicable to contracts on behalf of a municipality for construction, alternation or repair of any building or public work.

14. WORKMENS COMPENSATION

- A. The Contractor shall take out and maintain Workmen's Compensation Insurance to fully protect the OWNER as required by existing law, or as such may be amended during the life to this contract. In case the Contractor shall subcontract any portion of the work, he shall require that all employees of the subcontractor are properly covered by such Workmen's Compensation Insurance. In case any class of

GENERAL CONDITIONS (Continued)

employees engaged in hazardous work under this contract is not protected under Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate and suitable insurance for the protection of his employees not otherwise protected.

15. PUBLIC LIABILITY, PROPERTY AND AUTOMOBILE INSURANCE

- A. The Contractor shall, at his own cost and expense, secure and maintain in force until Contract Completion and at all times thereafter when the Contractor may be correcting, removing or replacing defective work or completing plantings, insurance for damages imposed by law and assumed under the Contract of the kinds and in the amounts hereinafter provided with insurance companies authorized to do business in the State of New Jersey.

As a precondition to be satisfied to the satisfaction of the OWNER prior to the issuance of the Notice to Proceed, the Contractor shall furnish to the OWNER a certificate or certificates of insurance, in triplicate, together with declaration pages, in a form satisfactory to the OWNER, showing that the Contractor has complied with this Section. Insurance binders are not acceptable as proof of insurance coverage. Such certificates shall specifically refer to this Project by project name and contract number. Original copies of the Owner's and Contractor's Protective Liability Insurance (OCPL) policy and the Builders Risk Policy shall be provided to the OWNER before starting work. The Contractor waives and releases any and all claims caused by the time for review by the OWNER and/or ENGINEER of all insurance provided by the Contractor, subcontractor of any tier, materialmen and suppliers and for any decision by the OWNER and/or ENGINEER regarding whether the insurance is or is not satisfactory, including, but not limited to, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties and all costs (including, but not limited to, all fees and charges of engineers, attorneys, architects and other professionals and consultant fees and all court and alternative dispute resolution costs) or other such damages.

- B. All of the policies of insurance required to be purchased and maintained and the certificates, declaration pages, or other evidence thereof shall contain a provision or endorsement that the coverage afforded is not to be cancelled, materially changed, or renewal refused until at least thirty (30) calendar days prior to written notice has been given to the OWNER by certified mail.
- C. Contractor Insurance Requirements: The Contractor shall procure and maintain liability insurance as specified below, to protect the Contractor, the OWNER, ENGINEER and their respective officers, employees and agents against claims of

GENERAL CONDITIONS (Continued)

or relating to personal injury (including death) to persons or damage to property which may arise from or in connection with the performance of the work (whether performed on-site or off-site) by the Contractor, its employees, officers, agents, subcontractors or other individuals or entities for whom the Contractor may be contractually or legally responsible from the date of execution of the Contract until Contract Completion.

1. **Commercial General Liability:** Commercial General Liability is to be written as broad as the standard coverage form currently in use in the State of New Jersey and shall not be circumscribed by any endorsements limiting the breadth of coverage. The policy shall include coverage for contractual liability, products, completed operations and any explosion, collapse and underground (XCU) operations. Limits of liability shall not be less than \$2,000,000 combined single limit with excess or umbrella liability coverage with the same terms and conditions as the underlying coverage in an amount such that the primary coverage and excess/umbrella coverage equals \$2,000,000. The policy shall name the OWNER, the ENGINEER, their respective officers, employees and agents as additional insured's.
2. **Automobile Liability Insurance:** The Contractor shall carry Automobile Liability Insurance covering owned, non-owned, and hired vehicles. The limits of liability shall not be less than \$1,000,000 combined single limit, each accident for bodily injury and property damage.
3. **Workers Compensation and Employer's Liability:** Workers Compensation Insurance in accordance with the laws of the State of New Jersey and any other state or federal jurisdiction as is required to protect the employees of the Contractor or any subcontractor who will be engaged in the performance of the work. This policy shall include Employer's Liability protection with a limit of liability of not less than \$1,000,000.
4. **Owner's and Contractor's Protective Liability Insurance (OCPL):** In addition to the insurance required above, the Contractor shall obtain and maintain a separate Owner's and Contractor's Protective Liability insurance policy for the same limits of liability as specified for the Commercial General Liability insurance. The policy shall be maintained in force for the term of the Contract or for one (1) year, whichever is longer, and shall name the OWNER, the ENGINEER and their respective officers, employees and agents as insured's.
5. **Builder's Risk Insurance:** The Contractor shall provide Special Form Builder's Risk insurance on a completed value basis and in the full amount of the Contract insuring the interest of the OWNER, covering all

GENERAL CONDITIONS (Continued)

real and personal property for all risks of physical loss or damage to the project, including coverage while in transit and during storage away from the site, external water damage and debris removal. In the event that the value of the work increases during the course of construction, the value of the insurance shall be immediately increased accordingly.

The Contractor shall maintain such coverage from the date of execution of the Contract until Contract Completion.

Coverage shall include all materials, supplies, assemblies, furnishings and equipment that are intended for specific installation in the project while such materials, supplies, assemblies, furnishings and equipment are located at the site, in transit and while temporarily located away from the site for the purpose of repair, adjustment or storage.

Coverage shall include structures, excavations and foundations, including pilings, demolition, re-excavation and debris removal and operations testing.

The Builder's Risk insurance policy shall be endorsed waiving the insurance company's rights of subrogation and provide that the insurance company will not cancel such insurance without giving thirty (30) day prior written notice to the OWNER.

Deductibles or self-insured retentions with respect to the builder's risk insurance shall be no greater than \$25,000 per claim for flood and earthquake, and not greater than \$10,000 per claim for all other property losses. The Contractor shall bear the cost of all deductibles and self-insured retentions. Notwithstanding any deductible or self-retention, the Contractor shall remain solely liable for the full amount of any item covered by the builder's risk insurance.

The OWNER and the Contractor waive all rights against each other for damages caused by fire or other perils to the extent they are covered by the builder's risk insurance or any other property insurance applicable to the work.

- D. Endorsement and Waivers: The Commercial General Liability Policy, Automobile Liability Policy, and Excess/Umbrella Policies provided by the Contractor shall contain or be endorsed to contain the following provisions:

1. The OWNER, the ENGINEER, and their respective officers, employees and agents shall be covered as additional insured's as respects any and all liability arising out of the work of this Contract.

GENERAL CONDITIONS (Continued)

2. For any claims related to the Project, the Contractor's insurance coverage shall be primary insurance with respect to the OWNER, the ENGINEER, and their respective officers, employees and agents, and shall specify that coverage, continues notwithstanding the fact that the Contractor has departed from the site. Any insurance or self-insurance maintained by the OWNER, the ENGINEER, and their respective officers, employees and agents shall be in excess of the Contractor's insurance and shall not contribute with it.
 3. Any failure on the part of the Contractor to comply with reporting provisions or other conditions of the policies, any breach of warranty, any action or inaction of the Contractor or others, any foreclosures related to the Project or any change in ownership of all or any portion of the Project shall not affect coverage provided to the OWNER, the ENGINEER, and their respective officers, employees and agents.
 4. The Contractor's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.
 5. In the event the Commercial General Liability Insurance has an aggregate limit of liability, it shall be endorsed with the Designated Construction Project(s) General Aggregate Limit endorsement (CG 25 03 or equivalent).
 6. The Builder's Risk policy shall contain a waiver of subrogation against the OWNER, the ENGINEER and their respective officers, employees and agents.
- E. Disclaimer: The Contractor and each subcontractor have the responsibility to make sure that their respective e insurance programs fit their particular needs, and it is their responsibility to arrange for and secure any insurance coverage that they deem advisable, whether or not specified herein.
- F. No Recourse: There shall be no recourse against the OWNER or the ENGINEER for payment of premiums or other amounts with respect to the insurance required by the Contractor hereunder.
- H. Right to Remedy: If the Contractor fails to provide insurance as required herein, the OWNER shall have the right, but not the obligation, to purchase such insurance. In such event, the Contract Price shall be reduced by the amount paid for such insurance.

16. SOCIAL SECURITY ACT

GENERAL CONDITIONS (Continued)

- A. The Contractor shall be and remain an independent Contractor with respect to all services performed hereunder and agrees to and does hereby accept full liability for the payment of any and all contributions or taxes for social security, unemployment insurance, federal withholding tax or old age retirement benefits, pensions or annuities, nor or hereafter imposed under any state or federal law which are measured by the wages, salaries, or other remuneration paid to persons employed by the Contractor on work performed under the terms of this contract, and further agrees to obey all lawful rules and regulations and to meet all lawful requirements which are now or hereafter may be issued or promulgated under said respective laws by any duly authorized state or federal officials; and said Contractor also agrees to indemnify and save harmless the OWNER from any such contributions or taxes or liability thereof.

17. ASSIGNMENT OF CONTRACT

- A. The Contractor or his thoroughly qualified and designated representative shall give his personal attention constantly to the faithful prosecution of the work. He shall not assign, transfer, convey or otherwise dispose of this contract, or his right, title, or interest in, or to the same or any part thereof, without the previous approval of the OWNER.
- B. The Contractor shall not assign, by power of attorney or otherwise, any of the monies to become due and payable under this contract, unless by and with the written consent of the OWNER, and such consent or approval, if given, will not relieve the Contractor from any of the obligations of said contract, assignment of this contract or any part thereof or of any funds to be received thereunder by the Contractor shall contain a clause to the effect that it is agreed that the funds to be paid the assignee under the assignment are subject to a prior lien for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms or corporations rendering such services or supplying such materials.

18. ROYALTIES AND PATENTS

- A. The Contractor shall indemnify and save harmless the OWNER and its officers and agents from all damages, judgments, claims and expenses arising from the infringement of any letter, patent, or patent right because of any royalty, fee or license for the use, arrangement or operation of any tools, machinery, appliances, devices, materials, process or processes which may be used by the Contractor or furnished by him in fulfillment of the requirements of this contract. In the event of any claim or action at law on account of such patents or fees, it is agreed that the OWNER may retain out of the monies which are or which may become due the Contractor under his contract, a sum of money sufficient to protect itself

GENERAL CONDITIONS (Continued)

against loss, and to retain the same until said claims are paid or satisfactorily adjusted.

19. CLAIMS FOR LABOR, MATERIALS AND DAMAGES

- A. The Contractor shall, from time to time, as required by the OWNER, furnish the OWNER with satisfactory evidence that all persons who have done work or furnished materials under this contract, or have suffered some damage on account of the Contractor's operations, have been fully paid or secured; and in case such evidence be not furnished as aforesaid, such amount as the OWNER may consider necessary to meet the lawful claims of the persons aforesaid will be retained from the monies otherwise due said Contractor, until the liabilities aforesaid have been full satisfied. It is understood and agreed, however, that the OWNER hereby assumes no obligation toward such claimants, nor in any way undertakes to pay such claims out of any funds due or that may become due the Contractor, or out of its own funds.

20. ACCIDENTS AND CLAIMS TO BE GUARDED AGAINST

- A. All work shall be in compliance with OSHA General Industry Standards (29 CFR 1910), OSHA Construction Industry Standards (29 CFR 1926), the rules and regulations of State of New Jersey Department of Labor and Workforce Development, the "Construction Safety Act," (N.J.S.A. 34:5-166, et seq.), the High Voltage Proximity Act N.J.S.A. 34:6-47.1) and other applicable rules and regulations.
- B. The Contractor, when necessary, shall erect and maintain on the work such strong and suitable barriers and at night time such red lights as will efficiently and effectually prevent any accident to life, limb or property on consequence of said work, or in the use or occupancy of street, alley, highway or public or private grounds.
- C. The status of the Contractor in the work to be performed by him under the contract is that of an independent Contractor and the safety of his employees, the safety of third parties on or near the construction site and the means, methods, techniques and sequences of construction are the sole responsibility of the Contractor. As such, the work, in every respect, from the execution of the contract and during progress of the work thereunder, and until final acceptance, shall be under the charge and in care of the Contractor and at his risk. He shall be solely responsible for site safety and the implementation, discharge and monitoring of all safety standards or practices and shall properly safeguard against any or all injury to the public, to public and private property, materials and things and, as such, the Contractor alone shall be responsible for any and all damage, loss or injury to persons or property that may arise, or be incurred in, or

GENERAL CONDITIONS (Continued)

during the conduct or progress of said work without regard to whether the Contractor, his subcontractors, agents or employees, have been negligent. The Contractor shall appoint a Construction Site Safety Officer who shall implement the Contractor's Safety Program. The Contractor shall keep the OWNER and ENGINEER free from, and discharged of any and all responsibility and liability therefore of any sort or kind whatsoever. The Contractor shall assume all responsibility for risks and casualties of every description and for any or all damage, loss or injury to persons or property arising out of the nature of the work from the action of the elements, or from any unforeseen or unusual difficulty or circumstance. The Contractor shall assume and be liable for all blame and loss of whatsoever nature by reason of neglect or violation of any Federal, State, County or local laws, statutes, ordinances or any an all rules and regulations promulgated thereunder. The Contractor shall indemnify, defend and save harmless the OWNER and ENGINEER and all of their respective officers, agents and employees from all liability or suits or actions at loss or in equity of any kind whatsoever arising from the failure of the Contractor to comply with the terms and conditions of the contract, plans and specifications or any Federal or State statutes or local ordinances or any rules and regulations promulgated, in accordance with the provisions of such statutes or ordinances by the United States, the State of New Jersey, or any municipality thereof, or by any department or agency of any or all thereof, and the Contractor shall, if required by the OWNER or ENGINEER, produce evidence of settlement of any such action before final payment under the contract shall be made by the OWNER.

- D. The Contractor shall, unless otherwise specified, maintain and pay for such primary insurance, issued in the name of the OWNER and ENGINEER, as will protect the OWNER and ENGINEER from contingent liability under this contract, and the OWNER's and ENGINEER's right to enforce against the Contractor any provision of this article shall be contingent upon the full compliance by the OWNER and ENGINEER with the terms of such insurance policy or policies, a copy of which shall be deposited with the OWNER and ENGINEER.

21. STATEMENT OF QUANTITIES

- A. The OWNER shall not be held responsible if any of the said quantities are found incorrect or omitted and the Contractor shall not make any claim for damages or for loss of profits or for an extension of time because of a difference between the quantities of the various classes or work as estimated and the work actually performed. If any error, omission, or misstatement is discovered in the said estimated quantities, the same shall not invalidate the contract or release the Contractor from execution and completion of the whole or any part of the work to the satisfaction of the OWNER and in accordance with the specifications and plans and for the prices agreed upon and fixed therefore or excuse him from any

GENERAL CONDITIONS (Continued)

of the obligations or liabilities set forth in the Contract Documents, or entitle him to any damages or compensation otherwise than is specified in said Contract Documents.

- B. The quantities of the various work on which payments will be made to the Contractor are to be determined by measurements of the work actually performed by the Contractor and accepted by the ENGINEER as being satisfactorily completed in accordance with the requirements of the Contract Documents.
- C. Before submitting this proposal, the Contractor shall determine for himself the quantities of work required and the conditions under which the work will be performed, by such means as he may prefer, and shall assume all risks as to variations in the quantities of the different classes of work.
- D. He shall not at any time after the submission of this proposal, dispute or complain of the schedule of quantities or assert that there are any misunderstanding as to the amount or character of the work to be done, and shall not make any claim for damages, or for loss of profits, or for an extension of time because of a difference between the quantities of the various classes of work stated, and the quantities of work actually performed.

22. MATERIALS AND WORK

- A. All materials furnished under this contract shall be as specified or required, or in the absence of particular specification shall be the best of their respective kinds, or new stock, unused and not deteriorated and all the work contemplated and described shall be done in a good, substantial and workmanlike manner.
- B. Only manufactured and farm products of the United States, wherever available, shall be incorporated into the work of this contract in accordance with N.J.S.A. 40A:11-18.
- C. Wherever in these *Specifications* or on the plans, the terms ASTM, AWWA, or other such reference *Specifications* are used, it shall be considered to mean the latest pertinent *Specifications* and any subsequent amendments thereto.
- D. Substitutes and "Or-Equals"
 - 1. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted,

GENERAL CONDITIONS (Continued)

other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.

- a. *"Or-Equal" Items:* If in OWNER's or its ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by OWNER as an "or-equal" item, in which case review and approval of the proposed item may, in OWNER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- (1) in the exercise of reasonable judgment OWNER determines that:

- (a) it is at least equal in quality, durability, appearance, strength, and design characteristics;
- (b) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;
- (c) it has a proven record of performance and availability of responsive service; and

- (2) CONTRACTOR certifies that:

- (a) if approved and incorporated into the work there will be no increase in cost to the OWNER; and
- (b) it will conform substantially, to the detailed requirements of the item named in the Contract Documents.

- b. *Substitute Items:*

- (1) If in OWNER's or its ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under paragraph 22.D.1.a, it will be considered a proposed substitute item.

GENERAL CONDITIONS (Continued)

- (2) **CONTRACTOR shall submit sufficient information as provided below to allow OWNER or its ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. Requests for review or proposed substitute items of material or equipment will not be, accepted by OWNER from anyone other than CONTRACTOR.**
- (3) **The procedure for review by ENGINEER will be as set forth in paragraph 22.D.1.b.(4), as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.**
- (4) **CONTRACTOR shall make written application to OWNER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application:**
 - (a) **Shall certify that the proposed substitute item will:**
 - (i) **perform adequately the functions and achieve the results called for by the general design,**
 - (ii) **be similar in substance to that specified,**
 - (iii) **and be suited to the same use as that specified.**
 - (b) **The application will state:**
 - (i) **the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time;**
 - (ii) **whether or not use of the proposed substitute item in the Work will required a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item;**
 - (iii) **and whether or not incorporation or use of the proposed substitute item in connection**

GENERAL CONDITIONS (Continued)

with the Work is subject to payment of any license fee or royalty.

- (c) Will identify:
 - (i) all variations of the proposed substitute item from that specified, and;
 - (ii) available engineering, sales, maintenance, repair, and replacement services.
 - (d) And shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
2. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by OWNER or its ENGINEER. CONTRACTOR shall submit sufficient information to allow OWNER, in OWNER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review, by OWNER or its ENGINEER will be similar to that provided in subparagraph 22.D.1.b.
3. *OWNER's Evaluation:* OWNER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 22.D.1 and 22.D.2. OWNER may require CONTRACTOR to furnish additional data about the proposed substitute item. OWNER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until OWNER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or-equal." OWNER or its ENGINEER will advise CONTRACTOR in writing of any negative determination. The Contractor waives and releases any and all claims caused by the time for the OWNER'S and/or ENGINEER's evaluation of any proposal or submittal and for any decision by the OWNER or its ENGINEER as to any proposal or submittal, including, but not limited to, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties and all costs

GENERAL CONDITIONS (Continued)

(including, but not limited to, all fees and charges of engineers, attorneys, architects and other professionals and consultant fees and all court and alternative dispute resolution costs) or other such damages.

4. *Special Guarantee:* OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.
5. *ENGINEER's Cost Reimbursement:* ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 22.D.1 and 22.D.2 and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.
6. *CONTRACTOR's Expense:* CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

E. Modification Request to Contract Documents:

1. CONTRACTOR may, at his sole cost and expense, submit to the ENGINEER for his consideration a Modification Request to the *Contract Documents* for a change in equipment, materials or methods of work than would result in net savings in excess of \$15,000 to the OWNER. A Modification Request will only be considered that will not compromise the useful life, operation costs, safety, code compliance, project schedule, or design integrity of the system.
2. Requests by the CONTRACTOR shall only be considered if accompanied by a detailed report, calculations, and drawings signed and sealed by a licensed Professional Engineer in the State of New Jersey defining the impacts related to the Modification Report and the net cost savings to the OWNER over the useful life of the Modification.
3. CONTRACTOR shall submit all Modification Requests to the ENGINEER within sixty (60) calendar days after Notice to Proceed. Each request will be, accompanied with a Certified Check for \$5,000.00 in the name of the OWNER to cover the cost of the initial review of the Modification Request by the ENGINEER. The ENGINEER shall respond

GENERAL CONDITIONS (Continued)

to the Request within thirty (30) calendar days of submission either denying the Request, deeming the Request incomplete, or conditionally approving the Request. In cases where Requests are conditionally approved, the ENGINEER shall define the conditions of approval including the applicable redesign costs and any other impacts which must be borne at the CONTRACTOR'S sole cost and expense. In cases where a Request is deemed incomplete, the CONTRACTOR shall resubmit the required information within ten (10) calendar days or the Request will be deemed denied. No denied Requests will be reconsidered.

4. Submission of Modification Requests shall be in general conformance with Section 01640, Equivalents and Substitutions for informational content. Equipment, materials, or methods of work rejected as an "*or equivalent*" or "*substitute*" item may be resubmitted under this section in keeping with conditions defined herein.
5. The Contractor waives and releases any and all claims caused by the time for the ENGINEER's evaluation of any Modification Request and for any decision by the ENGINEER as to any Modification Request, including, but not limited to, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties and all costs (including, but not limited to, all fees and charges of engineers, attorneys, architects and other professionals and consultant fees and all court and alternative dispute resolution costs) or other such damages.

23. DEFECTIVE WORK OR MATERIALS

- A. If at any time before the final acceptance of the work, any materials or workmanship shall be discovered, which do not comply with the specifications and Contract Drawings they shall be immediately removed by the Contractor, when notified to do so by a written notice from the ENGINEER, and shall be replaced at the Contractor's expense. Any work condemned by the ENGINEER as unsuitable or improperly done shall be removed and repaired, or otherwise remedied, as the ENGINEER may direct.
- B. All material condemned by the ENGINEER shall be removed from the site of the work within two (2) days if and after notice to that effect is given.
- C. Should defective work be suspected and the ENGINEER so requires, the Contractor shall uncover, take down or make openings in the finished work for the purpose of examining at such points as said ENGINEER designates. Should the

GENERAL CONDITIONS (Continued)

- work thus exposed or examined provide satisfactory, the uncovering, taking down or making openings in and the replacing of the covering or the making good of the parts removed shall be paid for in accordance with the contract prices for the items involved; but should the work exposed or examined prove unsatisfactory, the uncovering, taking down and replacing and making good shall be at the expense of the Contractor.
- D. If the Contractor shall neglect or refuse to remove or replace the same within seven (7) days from the date of the written notice from the ENGINEER to do so, said notice being served either personally or by leaving it at his place of business or with his agent in charge of the work, then the OWNER may remove or cause the same to be removed and satisfactorily replaced by contract or otherwise, as he may deem expedient, and charge the expense thereof to the Contractor. The expense so charged will be deducted and paid by the OWNER out of such monies as are or may become due under this Agreement; or if such monies are not sufficient to meet the said expense, the additional monies shall be furnished by the Contractor; and if he refuses or neglects to provide the necessary monies, they shall be provided by his surety.
- E. The Contractor waives and releases any and all claims caused by any of the events that occur as described in paragraphs 23A, 23B, 23C and 23D including, but not limited to, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties and all costs (including, but not limited to, all fees and charges of engineers, attorneys, architects and other professionals and consultant fees and all court and alternative dispute resolution costs) or other such damages.

24. PERMISSIBLE CHANGES AND VARIATIONS IN THE WORK

- A. Should it be deemed necessary in the execution of the work, by reason of any condition or circumstance arising or discovered after the making of the contract, to make any minor variation desirable or necessary for the stability, safety, economy or betterment of the work, which variations increase or decrease the quantities of the work specified or change the location thereof to an extent not unreasonably affecting the conditions of the work, and further interpreted by the ENGINEER as involving no classes of work other than those called for by this contract, the Contractor shall, upon written order from the ENGINEER to that effect, make such minor variations. If such minor variations diminish the quantity of the work to be done, no claim for damages or for anticipated profits on the work that may be dispensed with shall thereby accrue to the Contractor, and the value of the work dispensed with, will not be included in any payments made to the Contractor. If such minor variations increase the amount of the work, the

GENERAL CONDITIONS (Continued)

value of such increase shall be determined and fixed by the ENGINEER in accordance with the quantity of such work actually done, and/or at the unit prices stipulated in the contract.

- B. Such alterations or changes as are mentioned in this section shall not vitiate or annul the obligations of the contract or the agreement of the work.
- C. Notwithstanding the foregoing, or anything to the contrary, pursuant to N.J.S.A. 40A:11-16.7 and N.J.S.A. 40A:11-16.8:
 - (1) The OWNER may increase or decrease the quantity of work to be performed by the Contractor.
 - (2) (a) If the quantity of a pay item is cumulatively increased or decreased by 20 percent or less from the bid proposal quantity, the quantity change shall be considered a minor change in quantity.

(b) If the quantity of a pay item is increased or decreased by more than 20 percent from the bid proposal quantity, the quantity change shall be considered a major change in quantity.
 - (3) For any minor change in quantity, the OWNER shall make payment for the quantity of the pay item performed at the bid price for the pay item.
 - (4) (a) For a major increase in quantity, the OWNER or Contractor may request to renegotiate the price for the quantity in excess of 120 percent of the bid proposal quantity. If a mutual agreement cannot be reached on a negotiated price for a major quantity increase, the OWNER shall pay the actual costs plus an additional 10 percent for overhead and an additional 10 percent for profit, unless otherwise specified in the original bid.

(b) For a major decrease in quantity, the OWNER or Contractor may request to renegotiate the price for the quantity of work performed. If a mutual agreement cannot be reached on a negotiated price for a major quantity decrease, the OWNER shall pay the actual costs plus an additional 10 percent for overhead and an additional 10 percent for profit, unless otherwise specified in the original bid; provided, however, that the Owner shall not make a payment in an amount that exceeds 80 percent of the value of the bid price multiplied by the bid proposal quantity.
 - (5) As used in this subsection, the term "bid proposal quantity" means the quantity indicated in the bid proposal less the quantities designated in the project plans as "if and where directed."

GENERAL CONDITIONS (Continued)

25. EXTRA WORK AND CHANGED CONDITIONS

The Owner may, at any time, by written order, and without notice to the sureties, make changes in the work within the general scope of the Contract Documents, consisting of additions, deletions or other revisions. Such changes may include, without limitation, changes in the Contract Documents, Contract Drawings and Specifications, changes in the quantities, estimated quantities, design, line, grade, plan, form, dimensions or materials of the work or any part thereof, changes in the method or manner of performing the work, and changes in Owner-furnished property.

Any other written or oral orders (including, without limitation, directions, instructions, interpretations, or determinations) from the Owner or Engineer to the Contractor that cause material change in the requirements of the Contract Documents, may be authorized as changes under this Clause; provided, as conditions precedent, that the Contractor gives the Owner and Engineer advance written notice at the earliest practicable time (in any case before beginning the Work which will be the subject of the claimed change and before incurring any costs in connection with the claimed change) of the date, circumstances and source of the alleged change; provided that the Contractor expressly states in the notice that the Contractor regards the order as a change in the requirements of the Contract Documents and cites this Article of the Contract; and provided that the Owner determines that the claim of the Contractor is meritorious and issues a duly authorized written change order to that effect.

If any such change causes an increase or decrease in the cost of or time required for the performance of any part of the work under this Contract, the Owner shall make an adjustment in the Contract Price, the required completion times for the Contract work, or both. If any change decreases the work to be performed, Owner shall be entitled to a full credit for the Work that is deleted and the Contractor shall not be entitled to costs, losses, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties, and all costs (including but not limited to all fees and charges of engineers, architects, attorneys' fees, and other professional and consultant fees and all court and alternative dispute resolution costs) or other such damages or anticipated profits for the work that is deleted and Contractor shall not be entitled to costs, losses, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties, and all costs (including but not limited to all fees and charges of engineers, architects, attorneys' fees, and other professional and consultant fees and all court and alternative dispute resolution costs) or other such damages or anticipated profits for Work that was performed by Contractor or Work that remains to be performed by Contractor and for which Contractor claims was distributed into any bid line item that

GENERAL CONDITIONS (Continued)

is eliminated or deleted. If Contractor claims that costs for Work performed or to be performed were distributed into any bid line item that is deleted, Contractor must demonstrate those costs were distributed into said bid line item to the satisfaction of the Owner and Engineer with documentation conclusively demonstrating same and failure to make such conclusive written demonstration to Owner and Engineer shall also relieve Owner from making any payment to Contractor for Contractor's claim of distributed costs.

This construction Contract is subject to changed conditions clauses in accordance with N.J.S.A. 40A:11-16.7 and N.J.S.A. 40A:11-16.8.

A) A Contract subject to this section shall include the following differing site conditions provisions as per N.J.S.A. 40A:11-16.7 and N.J.S.A. 40A:11-16.8:

- (1) If the Contractor encounters differing site conditions during the progress of the work of the Contract, the Contractor shall promptly notify the Owner in writing of the specific differing site conditions encountered before the site is further disturbed and before any additional work is performed in the impacted area.
- (2) Upon receipt of a differing site conditions notice in accordance with paragraph (1) of this subsection, or upon the Owner otherwise learning of differing site conditions, the Owner shall promptly undertake an investigation to determine whether differing site conditions are present.
- (3) If the Owner determines different site conditions that may result in additional costs or delays exist, the Owner shall provide prompt written notice to the Contractor containing directions on how to proceed.
- (4) (a) The Owner shall make a fair and equitable adjustment to the Contract price and Contract completion date for increased costs and delays resulting from the agreed upon differing site conditions encountered by the Contractor.

(b) If both parties agree that the Owner's investigation and directions decrease the Contractor's costs or time of performance, the Owner shall be entitled to a fair and equitable downward adjustment of the Contract price or time of performance.

(c) If the Owner determines that there are no differing site conditions present that would result in additional costs or delays, the Owner shall so advise the Contractor, in writing, and the Contractor shall resume performance of the Contract, and shall be entitled to pursue a differing site conditions claim against the Owner for additional compensation or time attributable to the alleged differing site conditions.

GENERAL CONDITIONS (Continued)

- (5) Execution of the Contract by the Contractor shall constitute a representation that the Contractor has visited the site and has become generally familiar with the local conditions under which the work is to be performed.
 - (6) As used in this subsection, “differing site conditions” mean physical conditions at the Contract work site that are subsurface or otherwise concealed and which differ materially from those indicated in the Contract documents or are of such an unusual nature that the conditions differ materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in the Contract.
- B) A Contract subject to this section shall include the following change in character of work provisions as per N.J.S.A. 40A:11-16.7 and N.J.S.A. 40A:11-16.8:
- (1) If the Contractor believes that a change directive by the Owner results in a material change to the Contract work, the Contractor shall so notify the Owner in writing. The Contractor shall continue to perform all work on the project that is not the subject of the notice.
 - (2) Upon receipt of the Contractor’s change in character notice in accordance with paragraph (1) of this subsection, the Owner shall promptly evaluate the Contractor’s notice and promptly advise the Contractor of its determination on how to proceed in writing.
 - (3) (a) If the Owner determines that a change to the Contractor’s work caused or directed by the Owner materially changes the character of any aspect of the Contract work, the Owner shall make a fair and equitable upward adjustment to the Contract price and Contract completion date. The basis for any such price adjustment shall be the difference between the cost of performance of the work as planned at the time of contracting and the actual cost of such work as a result of its change in character, or as otherwise mutually agreed upon by the Contractor and the Owner prior to the Contractor performing the subject work.

(b) If the Owner determines that the Contractor is not entitled to additional compensation or time, the Contractor shall continue the performance of all Contract work, and shall be entitled to pursue a claim against the Owner for additional compensation or time attributable to the alleged material change.

As used in this subsection, “material change” means a character change which increases or decreases the Contractor’s cost of performing the work, increases or decreases the amount of time by which the Contractor completes the work in relation to the

GENERAL CONDITIONS (Continued)

contractually required completion date, or both as a condition precedent to the Contractor's right to any entitlement to increased costs or an extension of time under this Article, the Contractor must fully document its claim to an adjustment within thirty (30) days after receipt of a written change request/directive from the Owner or within thirty (30) days after the Contractor gives notice of a constructive change. Such documentation shall, without limitation, include a written statement to the Owner and Engineer setting forth the full particulars of the Contractor's claimed entitlements and the claimed amounts, accompanied by full documentation and detailed accounting in support of all aspects of the claim. The Contractor shall update and supplement its claim and documentation as necessary at intervals not greater than thirty (30) days.

No claims for an adjustment shall be allowed if asserted after final payment under this Contract.

Total value of change orders executed for a particular Contract shall not cause the originally awarded contract price to be exceeded by more than 20 percent unless otherwise authorized as per N.J.A.C. 5:30-11.

The following general policies shall apply to adjustments under this Article:

- (a) The Contractor shall be entitled to any additional identifiable Contract Direct Costs associated with the changed work excluding Subcontractor's costs. For adjustments up to \$100,000, the Contractor may include up to 10-percent overhead factor to its additional identifiable direct job costs, but excluding the cost of any subcontracting, plus up to a 10-percent profit factor to its identifiable direct costs plus overhead amount.
- (b) These overhead and profit factors may be accepted by the Owner as reasonable in lieu of requiring the submission of additional supporting data. However, the Owner reserves the right to review any cost or profit element on a case-by-case basis.
- (c) Adjustments relating to changes in subcontracted work may be similarly handled and the Contractor may add up to 10 percent to the total cost (including overhead and profit factors) incurred by the subcontractor. In such cases, the same reservation of rights shall apply.
- (d) For adjustments more than \$100,000, the above factors may be included initially for adjustments but will be subject to negotiation, cost and pricing data, and Owner review requirements.

In order to be allowable in adjustments, costs must be reasonable in nature and amount. Indirect Costs (overhead costs) must be allocable to the Contract, i.e., chargeable to the Contract on the basis of relative benefit received or other relationship. Direct Costs for

GENERAL CONDITIONS (Continued)

changed work shall be limited to increases or decreases in the identifiable direct cost of the following:

- (a) Direct Labor costs, including the time of a foreman while engaged directly upon changed work.
- (b) Direct Labor employee insurance, social security and other direct costs assessed on Direct Labor payrolls by properly authorized public agencies.
- (c) Direct costs of equipment, materials and supplies installed in the work. The direct cost of these items shall be the actual costs paid by Contractor to the suppliers of these items, without markup.
- (d) Direct costs of job equipment associated with the changed work. The compensable cost for construction equipment shall be based upon the most current costs established in the "Rental Rate Blue Book for Construction Equipment" (published by Equipment Guide-Book Company) for each piece of equipment having a value in excess of \$50.00. Equipment and tools of lesser value are considered "small tools" and, as such, are considered to be part of overhead. Costs shall be based on an hourly rate determined by dividing the monthly rate listed in the cited "Blue Book" by 176. Overhead and profit factors shall only be applied to the rates charged for rental equipment. No overhead or profit will be allowed for Contractor-owned equipment.

Should the Owner and Contractor fail to agree upon any adjustment addressed by this Article, the Engineer shall initially fix the terms of the adjustment and if the Owner or Contractor shall be dissatisfied with the Engineer's actions in this regard, such party may give notice to the Engineer of a dispute and a request for a formal decision under the Clause of this Contract entitled, "Responsibility of the Engineer". However nothing shall excuse the Contractor from proceeding with the Contract as changed.

The change orders executed for this Contract shall, in no event, cause the originally awarded Contract Price to exceed limitations set forth in N.J.A.C. 5:34-4.1 et. seq., except as may be authorized under such regulation.

26. OTHER CONTRACTS

- A. It is understood and agreed that the Contractor shall execute his work in such a manner and in such order as will not interfere with work in progress and will permit the OWNER to perform other work or to enter into other contracts for work and materials to be constructed or placed in, on, or about the work herein described, with the least interference possible and with complete cooperation whenever it is desirable to prosecute said work, either simultaneously with the work under this contract or otherwise. It is agreed that the Contractor shall not be

GENERAL CONDITIONS (Continued)

entitled to any damages or extra compensation from the OWNER on account of any work performed by the OWNER or other contractors that in any way affects the work under this contract, including, but not limited to, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties and all costs (including, but not limited to, all fees and charges of engineers, attorneys, architects and other professionals and consultant fees and all court and alternative dispute resolution costs) or other such damages, provided that such work of the OWNER and other contractors shall, in the opinion of the ENGINEER, be performed in a proper and expeditious or a necessary manner. The ENGINEER shall decide all questions between the Contractor hereunder, the other contractors, and the order of carrying on the work shall always be subject to his direction or approval.

- B. If, in the judgment of the ENGINEER, the joint occupation of the site of the work by the OWNER, or by two or more contractors working on different contracts at the same time actually impedes progress on the work herein described, then upon the recommendation of the ENGINEER, the OWNER may extend the time for the completion of the work by a length of time which accords with and compensates for the delay so caused.
- C. In the case the Contractor by his own acts, or the acts of any person or person in his employ or by any of the Contractor's subcontractors of any tier, suppliers and/or materialmen shall unnecessarily delay, in the opinion of the ENGINEER, the work of the OWNER or other contractors by not properly cooperating with them, or by not allowing them sufficient opportunity or facility to perform work as may be specified, the Contractor shall, in that case, pay all costs and expenses incurred by such parties due to any such delays, and he hereby authorizes the OWNER to deduct the amount of such cost and expenses from any monies due or to become due the Contractor under this contract. Additionally, in such event, the Contractor waives any and all claims for damages as against any party, including, but not limited to, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties and all costs (including, but not limited to, all fees and charges of engineers, attorneys, architects and other professionals and consultant fees and all court and alternative dispute resolution costs) or other such damages, The ENGINEER, subject to the approval of the OWNER, shall decide the extent of such delay or delays, and the amount of such cost and expenses, and his decision shall be binding upon both parties to this contract. Nothing contained in this paragraph shall, however, relieve said Contactor from liability or damage resulting to the OWNER on account of such delay or delays.

GENERAL CONDITIONS (Continued)

- D. If any part of the Contractor's work depends for proper execution or results upon the work of any other Contractor, the Contractor shall inspect and promptly report to the ENGINEER any defects in such work and render it unsuitable for such proper execution and results. His failure to so inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of his work, except as to defects, which may develop in the other contractor's work after the execution of his work.
- E. To ensure the proper execution of this subsequent work, the Contractor shall measure work already in place and shall at once report to the ENGINEER any discrepancy between the executed work and the drawings.

27. SUSPENSION OF WORK

- A. The OWNER shall have right to suspend the whole or any part of the work to be done hereunder, when, in the opinion of the OWNER, the Contractor is not doing the work in accordance with the provisions of the contract and specifications. In accordance with N.J.S.A. 40A:11-16.7:
 - (1) The Owner shall provide written notice to the Contractor in advance of any suspension of work lasting more than 10 calendar days of the performance of all or any portion of the work of the Contract.
 - (2) If the performance of all or any portion of the work of the Contract is suspended by the Owner for more than 10 calendar days due to no fault of the Contractor or as a consequence of an occurrence beyond the Owner's control, the Contractor shall be entitled to compensation for any resultant delay to the project completion or additional Contractor expenses, and to an extension of time, provided that, to the extent feasible, the Contractor, within 10 calendar days following the conclusion of the suspension, notifies the Owner, in writing, of the nature and extent of the suspension of work. The notice shall include available supporting information, which information may thereafter be supplemented by the Contractor as needed and as may be reasonably requested by the Owner. Whenever a work suspension exceeds 60 days, upon seven days' written notice, either party shall have the option to terminate the Contract for cause and to be fairly and equitably compensated therefor.
 - (3) Upon receipt of the Contractor's suspension of work notice in accordance with paragraph (2) of this subsection, the Owner shall promptly evaluate the Contractor's notice and promptly advise the Contractor of its determination on how to proceed in writing.

GENERAL CONDITIONS (Continued)

- (4) (a) If the Owner determines that the Contractor is entitled to additional compensation or time, the Owner shall make a fair and equitable upward adjustment to the Contract price and Contract completion date.
- (b) If the Owner determines that the Contractor is not entitled to additional compensation or time, the Contractor shall proceed with the performance of the Contract work, and shall be entitled to pursue a suspension of work claim against the Owner for additional compensation or time attributable to the suspension.

Failure of the Contractor to provide timely notice of a suspension of work shall result in a waiver of a claim if the Owner can prove by clear and convincing evidence that the lack of notice or delayed notice by the Contractor actually prejudiced the Owner's ability to adequately investigate and defend against the claim.

The following general policies shall apply to adjustments under this Article:

- (a) The Contractor shall be entitled to any additional identifiable Contract Direct Costs associated with the changed work excluding Subcontractor's costs. For adjustments up to \$100,000, the Contractor may include up to 10-percent overhead factor to its additional identifiable direct job costs, but excluding the cost of any subcontracting, plus up to a 10-percent profit factor to its identifiable direct costs plus overhead amount.
- (b) These overhead and profit factors may be accepted by the Owner as reasonable in lieu of requiring the submission of additional supporting data. However, the Owner reserves the right to review any cost or profit element on a case-by-case basis.
- (c) Adjustments relating to changes in subcontracted work may be similarly handled and the Contractor may add up to 10 percent to the total cost (including overhead and profit factors) incurred by the subcontractor. In such cases, the same reservation of rights shall apply.
- (d) For adjustments more than \$100,000, the above factors may be included initially for adjustments but will be subject to negotiation, cost and pricing data, and Owner review requirements.

In order to be allowable in adjustments, costs must be reasonable in nature and amount. Indirect Costs (overhead costs) must be allocable to the Contract, i.e., chargeable to the Contract on the basis of relative benefit received or other relationship. Direct Costs for changed work shall be limited to increases or decreases in the identifiable direct cost of the following:

GENERAL CONDITIONS (Continued)

- (a) Direct Labor costs, including the time of a foreman while engaged directly upon changed work.
- (b) Direct Labor employee insurance, social security and other direct costs assessed on Direct Labor payrolls by properly authorized public agencies.
- (c) Direct costs of equipment, materials and supplies installed in the work. The direct cost of these items shall be the actual costs paid by Contractor to the suppliers of these items, without markup.
- (d) Direct costs of job equipment associated with the changed work. The compensable cost for construction equipment shall be based upon the most current costs established in the "Rental Rate Blue Book for Construction Equipment" (published by Equipment Guide-Book Company) for each piece of equipment having a value in excess of \$50.00. Equipment and tools of lesser value are considered "small tools" and, as such, are considered to be part of overhead. Costs shall be based on an hourly rate determined by dividing the monthly rate listed in the cited "Blue Book" by 176. Overhead and profit factors shall only be applied to the rates charged for rental equipment. No overhead or profit will be allowed for Contractor-owned equipment.

Should the Owner and Contractor fail to agree upon any adjustment addressed by this Article, the Engineer shall initially fix the terms of the adjustment and if the Owner or Contractor shall be dissatisfied with the Engineer's actions in this regard, such party may give notice to the Engineer of a dispute and a request for a formal decision under the Clause of this Contract entitled, "Responsibility of the Engineer". However nothing shall excuse the Contractor from proceeding with the Contract as changed.

The change orders executed for this Contract shall, in no event, cause the originally awarded Contract Price to exceed limitations set forth in N.J.A.C. 5:34-4.1 et. seq., except as may be authorized under such regulation.

28. DISPUTES

Pursuant to P.L. 1997, c.371 (N.J.S.A. 40A:11-50), with regard to any dispute arising under this contract and prior to being submitted to a court for adjudication, the parties agree to try in good faith to settle the dispute by the alternative dispute resolution practice known as non-binding mediation. The Parties agree that the Owner shall select the mediator. The mediator may be a retired judge of the Superior Court of New Jersey. With the exception of attorney fees and consulting fees, the expense of the mediation shall be shared equally by the parties. The mediation shall be conducted at the Owner's offices or at any other

GENERAL CONDITIONS (Continued)

mutually agreeable location in Essex County, New Jersey. If necessary to fully resolve the issues in dispute, either party may demand the joinder of other interested parties to the dispute unless the mediator determines that such a joinder is inappropriate. Nothing in this section shall prevent the Owner from seeking injunction or declaratory relief in court at any time.

During any and all mediation, the Contractor shall continue to work on the Project and the Work and the time to complete the Project and the Work shall not be extended as a result of the processing of mediation hereunder.

The alternative dispute resolution practices required by this Article shall not apply to disputes concerning the bid solicitation or award process, or to the formation of contracts or subcontracts to be entered into pursuant to N.J.S.A. 40A:11-1, et seq. Nothing herein shall prevent or be deemed to prevent the contracting unit from seeking injunctive or declaratory relief in a Court of competent jurisdiction at any time.

The joinder of parties to any dispute hereunder shall be governed by the provisions of N.J.S.A 40A:11-50.

Should the Contractor make any claim or claims against the OWNER or ENGINEER, or their agents and employees, based, in whole or in part, upon any alleged ENGINEER error or omission in connection with the project; the Contractor shall be responsible for the payment of ENGINEER's costs of defense against such claims (including but not limited to reasonable attorneys' fees), unless the ENGINEER is proved, in a court of competent jurisdiction, to have been guilty of negligence or willful misconduct which is determined to be the sole proximate cause of such claim or claims.

Any suit brought by either party with respect to this Contract shall be filed only in the Superior Court of New Jersey, in the County in which the OWNER is located, regardless of any rule or law involving diversity of citizenship, amount in controversy, residence of a part or venue.

29. ABANDONMENT OF WORK

- A. Should the Contractor abandon or in any manner fail to complete the said work, the OWNER is hereby authorized and empowered to pay any laborers for work done who may have been employed by said Contractor upon the work herein, and to pay any claims against the Contractor for material furnished, out of any funds that would otherwise be due or become due said Contractor under this contract, and in every such case the said OWNER is hereby authorized and empowered to ascertain through the ENGINEER, the amount or amounts so due or owing to such labor or laborers, or for material, from said Contractor, in such manner and upon such proof as the said ENGINEER may deem sufficient; and the amount or amounts so found by the ENGINEER to be due and payable be final and

GENERAL CONDITIONS (Continued)

conclusive against the Contractor, and may therefore be paid by the OWNER to said labor or laborer, or to liquidate claims for materials furnished; and any estimate may be withheld from said Contractor until all such claims for labor or material on his contract have been satisfied.

30. FORFEITURE OF CONTRACT

- A. The OWNER at any time during the continuance of the contract for the work herein provided for, and prior to the date of acceptance of the work as hereinafter provided, shall have the right and power to declare the whole or any part of the same forfeited for the violation of any of the conditions, terms, requirements or limitations herein contained, or if the performance of the contract is unnecessarily or unreasonably delayed, or if the Contractor is not progressing with the work as fast as is necessary to insure its completion within the time specified by this contract, or if the Contractor is showing bad faith in carrying out the contract, or if the work be not fully completed within the time fixed in this contract, for its completion, or within the time to which completion may be extended as hereinafter provided, or further, if the Contractor shall fail to refuse to remedy or repair defective work or materials when so ordered as herein provided. If the OWNER shall declare the said contract forfeited, in whole or in any particular, such declaration of forfeiture shall in no way relieve or affect the liability of the Contractor and his sureties for breach of any of the covenants and conditions for said contract.
- B. The OWNER will give written notice of the Contractor stating the effective date of the forfeiture. This notice will be delivered to the Contractor at least five (5) days before said effective date.
- C. On such event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by the Contractor under this Contract shall, at the option of the OWNER, become the OWNER'S property and the Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.
- D. Notwithstanding the above, the Contractor shall not be relieved of liability to the OWNER for damages sustained by the OWNER by virtue of any breach of the Contract by the Contractor, and the OWNER may withhold any payments due the Contractor until such time as the exact amount of damages due the OWNER from the Contractor is determined.

31. COMPLETION OF CONTRACT BY OWNER

- A. If the work to be done hereunder shall be abandoned by the Contractor, or, if this contract shall be assigned or the work sublet by him, otherwise than as herein

GENERAL CONDITIONS (Continued)

specified, or if at any time and for reasons hereinbefore specified, the OWNER declares the contract forfeited, the OWNER may notify the Contractor to discontinue all work or any part thereof, hereunder, or may notify the said Contractor to remedy or correct the condition or breaches enumerated by a written notice served upon the Contractor. In the event that the work is ordered discontinued as herein provided, or in case the said conditions or breaches are not remedied and corrected to the satisfaction of the OWNER within seven (7) days from the service of the said written notice, the OWNER will thereupon have the power to contract for the completion of the work, or such parts thereof, in the manner prescribed by law, or to employ such and so many persons as he may deem advisable, by contract or otherwise to work at and complete the work herein described or such parts thereof, and to use such machinery, materials, tools and appliances as may be found upon the site of the work, and to produce other materials, machinery, tools and appliances for the completion of the same, and to charge the expense so incurred to the Contractor. The expense so charged will be deducted and paid by the OWNER out of such monies as may be due or may at any time thereafter become due to the Contractor under and by virtue of this contract or any part thereof. In case such expense exceeds the amount due and payable or which would become due and payable under this contract, if completed by the Contractor, the amount of such excess shall be repaid to the OWNER, and in case such expense shall be less than the sum which would have been payable under this contract, if the same had been completed by the Contractor, then the Contractor shall be entitled to receive the difference. When any particular part of the work is being carried on by the OWNER, by contract or otherwise, under the provisions of this clause of the contract, the Contractor shall continue the remainder of the work in conformity with the terms of this contract, and in such manner as will in nowise hinder or interfere with the persons or workmen employed, as above provided, by the OWNER, by contract or otherwise, to do any part of the work or to complete the same under provisions of this article of the contract.

32. COMPLETION OF WORK DEFINED

- A. The completion of the herein specified work is defined as that stage when the installation and the appurtenant equipment included under this contract have been completed and tested, and are together, ready for continuous permanent use and occupancy for the purpose intended. After this date, there may still remain some cleaning up or other minor work, which does not prevent the permanent use of the contracted work.

33. TIME FOR COMPLETION

- A. Contractor shall achieve final completion of the Work to the satisfaction of the OWNER within 90 Days of the Notice to Proceed. Work on this contract shall be

GENERAL CONDITIONS (Continued)

commenced within ten (10) days from the date a notice to proceed from the OWNER/ENGINEER is received by the Contractor to commence work.

- B. The work shall be carried on with such force and in such manner and order and at such points that by the date stipulated in the proposal and contract, or as may be modified or extended as hereinafter provided, the whole work and its parts shall be performed in accordance with the terms of this contract.
- C. It is mutually agreed and understood by and between the parties hereto that time is an essential part of this contract, and that, if the Contractor shall fail to complete the work or any part thereof within the time above fixed, the OWNER may retain as liquidated damages as a result of such delay, from monies that are or which may become due the said Contractor, such sum per day as specified in the contract for each and every day (Sundays and legal holidays excepted) the completion of the work be delayed beyond the time specified herein for such completion..
- D. It is understood and agreed that by the signing of the foregoing contract the Contractor waives any legal defense he might have because of the omission of a bonus clause in the event of completion before the date agreed upon, the term "Liquidated Damages" governing absolutely.
- E. It is agreed by and between the parties hereto that inasmuch as expenses and inconvenience and other damages will be sustained by the OWNER in the event that said Contractor fails to perform the work herein specified within the time herein set forth, such as inconvenience of the public, consulting and field engineering expenses, interest charges, wages, salaries of inspectors, delay caused to other work by failure to perform this contract, and other elements, some of which are indefinite and in some cases insusceptible of easy proof, the sum per day specified in the contract for each day's delay (Sundays and legal holidays excepted) shall be considered as liquidated damages and not as a penalty and shall become due said OWNER as full payment for all such expenses and damages sustained to fit by the failure of said Contractor to complete the work as herein specified.
- F. The parties acknowledge that in the event of a default in performance by the Contractor it is foreseeable that the Owner will suffer damages for which it is entitled to be compensated, both by virtue of the provisions of this Contract and as a matter of applicable law. Certain of these damages may be reasonably ascertaining. Others shall consist of intangible losses which are difficult of calculation, including but not limited to revenue losses and general and administrative costs. For these intangible losses, in the event the Contractor fails satisfactorily to complete all work for the entire project as contemplated and provided for under this Contract on or before the time wherein final completion is required under the terms of the Contract Documents, the Contractor shall be liable

GENERAL CONDITIONS (Continued)

for, and the Owner may deduct from the Contract price, the sum of \$100.00 as liquidated damages for each calendar day (Sundays and legal holidays included) of delay. Such damages shall continue for the period of time that final completion has not been met and the sum thereof is hereby, in view of the difficulty of estimating such damages, fixed and determined as liquidated damages which the Owner will suffer by such time delay. The sum determined pursuant to this paragraph is not a penalty but an attempt reasonably to forecast the potential harm due to intangible losses caused by delay. The Contractor acknowledges that in submitting its bid and in setting the amount thereof it has ascertained the risk of nonperformance under this Article to the same extent as if the Contractor and the Owner had negotiated the amount of liquidated damages at arm's length.

- G. In addition to and not in lieu of liquidated damages for the intangible costs of delay, the Contractor shall be liable for compensatory damages as allowed by law and in addition as hereinafter provided.
- H. The Contractor agrees that, as compensatory damages due on account of delay in performance of the Contract, the Contractor shall be liable for and the Owner may deduct from the Contract Price the actual costs, resulting from the Contractor's failure to complete the work contemplated herein within the time provided, for payment for the services of construction observers necessarily employed on the work and for the services of the Engineer for any number of days in excess of the time allowed in the Contract Documents and for payment for all fines and penalties of whatever description imposed by the State of New Jersey or other governmental agency.
- I. If the amounts of liquidated or compensatory damages due from the Contractor exceed the amounts of all monies due and to become due to the Contractor, the Contractor or his Surety shall pay the balance to the Owner.

34. DELAYS AND EXTENSION OF TIME FOR COMPLETION

- A. The OWNER shall have the right to defer the beginning or to suspend the whole or any part of the work herein contracted to be done whenever it may be necessary or expedient for the OWNER so to do; and if the Contractor be delayed in the completion of the work by any act of the OWNER, or of any employee of his or any other contractor employed by the OWNER or by changed order in the work, or by strikes, lockouts, fire, unusual delay of common carriers, unavoidable casualties, epidemics, abnormal weather conditions, acts of God or acts or neglect of utility companies, or any other such cause beyond the Contractor's control, then for all such delays and suspensions the Contractor shall be allowed one day additional to the time herein stated for each and every day of such delay so caused in the completion of the work, the same to be ascertained by the ENGINEER and recommended to the OWNER for issuance of a change order.

GENERAL CONDITIONS (Continued)

- B. No such extension shall be made for any one or more of such delays unless within ten (10) days after the beginning of such delay a written request for additional time shall be filed with the ENGINEER. In case of a continuing cause of delay, only one request is necessary.
- C. No claim for damages or any claim other than that for extension of time as herein provided shall be made or asserted against the OWNER by reason of any of the delays hereinbefore mentioned.
- D. Those acts by the OWNER which are negligent, taken in bad faith, represent active interference, tortuous conduct or are otherwise un-contemplated by the parties to this contract are not subject to the above provisions.

35. SALES AND USE TAXES SHALL BE EXCLUDED

- A. In accordance with NJSA 54:32B-1 et. seq., the OWNER is a public agency exempt from sales and use taxes. The Contractor must issue Contractors Exempt Purchase Certificate (ST-13) to his suppliers.
- B. Use Tax: In accordance with P.L. 2004, c.57, and for the term of this contract, a contractor or a contractor with a subcontractor that enters into a contract with the OWNER, and each of the affiliates of the contractor or subcontractor (as defined by N.J.S.A. 52:32-44(g)(3)), shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury the use tax due pursuant to the "Sales and Use Tax Act," P.L. 1966, c.30 (N.J.S.A. 53:32B-1 et seq.) on all their sales of tangible personal property delivered into this State.

36. APPROVAL AND ACCEPTANCE OF WORK

- A. Following the completion of this contract, as such completion is defined herein, and as soon thereafter as practicable, the OWNER will inspect the entire work on all parts and details or cause the same to be inspected, and if said work and all contract performances are found to be satisfactory and in accordance with the provisions and terms of the contract and specifications, the OWNER will certify the work as completed and will accept it, but conditional upon the subsequent remedying of defects which may become manifest within a period of two (2) years following completion and as herein required. The certification of completion and the said acceptance of the work will be prerequisite to final payment hereunder.
- B. Twenty-four (24) months after the date of the certificate of acceptance as hereinbefore set forth, and as soon thereafter as practicable, the OWNER shall make a review and reinspection of the work and performances of this contract, or

GENERAL CONDITIONS (Continued)

cause the same to be made. If the said performances and work shall be found satisfactory and the work not to have deteriorated through defects of workmanship or materials, then the OWNER shall certify the release of the two year Maintenance Bond herein elsewhere specified, if applicable, and such certification shall be prerequisite to the release of the sureties on the contract bonds. If, however, the review and reinspection as herein or any prior inspection discloses defects due to the non-fulfillment of this contract, or non-compliance with its requirements, the OWNER shall so notify the Contractor in writing, and thereupon the Contractor shall, at his own expense, repair or replace and shall make good all defects of workmanship, material and guarantee, and shall rectify any non-compliance, and such repairs and fulfillment shall be a prerequisite to the release of the two year Maintenance Bond, if applicable. If however, the Contractor shall, after due notice, refuse or neglect to make good the defects as notified and to the satisfaction of the OWNER, then the OWNER may and is empowered to proceed in the manner described in the event of abandonment or forfeiture of the work by the Contractor and completion by the OWNER and the payment of claims for material and labor and other expenses as provided in such procedures shall be a prerequisite to the release of the surety on the bond.

- C. In the event that an element of the work evidences noncompliance with the Contract Documents due to deficient materials, methods of construction, failure to comply with established/specified practices and procedures, Contractor negligence, Contractor error or other reason attributable to the CONTRACTOR necessitating retesting; reinspection; supplemental engineering reports, calculations, design, coordination or field survey work; and/or extended inspection hours days then the cost for such reinspection, retesting and related additional engineering services shall be documented, presented to the CONTRACTOR and deducted from payments otherwise due the CONTRACTOR by the OWNER.

1. This provision shall not apply to normal or routine construction activities and punch list items such as:

- Touch-up painting
- Re-seeding
- Adjustment of castings
- Maintenance/repair of trench restorations
- Bulb replacement
- Tightening of nuts and bolts
- Adjustment of lighting fixtures
- Routine site maintenance and clean-up
- Maintenance of erosion controls
- Re-compaction of soil/fill after proof-rolling

GENERAL CONDITIONS (Continued)

- Re-chlorination and retesting of a waterline retesting of a force main after one test failure and CONTRACTOR initiated remedial work
 - Re-hanging of gates/doors
 - Re-caulking
 - Minor regrading of landscaped areas and replacement of dead or dying plants during the contract period.
2. The OWNER recognizes that the afore listed normal or routine remedial work activities are to be expected in most construction contract and engineering service charges related to those and similar normally encountered or routine remedial work activities will be paid by the OWNER and not deducted from payments otherwise due the CONTRACTOR.
3. The ENGINEER will notify the CONTRACTOR by letter or memorandum as soon as practical following a determination that noncompliant materials, equipment, products or work has resulted in, is necessitating, or will necessitate supplemental engineering service charges and/or supplemental testing costs which are to be deducted from payments otherwise due the CONTRACTOR.
4. The hourly rates and charges by the ENGINEER for billings to be deducted from the Contractor's payments shall be the same rates and charges the ENGINEER bills the OWNER under the Engineering Services Agreement in effect between the OWNER and the ENGINEER when the costs are incurred. The testing service costs to be deducted from the Contractor's payments shall be the actual invoiced amount from the testing agency/laboratory for the necessary additional testing.

37. ESTIMATES AND PAYMENT – PARTIAL AND FINAL

- A. The ENGINEER will, each month, make an approximate partial estimate, based on the Contractors partial payment request; such as he shall believe to be just and fair, of the amount and value of the work done and the materials incorporated into the work during the previous calendar month, whenever said monthly work exceeds One Thousand Dollars (\$1,000.00) in value. More frequent estimates may, at the option of the OWNER, be made at any time during the progress of the work, and payment may at any time be withheld if the work is not proceeding in accordance with the contract. In those instances where a Schedule of Values is requested and the Contractor wishes to include bond and insurance premiums in his Schedule of Values as a separate payment item he shall furnish satisfactory evidence of the rate or rates paid for such bonds and insurance.

GENERAL CONDITIONS (Continued)

- B. The CONTRACTOR will submit to the ENGINEER on or before the first business day of the month, which day shall be the "Billing Date," a payment request signed by the CONTRACTOR covering the WORK performed during the previous month to include certified payroll records as required by N.J.A.C. 12:60-5.1(c) and supported by such other data as the ENGINEER may reasonably require. If the payment request is not received on or before the "Billing Date," it will not be considered until the next billing date.

The Owner shall withhold 2% of the amount due on each Application for Payment for Contracts pursuant to N.J.S.A. 40A:11-16.3 unless the Contractor makes the deposits referred to in N.J.S.A. 40A:11-16.1. Such withholding shall be in addition to any retainage otherwise authorized by law or the Contract Documents.

The ENGINEER will, within twenty (20) calendar days after the "Billing Date" either approve the payment request or notify the CONTRACTOR in writing the reasons for refusing to approve the request or any part thereof. The ENGINEER will prepare a payment estimate for the approved amount and present the payment estimate to the OWNER. The OWNER will, after presentation of an approved payment estimate, authorize payment at the public meeting following the 20th calendar day after the "Billing Date" and pay the CONTRACTOR a progress payment on the basis of the approved payment estimate less the retainage during the payment cycle following the public meeting. Allowances will be made for all materials placed along or upon the site or stored at secured locations that are suitable for use in the execution of the contract, if the person providing the materials furnishes releases of liens for the materials at the time each estimate of work is submitted for payment. The total of all the partial payments shall not exceed ninety percent (90%) of the cost of the materials. The cost of such materials shall be verified by vouchers from the suppliers (N.J.S.A. 40A:11-16.4). If payment is required on the basis of materials and equipment not incorporated in the WORK the payment request shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER'S title to the material and equipment and protect the OWNER'S interest therein, including applicable insurance. The CONTRACTOR shall furnish written proof from the supplier of ninety (90%) percent payment for the material and/or equipment no later than thirty (30) days after receipt of payment, for same from OWNER. The OWNER shall have the right to deduct from the next payment estimate an amount equal to the payment for said material and/or equipment if reasonable and adequate proof is not submitted.

- C. Upon such estimate being made and certified by the ENGINEER and approved by the OWNER, the OWNER will pay to the Contractor ninety percent (90%) of the amount stated in such estimate or certificate to be the value of the work therein certified to have been done, except that when the total contract price exceeds One Hundred Thousand Dollars (\$100,000.00), then the OWNER will pay to the

GENERAL CONDITIONS (Continued)

Contractor ninety-eight percent (98%) of the amount stated on said estimate or certificate. In lieu of the two percent (2%) cash retainage on contracts exceeding \$100,000.00, the Contractor may agree to deposit registered book bonds, entry municipal bonds, state bonds or other appropriate bonds of the State of New Jersey, or negotiable bearer bonds or notes of any political subdivision of the State, the value of which is equal to two percent (2%) of said estimate or certificate, provided they are delivered directly to and approved by the OWNER. The value of a bond or note shall mean par value or current market value, whichever is lower. The OWNER may at all times reserve and retain out of any or all of said partial payments, all such sums as it is or may be authorized to reserve or retain.

- D. The making of any such estimates or payment thereon shall not be taken or construed as an approval or acceptance by the OWNER of any work so estimated.
- E. Following the completion of the work and the acceptance thereof as previously defined, the CONTRACTOR shall file with the OWNER his Contractor's Certificate as required by N.J.S.A. 34:11-56.33 duly executed along with his request for final payment or release of retainage. The date the ENGINEER receives the request shall be the "Billing Date." The ENGINEER will, within twenty (20) calendar days after the "Billing Date" either approve the final payment request or notify the CONTRACTOR in writing the reasons for refusing to approve the request or any part thereof. The ENGINEER will prepare a final payment estimate for the approved amount and present the final payment estimate to the OWNER. The OWNER will, after presentation of an approved final payment estimate, authorize payment at the public meeting following the 20th calendar day after the "Billing Date" and return to the CONTRACTOR any bonds or notes deposited together with any interest accruing on such bonds or notes, and will pay the CONTRACTOR the full value of the work done under this Contract less any amounts previously paid during the payment cycle following the public meeting (N.J.S.A. 2A:30A-1).
- F. Any interest accruing on cash payments withheld shall be credited to the OWNER. (N.J.S.A. 40A:11-16.1)
- G. Prior to SUBSTANTIAL COMPLETION, the OWNER with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the Work. Such use shall not constitute an acceptance of such portions of the WORK.
- H. The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and

GENERAL CONDITIONS (Continued)

protection of the Work or the restoration of, any damaged Work except such as may be caused by agents or employees of the OWNER.

- I. The Contractor will indemnify and save the OWNER and the OWNER'S agents harmless from all claims growing out of the lawful demand of Subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the Work. The Contractor shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. The evidence shall be submitted with each monthly request for payment. If the Contractor fails to do so the OWNER may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payment to the Contractor shall be resumed in accordance with the terms of the Contract Document, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the Contractor, the Contractor's Surety, or any third party. In paying any unpaid bills of the Contractor, any payment so made by the OWNER shall be considered as a payment made under the Contract Documents by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.
- J. Acceptance of final payment as release:

1. The acceptance by the Contractor of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this Work and for every act and neglect of the Owner and others relating to or arising out of this work. Any payment, however, final or otherwise, shall not release the Contractor or its sureties from any obligations under the Contract Documents or the Performance and Payment Bonds.

- K. All disputes regarding whether a party has failed to make payments required pursuant to this section may be submitted to a process of alternative dispute resolution as described in Article 28, DISPUTES.

38. LIENS

- A. Neither the final payment nor any part of the retained percentage shall become due until the Contractor, if required, shall deliver to the OWNER a complete release of all liens arising out of this contract, or receipts in full in lieu thereof

GENERAL CONDITIONS (Continued)

and, if required in either case, an affidavit that so far as he has knowledge or information the release and receipts include all the labor and material for which a lien could be filed; but the Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the OWNER to indemnify him against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the OWNER all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

If at any time before final payment any person or persons claiming to have performed any labor or furnished any materials, toward the performance or completion of this Contract, shall file proper notice of claim, the Owner shall retain, until the discharge thereof from the monies under its control, so much of such monies as shall be sufficient to satisfy and discharge the amount claimed to be due in such notice, together with the estimated cost of any action or actions to be incurred by the Owner in connection with the filing of such notice.

After such retainage, the balance of money which may be due to the Contractor shall not be paid by the Owner until the Contractor has delivered to the Owner an Affidavit to be signed personally by the Contractor, or by a General Partner if Contractor is a Partnership, or by the President or Secretary if Contractor is a Corporation, attesting to the payment of all others who supplied labor, materials or equipment for the Contract and for which a lien claim could be filed, with receipts in full to cover the potential claims of such other suppliers of labor, materials or equipment, such receipts to be attached to such Affidavit.

39. CONTRACTORS CLAIM FOR DAMAGES

- A. If the Contractor shall claim compensation for any damage sustained by reason of the acts of the OWNER, or its agents, he shall, within seven (7) days after the sustaining of such damage, make a written statement to the ENGINEER of the nature of the damage sustained. On or before the fifteenth day of the month subsequent to that in which any such damage shall have been sustained, the Contractor shall file with the ENGINEER an itemized statement of the details and the amount of such damage, and unless such statement is made as thus required, his claim for compensation shall be forfeited and invalidated, and he shall not be entitled to payment on account of any such damage.

40. NO WAIVER OF CONTRACT

- A. Neither an extension of time for any reason beyond the date fixed herein for the completion of the contract, nor the delivery and acceptance of any articles or materials, nor any payment for, nor acceptance of the whole or any part of the

GENERAL CONDITIONS (Continued)

work by the ENGINEER, nor any possession taken by the OWNER, or its employees or agents, shall be deemed to be a waiver by the OWNER of the right to abrogate this contract for abandonment or delay or non-performance in the manner herein provided, nor shall it operate to void or annul any of the terms of this contract.

41. NO ESTOPPEL

- A. Neither the OWNER nor any department or officer thereof, shall be precluded or estopped by any return or certificate made or given to the OWNER, the ENGINEER, or other officer, agent or appointee to the OWNER under any provision of this agreement, from any time before the completion and acceptance of the work, and payment therefore, or before the payment of the guarantee retainer, pursuant to any such return or certificate showing the true and correct amount and character of the work done and materials furnished by the Contractor or any other person under this agreement, or that any such return or certificate is untrue and incorrect or improperly made in any particular, or that the work and materials, or any part thereof, do not in fact conform to the specifications and contract drawings, and the OWNER shall not be precluded or estopped, notwithstanding any such return or certificate any payment in accordance therewith, from demanding and recovering from the Contractor such damages as it may sustain by reason of his failure to comply with the specifications and contract drawings.

42. SUBLETTING

- A. The Contractor must perform, construct or install not less than 50% of each contract with his own forces and equipment. Only special items approved by the ENGINEER may be sublet.
- B. The Contractor shall not sublet any part of the work included in this contract without the previous approval of the ENGINEER. In making application for subletting any portion of the work, the Contractor shall state in writing, the portion of the work which each subcontractor is to do or the material which he is to furnish, his place of business, and such other information as may be required in order to ascertain whether such subcontractor is responsible, reliable and able to perform the work or to furnish the materials as called for in the specifications. Subletting, if permitted, shall not relieve the Contractor of any of his obligations under this contract. The Contractor shall be as fully responsible to the OWNER for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work, to bind subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents

GENERAL CONDITIONS (Continued)

insofar as applicable to the work of subcontractors, and to give the Contractor the same power as regards terminating any subcontract that the OWNER may exercise over the Contractor under any provisions of the Contract Documents.

- C. Nothing contained in this contract shall create any contractual relations between any subcontractor and the OWNER.
- D. Within five (5) days after the Contractor receives payment for work performed under this contract, he shall pay each subcontractor for the amount allowed the Contractor for and on account of work performed by the subcontractor to the extent of the subcontractor's interest herein. On each instance when the CONTRACTOR received payment from the OWNER and the CONTRACTOR thereafter makes a payment to a subcontractor, the CONTRACTOR shall furnish proof of all such payments to subcontractors prior to the OWNER releasing the next payment to the CONTRACTOR.

43. RELATIONS OF CONTRACTOR AND SUBCONTRACTOR

- A. The Contractor agrees to bind every subcontractor and every subcontractor agrees to be bound by the terms of the Agreement, the General Conditions, the Drawings and Specifications as far as applicable to his work, including the following provisions of this article, unless specifically noted to the contrary in a subcontract approved in writing as adequate by the OWNER or ENGINEER. This does not apply to minor subcontracts.
- B. The subcontractor agrees:
 - 1. To be bound to the Contractor by the terms of the Agreement, General Conditions, Drawings and Specifications, and to assume toward him the obligations and responsibilities that he, by those documents, assumes toward the OWNER.
 - 2. To submit to the Contractor applications for payment in such reasonable time as to enable the Contractor to apply for payment.
 - 3. To make all claims for extras, for extensions of time and for damages for delays or otherwise, to the Contractor in the manner provided in the General Conditions for like claims by the Contractor upon the OWNER, except that the time for making claims for extra cost is one week.
- C. The Contractor agrees:
 - 1. To be bound to the subcontractor by all the obligations that the OWNER assumes to the Contractor under the Agreement, General Conditions,

GENERAL CONDITIONS (Continued)

Drawings and Specifications, and by all the provisions thereof affording remedies and redress to the Contractor from the OWNER.

2. To pay the subcontractor, upon the payment of certificates, if issued under the schedule of values described herein, the amount allowed to the Contractor on account of the subcontractor's work to the extent of the subcontractor's interest therein.
3. To pay the subcontractor, upon the payment of certificates, if issued otherwise than in "b" so that at all times his total payments shall be as large in proportion to the value of the work done by him as the total amount certified to the Contractor is to the value of the work done by him.
4. To pay the subcontractor to such extent as may be provided by the Contract Documents or the subcontract, if either of these provides for earlier or larger payments than the above.
5. To pay the subcontractor on demand for his work or materials as far as executed and fixed in place, less the retained percentage, at the time the certificate should be issued, even though the ENGINEER fails to issue it for any cause not the fault of the subcontractor.
6. To pay the subcontractor a just share of any fire insurance money received by him, the Contractor.
7. To make no demand for liquidated damages or penalty for delay in any sum in excess of such amount as may be specifically named in the subcontract.
8. That no claim for services rendered or materials furnished by the Contractor or to the subcontractor shall be valid unless written notice thereof is given by the Contractor to the subcontractor during the first ten (10) days of the calendar month following that in which the claim originated.
9. To give the subcontractor an opportunity to be present and to submit evidence in any arbitration or court action involving his rights.
10. If arbitration is used, name as arbitrator under arbitration proceedings as provided in the General Conditions, the person nominated by the subcontractor, if the sole cause of dispute is the work, materials, rights or responsibilities of the subcontractor; or if of the subcontractor and other subcontractors jointly, to name as such arbitrator the person upon whom they agree.

GENERAL CONDITIONS (Continued)

11. In the manner of arbitration or court action, their rights and obligations and all procedures shall be analogous to those set forth in this contract.

D. Nothing in this paragraph shall create any obligation on the part of the OWNER to pay or see to the payment of any sums to any subcontractor.

44. WAGE RATES

A. This contract is subject to the New Jersey State Department of Labor and Industry prevailing wage rates. Prevailing minimum wage rates are appended to this contract. BIDS WILL NOT BE ACCEPTED FROM BIDDERS WHO ARE THE "DEBARRED LIST OF THE NEW JERSEY DEPARTMENT OF LABOR AND INDUSTRY."

B. The wage rates shall be made a part of the contract for performance of the described work. Contractors and subcontractors performing the described work shall post the prevailing wage rates for each craft and classification involved as herein determined in a prominent and easily accessible place at the site of the work or at such place or places as are used to pay workmen their wages.

C. Applicable rates are those in effect at that date on which a contract is awarded, and must be kept current as indicated.

D. The wage rates are conclusive for a period of two (2) years from date of issuance unless superseded within said two (2) year period by a later determination.

E. Employers not paying the itemized employees benefits to a payee designated in a collective bargaining agreement shall pay them directly to the employee on each payday.

45. SCOPE OF WORK

A. The work to be performed under this contract consists of furnishing all materials, equipment, supplies, labor and transportation, including fuel, power, water and performing all work as required in the Statement of Work in the contract, in strict accordance with the specifications, schedules and drawings, all of which are made a part hereof, and including such detail drawings as may be furnished by the ENGINEER from time to time during the prosecution of the work in explanation of said drawings.

46. CHARACTER AND WORK OF MECHANICS

GENERAL CONDITIONS (Continued)

- A. The work shall be executed in the best and most workmanlike manner by qualified, careful and efficient mechanics in strict accordance with the drawings and specifications.

47. SITE INVESTIGATION

- A. The Contractor acknowledges that he has satisfied himself as to the nature and location of the work, the general and local conditions, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, tides or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during the prosecution of the work.
- B. The Contractor further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the ENGINEER, as well as from information presented by the drawings and specifications made a part of this contract.
- C. Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work. The OWNER assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the ENGINEER. The OWNER also assumes no responsibility for any understanding or representations made by its officers or agents during or prior to the execution of this contract, unless (1) such understanding or representations are expressly stated in the contract, and (2) the contract expressly provides that the responsibility therefore is assumed by the OWNER'S Representatives.

48. OPERATIONS AND STORAGE AREAS

- A. All operations of the Contractor (including storage of materials) shall be confined to areas authorized or approved by the ENGINEER. No unauthorized or unwarranted entry upon or passage through, or storage or disposal of materials shall be made upon private premises. The Contractor shall be liable for any and all damage caused by him to such private premises. The Contractor shall hold and save the OWNER, its officers and agents, free and harmless from liability of any nature of kind arising from any use, trespass or damage occasioned by his operations on premises of third persons.

GENERAL CONDITIONS (Continued)

- B. Temporary buildings (storage sheds, shops, offices, etc.) may be erected by the Contractor only with the approval of the ENGINEER, and shall be built with labor and materials furnished by the Contractor without expense to the OWNER. Such temporary buildings and/or utilities shall remain the property of the Contractor and will be removed by him at his expense upon the completion of the work. With the written consent of the ENGINEER, such buildings and/or utilities may be abandoned and need not be removed.
- C. The Contractor shall, under regulations prescribe by the ENGINEER, use only established roadways or construct and use such temporary roadways as may be authorized by the ENGINEER. Where materials are transported in the prosecution of the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state or local law or regulation. When it is necessary to cross curbing or sidewalks protection against damage shall be, provided by the Contractor and any damaged roads, curbing or sidewalks shall be repaired by, or at the expense of, the Contractor.

49. PROGRESS CHARTS AND REQUIREMENTS FOR OVERTIME

- A. The Contractor shall, within five (5) days after date of notice to proceed, prepare and submit to the ENGINEER for approval a practicable schedule showing the date on which he will start the several salient features (including procurement of materials, plant and equipment) and the contemplated dates for completing same.
- B. If, in the opinion of the ENGINEER, the Contractor falls behind the progress schedule, the Contractor shall take steps as may be necessary to improve his progress, and the ENGINEER may require him to increase the number of shifts and/or overtime operations, days of work, and/or the amount of construction plant, and to submit for approval such supplementary schedule or schedules in chart form as may be deemed necessary to demonstrate the manner in which the agreed rate of progress will be regained, all without additional cost the OWNER.
- C. Failure of the Contractor to comply with the requirements of the ENGINEER under the provision shall be grounds for determination by the ENGINEER that the Contractor is not prosecuting the work with such diligence as will ensure completion within the time specified. Upon such determination, the OWNER may terminate the Contractor's right to proceed with the work, or any separable part thereof, in accordance with the delays – damage clause of the contract.

50. SUBCONTRACTORS

- A. There will be set forth in the bid the name, or names, and addresses of all subcontractors to whom the bidder will subcontract the furnishing of plumbing

GENERAL CONDITIONS (Continued)

and gas fitting, and all kindred work, and of the steam and hot water heating and ventilating apparatus, steam power plants and kindred work, and electrical work, structural steel and ornamental iron work, each of which subcontractors shall be qualified in accordance with N.J.S.A. 40A:11-16. The OWNER shall require evidence of performance security to be submitted simultaneously with the list of the subcontractors.

- B. If for sufficient reason, at any time during the progress of the work, the ENGINEER determines that any subcontractor is incompetent or undesirable, he will notify the Contractor accordingly and immediately steps will be taken for cancellation of such subcontract. Subletting by subcontractors shall be subject to the same regulations. Nothing contained in this Contract shall create any contractual relation between the subcontractor and the OWNER.

51. QUALITY OF ARTICLES, MATERIALS AND EQUIPMENT

- A. Articles, materials and equipment to be incorporated into the work under the contract shall be new and unused unless otherwise specified; and where required to conform to standard specifications of the ENGINEER or other authorities incorporated by reference, will conform to the respective editions, including amendments specified; or where the editions are not specified, will conform to the editions, including amendments in effect on the date of the Invitation for Bids.
- B. In accordance with N.J.S.A. 40A:11-18, only manufactured and farm products of the United States, wherever available, shall be used in this Contract.
- C. Any samples and descriptive data required shall:
1. Be submitted within the time specified in these specifications, or, if no time be specified, within a reasonable time before use to permit inspection and testing.
 2. Be shipped, prepaid and delivered, as specified in these specifications, or as directed by the ENGINEER.
 3. Be properly marked to show the name of the material, trade name of manufacturer, place of origin, name and location of the project where the material represented by the sample is to be used, and the name of the contractor submitting the sample.
- D. Samples not subject to destructive tests may be retained until the completion of the work, but thereafter will be returned to the Contractor, if he so requests, in writing, at his own expense. Failure of any sample to pass the specified

GENERAL CONDITIONS (Continued)

requirements will be sufficient cause for refusal to consider further any sample from the same manufacturer whose material failed to pass the tests.

52. PROTECTION OF MATERIAL AND WORK

- A. The Contractor shall at all times protect and preserve all materials, supplies and equipment of every description (including property which may be OWNER furnished or owned) and all work performed. All reasonable requests of the ENGINEER to enclose or specially protect such property shall be complied with. If, as determined by the ENGINEER, material, equipment, supplies and work performed are not adequately protected by the Contractor such property may be protected by the OWNER and the cost thereof may be charged to the Contractor or deducted from any Payment due to him.

53. PROTECTION OF VEGETATION

- A. The Contractor will preserve and protect all existing vegetation such as trees, shrubs and grass on or adjacent to the site which do not reasonably interfere with the construction as may be determined by the ENGINEER. The Contractor will be responsible for all unauthorized cutting or damaging of trees and shrubs, including damage due to careless operation of equipment, stockpiling of materials, or tracking of grass areas by equipment.
- B. Care will be taken by the Contractor in felling trees authorized for removal to avoid any unnecessary damage to vegetation that is to remain place. Any limbs or branches of trees broken during such operations shall be trimmed with a clean cut and painted with an approved tree pruning compound if required by the ENGINEER. The Contractor will be liable for, or may be required to replace or restore at his own expense, all vegetation destroyed or damaged.
- C. Protect existing structures and other property at site or adjacent thereto, including walks, pavements and roadways.
- D. Promptly remedy all damage or loss, at no expense to the Owner.

54. POSSESSION PRIOR TO COMPLETION

- A. The OWNER shall have the right to take possession of or use any completed or partially completed part of the work. Such possession or use shall not be deemed an acceptance of any work not completed in accordance with the contract. If such prior possession or use by the OWNER delays the progress of the work or causes additional expenses to the Contractor, and equitable adjustment in the contract price and/or the time of completion will be made and the contract shall be modified in writing accordingly.

GENERAL CONDITIONS (Continued)

55. MONEY MAY BE RETAINED BY OWNER

The Owner may keep any monies which would otherwise be payable at any time hereunder, and apply the same or so much as may be necessary therefor, to the payment of any expenses, losses or damages, incurred by the Owner, and may retain until all claims are settled, so much of such money as the Owner shall be of the opinion shall reasonably be required to settle all claims filed with the Owner, its officers and agents, relating to this Contract.

56. RIGHT OF THE OWNER TO TERMINATE CONTRACT OR GIVE A THREE (3) DAY DEFICIENCY NOTICE

In the event of any material delay or default in the performance of any of the provisions of the Contract Documents by the Contractor, or by any of his Subcontractors (of any tier), the Owner may serve written notice upon the Contractor and the surety(ies) of its intention to terminate the Contract, such notice to contain the reasons for the Owner's intention to terminate the Contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such delay or default shall cease or arrangements for the correction and cure of the delay or default satisfactory to the Owner shall be made, the Owner may, upon the expiration of said ten (10) days, terminate the Contract. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Contractor and the surety(ies), and the surety(ies) shall have the right to take over and perform the Contract; provided, however, that if the surety(ies) do not commence performance of the Contract within ten (10) days from the date of the mailing to such surety(ies) of the notice of termination and correct and cure such delay or default or make arrangements for the correction and cure of the delay or default satisfactory to the Owner, the Owner may take over the work and prosecute the same to completion by contract or by force account for the account of and at the expense of the Contractor and may deduct the cost thereof from the payment then or thereafter due to the Contractor, and the Contractor and the surety(ies) shall be liable to the Owner for any excess cost caused to the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such of the Contractor's materials, equipment appliances, and plant as may be on the site of the work and necessary or convenient therefor.

In addition to and not in lieu of the termination remedy provided above or any other remedy the Owner may have, if the Contractor or Subcontractor (of any tier) should fail or neglect at any time to prosecute the work properly or fail to perform any provision of the Contract Documents, the Owner may give a three (3) day written deficiency notice. The Owner, after three (3) days from the service of the three (3) day deficiency notice to the Contractor, may make good such deficiencies for the account of and at the expense of the Contractor and may deduct the cost thereof from the payment then or thereafter due to the Contractor

GENERAL CONDITIONS (Continued)

and the Contractor and the surety(ies) shall be liable to the Owner for any excess cost caused to the Owner thereby.

In addition to and not in lieu of the termination remedies provided above, the Owner may terminate this Contract, in whole or in part, for the convenience of the Owner, if the Owner determines that such termination is in the Owner's interest. Such termination shall be by written notice to the Contractor specifying the extent of termination and the effective date. In case of such termination for convenience, the Contractor shall be paid for the work satisfactorily completed to the date of termination, together with the reasonable costs of settlement of the work terminated, but not for losses, disruption, delay, loss of productivity, escalation, home office overhead, field office overhead, extended or disrupted performance, demobilization, mobilization, remobilization, indirect or impact claims, acceleration, loss of profit, time loss use of money, claims by third parties, and all costs (including but not limited to all fees and charges of engineers, architects, attorneys' fees, and other professional and consultant fees and all court and alternative dispute resolution costs) lost or anticipated profits or such other damages on the work terminated.

57. CLEANING UP

- A. The Contractor shall at all times keep the construction area, including storage areas used by him, free from accumulations of waste materials or rubbish and prior to completion of the work remove the rubbish from the premises. Upon completion of the construction, the Contractor shall leave the work and premises in a clean, neat and workmanlike condition satisfactory to the ENGINEER.

58. BONDS

- A. Performance, Payment and Maintenance Bonds. The Contractor further agrees to furnish a performance, payment and maintenance bond with an obligation for the payment by the Contractor, and by all subcontractors, for all labor performed or materials, provisions, provender, or other supplies, teams, fuels, oils, implements or machinery used or consumed in, upon, for or about the construction, erection, alteration or repair of such buildings, works or improvements. The maintenance bond shall remain in effect for a period of two (2) years after completion and acceptance of all work as a guarantee against latent defects. Such bonds shall be issued by a surety which meets the following criteria:
 - 1. The surety shall be licensed to conduct business in the State of New Jersey and have the minimum surplus and capital stock or net cash assets required by N.J.S.A. 17:17-6 or N.J.S.A. 17:17-7, whichever is appropriate, at the time the invitation to bid is issued, and
 - 2. With respect to all bonds in the amount of \$850,000 or more:

GENERAL CONDITIONS (Continued)

- a. If the amount of the bond is at least \$850,000 but not more than \$3.5 million, the surety shall hold a current Certificate of Authority, issued by the United States Secretary of the Treasury pursuant to 31USC_9305, that is valid in the State of New Jersey as listed annually in the United States Treasury Circular 570, except that if the surety has been operational for a period in excess of five (5) years, the surety shall be deemed to meet the requirements of this subparagraph if it is rate din one of the three highest categories by an independent, nationally recognized United States rating company that determines the financial stability of insurance companies, which rating company or companies shall be as determined by the Commissioner of Insurance, and
 - b. If the amount of the bond is more than \$3.5 million, then the surety shall hold a current Certificate of Authority, issued by the United States Secretary of the Treasury pursuant to 31USC_9305, that is valid in the State of New Jersey as listed annually in the United States Treasury 570 and, if the surety has been operational for a period in excess of five (5) years, shall be rated in one of the three highest categories by an independent, nationally recognized United States rating company that determines the financial stability of insurance companies, which rating company or companies shall be as determined by the Commissioner of Insurance.
3. A surety subject to the provisions of subparagraph 2.b above which does not hold a Certificate of Authority issued by the United States Secretary of the Treasury shall be exempt from the requirement to hold such a certificate if the surety meets an equivalent set of standards developed by the Commissioner of Insurance and certifies to the OWNER that it meets said standards.
- B. A surety's obligation shall not extend to any claim for damages based upon alleged negligence that resulted in personal injury, wrongful death, or damage to real or personal property, and no bond shall in any way be construed as a liability insurance policy. Nothing herein shall relieve the surety's obligation to guarantee the Contractor's performance of all conditions of the contract, including the maintenance of liability insurance if and as required by the contract. Only the obligee named on the bond, and any subcontractor performing labor or any subcontractor or materialman providing materials for the construction, erection, alteration or repair of the public building, work or improvement for which the bond is required pursuant to this section, shall have any claim against the surety under the bond.

GENERAL CONDITIONS (Continued)

- C. The OWNER shall not accept more than one payment, performance and maintenance bond to cover a single construction contract. The OWNER may accept a single bond executed by more than one surety to cover a single construction contract only if the combined underwriting limitations of all the named sureties, as set forth in the most current annual revision of the United States Treasury Circular 570, or as determined by the Commissioner of Insurance pursuant to N.J.S.A. 17:18-9, meet or exceed the amount of the contract to be performed.
- D. The OWNER shall not accept a performance, payment or maintenance bond unless there is attached thereto a Surety Disclosure Statement and Certification to which each surety executing the bond shall have subscribed. This statement and certification shall be submitted with the Bonds and be complete in all respects and duly acknowledged according to law, and shall have substantially the form required by N.J.S.A. 2A:44-143.
- E. The bonds required herein shall be executed by the Contractor with such sureties as shall be approved by the OWNER in an amount equal to at least 100 percent of the contract price, and shall be conditioned for the payment by the Contractor, and by all subcontractors, or his or their subcontractors, of all indebtedness which may accrue to any person, firm or corporation, in an amount not exceeding the sum specified in the bond, on account of any labor performed or materials, provisions, provender or other supplies, or teams, fuels, oils, implements or machinery used or consumed in, upon, for or about the construction, erection, alteration or repair of the public building or public work or improvement. The bond shall be deposited with and be held by the OWNER for the use of any party interested therein.
- F. Any bonds required hereunder will be dated as of the same date as the contract and will be furnished by the Contractor to the OWNER at the time the contract is executed, and must be accompanied by a Power of Attorney Certificate and Financial Statement.

59. ON-SITE CONDITIONS

- A. Comply with following requirements during the progress of construction.
 - 1. New Jersey Department of Transportation Standard Specifications, 2007.
 - a. Safety - Subsection 108.05.02.
 - b. Sanitary, Health and Safety Provisions - Subsection 108.05.
 - c. Final Clean Up - Section 161.

GENERAL CONDITIONS (Continued)

2. Code of Federal Regulations:

- a. 29 CFR 1926; Safety and Health Regulations for Construction.

60. UTILITIES

- A. Adhere to Subsection 105.07 of Standard Specifications regarding location of and construction around public utilities, including those publicly and privately owned.
- B. Permit owners of utilities, or their agents, access to site work at all times, in order to relocate or protect their facilities. Cooperate and coordinate with utility owners in performing this work.
- C. Notify utility owners not less than three (3) business days or more than ten (10) business days in advance of any work that will endanger or affect their facilities. A business day is any day, NOT INCLUDING WEEKENDS AND/OR HOLIDAYS. Comply with the New Jersey Underground Facility Protection Act. See http://www.nj1-call.org/whats_new.php.
- D. Separate payment will not be made for protection and preservation of utilities and cooperation and coordination with their owners. Include all such costs in unit price bid for the various items of contract as listed in Proposal.
- E. Any public utility facilities being constructed under this contract shall be subject to inspection by the utility owner during construction, and the utility owner shall be given the opportunity to inspect material to be used in reference to the specifications and plan details applying to such materials.
- F. Comply with requirements of Blasting – Excavating - Restrictions, State of New Jersey - Laws of 1964 and amended 1974 according to Section I, P.L. 1964 c.53 (C.2A:170-69.4), which generally requires notification of gas company before any work commences within 200 feet of their services.
- G. Contact the following a minimum of ten (10) days prior to construction:
1. Utility Line Service: (800) 272-1000
- H. Existence and location of utilities, pipes and structures shall be investigated and verified in field by Contractor before starting work.
- I. Contractor shall be held responsible for any damages to and for protection of all existing utilities and structures.

GENERAL CONDITIONS (Continued)

61. STORING OF MATERIALS

- A. All materials required in the work may be stored on site subject to approval by the ENGINEER. All such materials, tools, and machinery stored upon public thoroughfares shall be provided with approved warning lights or other devices to protect pedestrian and vehicular traffic.

Payment requested for stored materials and/or equipment shall, in addition to the conditions set forth in N.J.S.A. 40A:11-16.4, be subject to the following conditions:

- (a) The materials and/or equipment shall be received in a condition satisfactory for incorporation in the work.
- (b) The materials and/or equipment shall be stored on Owner's Property or at an approved secure location in such manner that they will not be damaged due to weather, construction operations or any other cause.
- (c) An invoice from the supplier shall be furnished for each item which payment is requested.
- (d) The Contractor shall furnish written proof from the supplier of payment for at least 90% of the cost of the materials and/or equipment, no later than thirty (30) days after Contractor's receipt of the payment for such materials and/or equipment from the Owner. The Owner shall have the right to deduct from the next Application for Payment an amount equal to the cost of the said materials and/or equipment if adequate and timely proof of payment is not submitted by the Contractor.
- (e) Title to the stored materials and/or equipment shall pass to the Owner immediately upon the Owner's issuance of payment for the same. All stored materials and/or equipment for which the Owner has title shall be prominently labelled by the Contractor to indicate that title is in the Owner.
- (f) Risk of loss for the stored materials and/or equipment shall remain in the Contractor until the materials and/or equipment shall be incorporated into the works and finally accepted by the Owner. The Contractor shall maintain (and provide evidence of) adequate insurance to cover the risk of loss of the stored materials and/or equipment.
- (g) All stored materials and/or equipment shall be, at all reasonable times, subject to the inspection of the Engineer and the Owner. The Contractor shall bear the cost of Engineer's time and expense incurred in travelling to the Contractor's storage site(s).

GENERAL CONDITIONS (Continued)

62. WATER SUPPLY

- A. Provide all water for construction purposes, including expense of having water conveyed about the work, in prices stipulated for various items of the work under this contract. The source, quality and quantity of water furnished shall at all times be satisfactory to ENGINEER.
- B. Existing water supply lines may be connected for construction water in accordance with utility company or utility authority requirements.

63. PRECONSTRUCTION CONFERENCE

- A. A Preconstruction Conference will be held at the office of the ENGINEER after award of the Contract. The ENGINEER shall notify the Contractor of the date and time. The Contractor and his superintendent shall attend along with his subcontractors as appropriate.

64. COMMUNICATIONS

- A. Forward all communications to OWNER through ENGINEER.

65. INDEMNIFICATION

- A. To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the OWNER and the ENGINEER and their officers, employees agents and employees and the owners of all property upon which the work is being performed from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission or partial negligent act or omission of the Contractor, any Subcontractor of any tier, any supplier or materialmen, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right of obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph.
- B. In any and all claims against the OWNER or the ENGINEER or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts

GENERAL CONDITIONS (Continued)

any of them may be liable, the indemnification obligation under this Paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

- C. The obligations of the Contractor under this Paragraph shall not extend to the liability of the ENGINEER, his agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the ENGINEER, his agents or employees provided such giving or failure to give is the sole cause of the injury or damage.
- D. The Contractor's indemnification obligation shall not be limited by the amounts of insurance required to be carried by the Contractor under this Contract.
- E. The aforementioned indemnification provisions shall survive the completion or termination of the Contract and shall be effective until the statutes of limitation and repose have run.

66. EXECUTION, CORRELATION AND INTENT OF DOCUMENTS

- A. The Contract Documents as defined in the General Conditions are complementary, and what is called for by one, is called for by all.

67. DEDUCTIONS FOR EXTRA ENGINEERING SERVICES

- A. The OWNER has employed the ENGINEER and other consultants to observe and test the work of this contract. In the event that the Contractor's unauthorized actions (including failure to act; failure to appear for scheduled appointments; deviations from the contract specifications for materials, equipment or methods of construction; failure to meet the minimum specified test performance criteria for the materials and/or work product) necessitate or otherwise cause reinspection, retesting or redesign of the work, then the cost of all such reinspection, retesting or redesign shall be paid for by the Contractor in the form of deduction applied to the payment otherwise due the Contractor.
- B. The Contractor shall also be responsible for the charges paid by the OWNER to the ENGINEER for the services of the ENGINEER (i.e., Project Manager, Resident Engineer, Field Services Representatives, etc.) for work after the completion date. Such charges shall be paid for by the Contractor in the form of a deduction applied to the payment otherwise due the Contractor.

GENERAL CONDITIONS (Continued)

- C. Deductions from the contract payments to the Contractor shall be listed on the current estimate and be accompanied by an itemized description of the extra engineering/testing services which shall be based upon the same rates paid to the ENGINEER by the OWNER for similar work.

68. COPIES OF DOCUMENTS

- A. OWNER shall furnish to CONTRACTOR up to five (5) copies of the Contract Documents. Additional copies will be furnished upon request at the cost of preparation thereof.
- B. Upon request by the CONTRACTOR, electronic drawing files will be provided to the CONTRACTOR for his convenience. The CONTRACTOR is under no obligation to utilize the electronic drawing files. By acceptance and utilization of same, the CONTRACTOR is assuming responsibility for ensuring that the electronic drawing files match the Contract Drawings including all issued addenda and revisions. The CONTRACTOR shall immediately notify the ENGINEER of any discrepancies between the electronic drawing files and the Contract Drawings. In the event of future revisions to the Contract Drawings, the CONTRACTOR accepts responsibility for obtaining updated electronic drawing files as required. The CONTRACTOR agrees to accept full responsibility for any and all erroneous interpretations of the electronic drawing files due to variations in Computer Aided Design and Drafting (CADD) software packages and/or CADD user skill and ability. These drawings are the property of the ENGINEER and may not be reproduced for any other purpose than for the project for which they were produced.

69. WARRANTY

The Contractor warrants to the Owner and Engineer that the materials and equipment furnished by the Contractor or any Subcontractor (of any tier) under the Contract Documents will be fit for the intended purpose, of good quality and new unless otherwise required or permitted by the Contract Documents, that the work will be free from defects not inherent in the quality required or permitted, and that the work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective. This warranty excludes remedy for damage or defect caused by others for whom the Contractor is not responsible, modifications not executed by the Contractor or its Subcontractors (of any tier), improper operation, or normal wear and tear under normal usage. In case of inquiry by the Engineer, the Contractor shall furnish evidence, satisfactory to the Engineer, as to the nature and quality of any work, materials or equipment furnished under the Contract. The foregoing warranty shall remain in effect until the end of the Maintenance Period described in the Article of this Contract entitled, "Maintenance Period" and the Owner shall have the remedies provided therein.

GENERAL CONDITIONS (Continued)

The Contractor will provide the Owner with all available manufacturer's warranties and the documentation therefore, covering the materials, equipment and goods supplied under the Contract. Such manufacturer's warranties shall survive the completion and acceptance of the Contract, and shall remain in effect according to their terms.

70. MAINTENANCE PERIOD

In addition to, and not in lieu of the Contractor's warranty, above, if, within two years from the date of Owner's final acceptance of the Contractor's work or such longer period of time as may be prescribed by law or regulation or by the terms of any special warranty required by the Contract Documents, any such work is found to be defective or requires repair, amendment, reconstruction, or rectification to keep the facility and its appurtenances in good and serviceable condition, the Contractor shall promptly, without cost to the Owner and in accordance with Owner's written instructions, either correct such condition or, if the work has been rejected by the Owner, remove it from the site and replace it with proper work. Such one-year period is referred to here as the "Maintenance Period."

The Contractor's maintenance obligation excludes remedy for damage or defect caused by others for whom the Contractor is not responsible, or caused by Owner's improper use or operation, or caused by the failure of the Owner to provide necessary lubricants.

Throughout the Maintenance Period, the Contractor shall also correct any settlement or erosion in fills or cuts and restore all ground areas to elevations indicated on the Contract Drawings when so instructed by the Owner or the Engineer.

The Contractor's Maintenance Bond shall remain in effect until the end of the Maintenance Period. The Maintenance Bond shall be in a sum equal to 25% of the Contract Price.

If the Contractor does not comply with the requirements of the above stated warranty obligations or maintenance obligations, promptly correct the work, promptly comply with the terms of instructions of the Owner or Engineer, or, in an emergency where delay would cause material risk of loss or damage, the Owner may have the work corrected or the rejected work removed and replaced and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be borne by Contractor and may, among the available remedies to Owner, be deducted from amounts payable to the Contractor under the Contract under the Contract.

71. ORAL AGREEMENTS

No oral order, objection, claim or notice by any party to the other shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason

GENERAL CONDITIONS (Continued)

of any act whatsoever, other than by an express waiver or modification to the Contract Documents, in writing, and no evidence shall be introduced in any proceeding of any other alleged waiver or modification.

72. CONTRACTOR BOOKS AND RECORDS

Contractor shall keep and maintain full and accurate books and records in connection with the Work provided pursuant to this Contract. Contractor agrees that the Owner and its duly authorized agents shall have the right at all times to enter upon and to examine and inspect Contractor's records relating to the Work upon reasonable notice.

Additionally, the Contractor shall maintain all documentation related to products, transactions or services under this Contract for a period of five (5) years from the date of the final payment to the Contractor by the Owner. Such records shall be made available to the Owner, Engineer and New Jersey Office of State Comptroller upon request.

73. OWNER'S ENTITLEMENT TO REIMBURSEMENT OF FEES AND COSTS FROM CONTRACTOR

Should the final completion and acceptance of the Work herein embraced together with any modifications or additions be delayed beyond the time herein set due to action or inaction, in whole or in part, of the Contractor, it is understood and agreed that aside from any other liquidated or other damages per day for such delay from such time until the same is completed and accepted as herein provided, all costs of engineering, architectural, inspection and all other costs incurred by the Owner as a result of such delay will be charged to the Contractor and deducted from any payment otherwise due.

74. ATTORNEYS FEES AND PROFESSIONAL FEES OF CONTRACTOR EXCLUDED

Notwithstanding the foregoing or any language to the contrary in the Contract Documents, the Contractor agrees that the Owner and their officers, directors, members, partners, employees, agents, consultants, whether past or present and Engineer are not liable to Contractor for any fees and charges incurred by Contractor for attorneys, engineers, architects, and other professionals. Contractor waives as to the Owner and their officers, directors, members, partners, employees, agents, consultants, whether past or present and as to Engineer, the recovery of all attorneys' fees, engineering fees, architectural fees, or any other professional fees no matter when and how incurred and shall not seek the same in any litigation or alternative dispute resolution.

75. HEADINGS

GENERAL CONDITIONS (Continued)

The headings or titles of any section, subsection, paragraph, provision, or part of the Contract Documents shall not be deemed to limit or restrict the content, meaning or effect of such section, subsection, paragraph, provision or part.

76. MODIFICATION OR TERMINATION

Except as otherwise expressly provided herein, the Contract may not be modified or terminated except in writing signed by the parties hereto.

77. WAIVER OF BREACH

The failure of either party, at any time, to require performance by the other party, of any provision of this contract, shall in no way affect the full right to require such performance at any time thereafter. The waiver by either party of a breach of any provision of this Contract does not constitute a waiver of any succeeding breach, of the same or any other such provision, nor shall it constitute a waiver of the provision itself.

78. APPLICABLE LAW

This Contract shall be construed according to the laws of the State of New Jersey, insofar as existence of the Contract as a binding agreement and matters concerning performance or breach thereof are concerned. Any legal action will be brought in the courts within the State of New Jersey.

79. CONTRACT REMAINING VALID

If any provision of this contract is determined to be ineffective or invalid under the laws of the State of New Jersey, all other provisions shall remain effective and valid, provided the purpose of the remaining valid and effective provisions is not frustrated.

GENERAL CONDITIONS (Continued)

In witness whereof: The parties hereto have executed this Agreement the day and year first mentioned above.

OWNER:

Attest: _____
Marilyn Regner

By: _____
Larry Gindoff, Executive Director

Date:

(SEAL)

CONTRACTOR:

Attest: _____

By: _____

(SEAL)

GENERAL CONDITIONS (Continued)

ACKNOWLEDGMENT OF MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY

STATE OF NEW JERSEY)

COUNTY OF ESSEX)

On this ____ day of _____, 202_, before me personally came and appeared Larry Gindoff, to me known, who, being by me duly sworn, did depose and say that he is the Executive Director of the Morris County Municipal Utilities Authority described in and who executed the foregoing instrument; that she knows the seal of said MCMUA; that one of the seal affixed to said instrument is such seal; that it was so affixed by order of the said MCMUA, and that she signed her name thereto by like order.

Notary Public

(SEAL)

MORRIS COUNTY MUA

Americans with Disabilities Act of 1990

The CONTRACTOR and the OWNER do hereby agree that the provisions of Title 11 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 act 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 abide 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 must 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 frill 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.

MORRIS COUNTY MUA

Americans with Disabilities Act of 1990

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.

Business Name (Print): Persistent Construction, Inc

Representative's Name (Print): Anthony Grano

Representative's Title: President

Representative's Signature:

Phone: 201-941-9888

Date: 11/21/25

MORRIS COUNTY MUA

New Jersey Anti-Discrimination

Pursuant to N.J.S.A. 10:2-1:

- a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;
- b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;
- c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$ 50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and
- d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

Business Name (Print): Persistent Construction, Inc

Representative's Name (Print): Anthony Grano

Representative's Title: President

Representative's Signature: 

Phone: 201-941-9888

Date: 11/21/25

STATEMENT OF OWNERSHIP DISCLOSURE
N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

Name of Organization: Persistent Construction, Inc

Organization Address: 58 Industrial Ave, Fairview, NJ 07022

Part I Check the box that represents the type of business organization:

- ☐ Sole Proprietorship (skip Parts II and III, execute certification in Part IV)
- ☐ Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
- ☒ For-Profit Corporation (any type) ☐ Limited Liability Company (LLC)
- ☐ Partnership ☐ Limited Partnership ☐ Limited Liability Partnership (LLP)
- ☐ Other (be specific): _____

Part II

- ☒ The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. (**COMPLETE THE LIST BELOW IN THIS SECTION**)

OR

- ☐ No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. (**SKIP TO PART IV**)

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Address
Anthony Grano 50%	178 Cottage Rd, Wyckoff, NJ 07484
Frank Ralph Grano 50%	316 Raymond Street, Hasbrouck Heights, NJ 07064

Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II other than for any publicly traded parent entities referenced above. The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. **Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Address
Anthony Grano 50%	178 Cottage Rd, Wyckoff, NJ 07484
Frank Ralph Grano 50%	316 Raymond Street, Hasbrouck Heights, NJ 07064

Part IV Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the **Morris County Municipal Utilities Authority** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with **Morris County Municipal Utilities Authority** to notify the **Morris County Municipal Utilities Authority** in writing of any changes to the information contained herein; 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 am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the **Morris County Municipal Utilities Authority** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):	Anthony Grano	Title:	President
Signature:		Date:	11/21/25

MORRIS COUNTY MUA

Corporate Acknowledgement

STATE OF New Jersey)
) SS:
COUNTY OF Bergen)

On this 21 day of November in the year 2025, before me personally came
and appeared Anthony Grano, President

to me known, who, being by me duly sworn, did depose and say, that he resides at
178 Cottage Rd, Wyckoff, NJ 07484

That he is the President
(principle executive officer or duly authorized representative)

of Persistent Construction, Inc,

the Corporation described in and which executed the foregoing instrument; that he knows the seal of said Corporation; that one of the impressions affixed to said instrument in an impression of such seal, that it was so affixed by order of the Board of Directors of said Corporation, and he signed his name thereto by like order.

(Seal)


Notary Public

County, State

OLGA M LIAPIS
Notary Public, State of New Jersey
Comm. # 50214311
My Commission Expires 9/18/2028

MORRIS COUNTY MUA

Acknowledgement of Contractor, if a Partnership or LLP

STATE OF _____)
COUNTY OF _____) SS:

On this _____ day of _____ in the year 20____, before me personally came
and appeared _____

to me known, who, being by me duly sworn, did depose and say, that he is the:

_____ of the
(general partner or duly authorized representative)

firm of: _____

described in and which executed the foregoing instrument by and with the consent of all partners and he
acknowledged to me that he executed the same as and for the act and deed of said firm.

(Seal)

Notary Public

County, State

MORRIS COUNTY MUA

Acknowledgement of Contractor, if an Individual

STATE OF

)

) SS:

COUNTY OF

)

On this _____ day of _____ in the year 20____, before me personally
came and appeared

to me known, who, being by me duly sworn, did depose and say, that he is the person described in and who
executed the foregoing instrument and acknowledged to me that he executed the same.

(Seal)

Notary Public

County, State

MORRIS COUNTY MUA

Acknowledgement of Contractor, if a Limited Liability Company

STATE OF _____)
) SS:
COUNTY OF _____)

On this _____ day of _____ in the year 20____, before me personally came
and appeared _____

to me known, who, being by me duly sworn, did depose and say, that he is the:

_____ of the
(Managing Member of LLC or duly authorized representative)

firm of: _____

described in and which executed the foregoing instrument by and with the consent of all partners and he
acknowledged to me that he executed the same as and for the act and deed of said firm.

(Seal)

Notary Public

County, State

MORRIS COUNTY MUA

Certified Copy of Resolution of Board of Directors

Persistent Construction, Inc

(Name of Corporation)

RESOLVED that Anthony Grano, President
(Person Authorized to Sign) (Title)

of Persistent Construction, Inc be authorized to sign and submit the Bid of this
(Name of Corporation)

Corporation for the following project:

Restorations to the Parsippany-Troy Hills Transfer Station North Tipping Floor, Located in Parsippany-Troy Hills Township.

The foregoing is a true and correct copy of the Resolution adopted by

Persistent Construction, Inc at a meeting of its Board of Directors

held on the 21 day of November, 20 25.

By 

Title Anthony Grano, President

(SEAL)

This form must be completed if the Bidder is a Corporation.

MORRIS COUNTY MUA

New Jersey Business Registration Certification

Pursuant to N.J.S.A. 52:32-44, the Morris County Municipal Utilities Authority is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the Morris County Municipal Utilities Authority with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the Morris County Municipal Utilities Authority prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

During the course of contract performance:

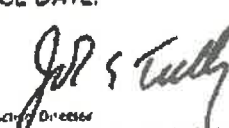
- (1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
- (2) the contractor shall maintain and submit to the Morris County Municipal Utilities Authority a list of subcontractors and their addresses that may be updated from time to time.
- (3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at <http://www.state.nj.us/treasury/revenue/busregcert.shtml>.

Before final payment is made under the contract, the contractor shall submit to the Morris County Municipal Utilities Authority a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

MORRIS COUNTY MUA

State of New Jersey Business Registration Certificate

STATE OF NEW JERSEY BUSINESS REGISTRATION CERTIFICATE FOR STATE AGENCY AND CASINO SERVICE CONTRACTORS	
TAXPAYER NAME: TAX REGISTRATION TEST ACCOUNT TAXPAYER IDENTIFICATION#: 970-097-382/500 ADDRESS: 847 ROEBLING AVE TRENTON NJ 08611 EFFECTIVE DATE: 01/01/01 FORM-BRC(02-01)	TRADE NAME CLIENT REGISTRATION SEQUENCE NUMBER: 0107330 ISSUANCE DATE: 07/14/04  Acting Director This Certificate is NOT assignable or transferable. It must be conspicuously displayed at above address.



STATE OF NEW JERSEY BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name: TAX REG TEST ACCOUNT
Trade Name:
Address: 847 ROEBLING AVE
TRENTON, NJ 08611
Certificate Number: 1093907
Date of Issuance: October 14, 2004

For Office Use Only:
20041014112823533

MORRIS COUNTY MUA

Pay to Play Advisory

PAY TO PLAY ADVISORY

Disclosure Requirement

(N.J.S.A. 19:44A – 20.27)

Any business entity that has received \$50,000 or more in contracts from government entities in a calendar year will be required to file an annual disclosure report with ELEC.

The report will include certain contributions and contract information for the current calendar year.

At a minimum, a list of all business entities that file an annual disclosure report will be listed on ELEC's website at www.elec.state.nj.us.

If you have any questions please contact ELEC at:
1-888-313-ELEC (toll free in NJ) or
609-292-8700

An analyst from ELEC's Special Programs Section will assist you.

Initials



MORRIS COUNTY MUA

Certification of Non-Involvement in Prohibited Activities in Russia or Belarus

Pursuant to N.J.S.A. 52:32-60.1, et seq. and N.J.S.A.40A:11-2.2 (L. 2022, c. 3) any person or entity (hereinafter "Vendor") that seeks to enter into or renew a contract with a local contracting unit subject to the Local Public Contracts Law for the provision of goods or services, or the purchase of bonds or other obligations, must complete the certification below indicating whether or not the Vendor is identified on the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, available here: <https://sanctionssearch.ofac.treas.gov/>. If the Department of the Treasury finds that a Vendor has made a certification in violation of the law, it shall take any 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 party.

I, the undersigned, certify that I have read the definition of "Vendor" below, and have reviewed the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, and having done so certify

(Check the Appropriate Box)

☒ A. That the Vendor is not identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of activity related to Russia and/or Belarus.

OR

☐ B. That I am unable to certify as to "A" above, because the Vendor is identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of activity related to Russia and/or Belarus.

OR

☐ C. That I am unable to certify as to "A" above, because the Vendor is identified on the OFAC Specially Designated Nationals and Blocked Persons list. However, the Vendor is engaged in activity related to Russia and/or Belarus consistent with federal law, regulation, license or exemption. A detailed description of how the Vendor's activity related to Russia and/or Belarus is consistent with federal law is set forth below.

(Attach Additional Sheets If Necessary.)

11/21/25

Signature of Vendor's Authorized Representative

Anthony Grano, President

Print Name and Title of Vendor's Authorized Representative

Persistent Construction, Inc

Vendor's Name

58 Industrial Ave

Vendor's Address (Street Address)

Fairview, NJ 07022

Vendor's Address (City/State/Zip Code)

Date

22-3520109

Vendor's FEIN

201-941-9888

Vendor's Phone Number

201-941-9889

Vendor's Fax Number

AGrano@PersistentConstruction.com

Vendor's Email Address

Vendor means: (1) A natural person, corporation, company, limited partnership, limited liability partnership, limited liability company, business association, sole proprietorship, joint venture, partnership, society, trust, or any other nongovernmental entity, organization, or group; (2) Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in Section 701(c)(3) of the International Financial Institutions Act, 22 U.S.C. 262r(c)(3); or (3) Any parent, successor, subunit, direct or indirect subsidiary, or any entity under common ownership or control with, any entity described in paragraph (1) or (2).

MORRIS COUNTY MUA

Disclosure of Investment Activities in Iran

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 for which I am authorized to bid/renew:

Bidder/Offeree: Persistent Construction, Inc

☒ 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; 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 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, 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.

Name: _____ Relationship to Bidder/Offeree: _____

Description of Activities: _____

Duration of Engagement: _____ Anticipated Cessation Date: _____

Bidder/Offeree Contact Name: _____ Contact Phone Number: _____

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 Town/ Township/ Borough/Government Agency 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 MCMUA to notify the MCMUA 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 Morris County Municipal Utilities Authority, New Jersey and that the MCMUA at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Anthony Grano Signature: [Signature]

Title: President Date: 11/21/25

MORRIS COUNTY MUA

Non-Collusion Affidavit

STATE OF NEW JERSEY

MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY ss:

I certify that I am Anthony Grano, President

of the firm of Persistent Construction, Inc

the Respondent making this Proposal for the bid or proposal for the above named project, that I executed the said proposal with full authority to do so; that said bidder has not, directly or indirectly entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and this affidavit are true, correct, and made with full knowledge that the Morris County Municipal Utilities Authority relies upon the truth of the statements contained in said Proposals 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.

Signature of Representative: 

/Anthony Grano, President

Subscribed and sworn to before me this 21 day of November, 20 25

Print Name of Affiant: Anthony Grano, President

Notary Public of 

My commission expires _____

OLGA M LIAPIS
Notary Public, State of New Jersey
Comm. # 50214311
My Commission Expires 9/18/2028

MORRIS COUNTY MUA

Federal Non-Debarment Certification

Summary of the Certification Requirements under N.J.S.A. 52:32-44.1

Pursuant to state law any natural person, company, firm, association, corporation, or other entity prohibited, or "debarred," from contracting with the federal government agencies, shall also be prohibited from contracting for public work in the state of New Jersey. This prohibition also extends to any affiliate organization(s) held by or subject to the control of an entity of that prohibited person or entity.

Prior to awarding a contract for public work a local units must obtain written certification from the contracting person or entity through the form below, attesting to their non-debarment from contracting with federal government agencies. Contracting units are reminded that they must fill-in the boilerplate information in the certification sections of Parts II through IV regarding their name and type of contracting unit before using the form.

MORRIS COUNTY MUA

Federal Non-Debarment Certification

CERTIFICATION OF NON-DEBARMENT FOR FEDERAL GOVERNMENT CONTRACTS

N.J.S.A. 52:32-44.1 (P.L. 2019, c.406)

This certification shall be completed, certified to, and submitted to the contracting unit prior to contract award, except for emergency contracts where submission is required prior to payment.

PART I: VENDOR INFORMATION	
Individual or Organization Name	Persistent Construction, Inc
Physical Address of Individual or Organization	58 Industrial Ave, Fairview, NJ 07022
Unique Entity ID (if applicable)	
CAGE/NCAGE Code (if applicable)	
Check the box that represents the type of business organization:	


☐ Sole Proprietorship (skip Parts III and IV) ☐ Non-Profit Corporation (skip Parts III and IV)

☒ For-Profit Corporation (any type) ☐ Limited Liability Company (LLC) ☐ Partnership

☐ Limited Partnership

☐ Limited Liability Partnership (LLP)

☐ Other (be specific): _____

PART II – CERTIFICATION OF NON-DEBARMENT: Individual or Organization			
I hereby certify that the individual or organization listed above in Part I is not debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that The Morris County Municipal Utilities Authority (the "Authority") is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by to notify the Authority in writing of any changes to the information contained herein; 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 am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the Authority , permitting the Authority to declare any contract(s) resulting from this certification void and unenforceable.			
Full Name (Print):	Anthony Grano	Title:	President
Signature:		Date:	11/21/25

MORRIS COUNTY MUA

Federal Non-Debarment Certification

PART III – CERTIFICATION OF NON-DEBARMENT: Individual or Entity Owning Greater than 50 Percent of Organization	
Section A (Check the Box that applies)	
<input type="checkbox"/>	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of its voting stock, or of the partner in the partnership who owns more than 50 percent interest therein, or of the member of the limited liability company owning more than 50 percent interest therein, as the case may be.
Name of Individual or Organization	
Physical Address	
OR	
<input checked="" type="checkbox"/>	No one stockholder in the corporation owns more than 50 percent of its voting stock, or no partner in the partnership owns more than 50 percent interest therein, or no member in the limited liability company owns more than 50 percent interest therein, as the case may be.
Section B (Skip if no Business entity is listed in Section A above)	
<input type="checkbox"/>	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of the voting stock of the organization's parent entity, or of the partner in the partnership who owns more than 50 percent interest in the organization's parent entity, or of the member of the limited liability company owning more than 50 percent interest in organization's parent entity, as the case may be.
Stockholder/Partner/Member Owning Greater Than 50 Percent of Parent Entity	
Physical Address	
OR	

MORRIS COUNTY MUA

Federal Non-Debarment Certification

<input type="checkbox"/>	No one stockholder in the parent entity corporation owns more than 50 percent of its voting stock, no partner in the parent entity partnership owns more than 50 percent interest therein, or no member in the parent entity limited liability company owns more than 50 percent interest therein, as the case may be.
--------------------------	--

Section C – Part III Certification

I hereby certify that no individual or organization that is debarred by the federal government from contracting with a federal agency owns greater than 50 percent of the **Organization listed above in Part I** or, if applicable, owns greater than 50 percent of a parent entity of **<name of organization>**. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that **The Morris County Municipal Utilities Authority (the "Authority")** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award from the **Authority** to notify the **Authority** in writing of any changes to the information contained herein; 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 am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the **Authority**, permitting the **Authority** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):	Anthony Grano	Title:	President
Signature:		Date:	11/21/25

Part IV – CERTIFICATION OF NON-DEBARMENT: Contractor – Controlled Entities

Section A

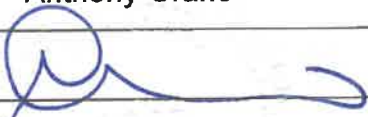
<input type="checkbox"/>	Below is the name and address of the corporation(s) in which the Organization listed in Part I owns more than 50 percent of voting stock, or of the partnership(s) in which the Organization listed in Part I owns more than 50 percent interest therein, or of the limited liability company or companies in which the Organization listed above in Part I owns more than 50 percent interest therein, as the case may be.
--------------------------	--

Name of Business Entity	Physical Address

****Add additional sheets if necessary****

MORRIS COUNTY MUA

Federal Non-Debarment Certification

OR			
<input checked="checked" type="checkbox"/>	The Organization listed above in Part I does not own greater than 50 percent of the voting stock in any corporation and does not own greater than 50 percent interest in any partnership or any limited liability company.		
Section B (skip if no business entities are listed in Section A of Part IV)			
<input type="checkbox"/>	Below are the names and addresses of any entities in which an entity listed in Part III A owns greater than 50 percent of the voting stock (corporation) or owns greater than 50 percent interest (partnership or limited liability company).		
Name of Business Entity Controlled by Entity Listed in Section A of Part IV		Physical Address	
Add additional Sheets if necessary			
OR			
<input type="checkbox"/>	No entity listed in Part III A owns greater than 50 percent of the voting stock in any corporation or owns greater than 50 percent interest in any partnership or limited liability company.		
Section C – Part IV Certification			
<p>I hereby certify that the Organization listed above in Part I does not own greater than 50 percent of any entity that that is debarred by the federal government from contracting with a federal agency and, if applicable, does not own greater than 50 percent of any entity that in turns owns greater than 50 percent of any entity debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that The Morris County Municipal Utilities Authority (the "Authority") is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by the Authority to notify the Authority in writing of any changes to the information contained herein; 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 am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the Authority, permitting the Authority to declare any contract(s) resulting from this certification void and unenforceable.</p>			
Full Name (Print):	Anthony Grano	Title:	President
Signature:		Date:	11/21/25

MORRIS COUNTY MUA

Affidavit of Non-Debarred Status

STATE OF NEW JERSEY)
) SS:
COUNTY OF Bergen)

I, Anthony Grano, President of the City/Town of
Wyckoff, in the County of Bergen

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


I am Anthony Grano, a President
(Name) (Title, Position, etc.)

of Persistent Construction, Inc, the Bidder
(Name of Firm, Company or Corporation)

making the Bid for the Morris County Municipal Utilities Authority (MCMUA) and that I executed the said Bid with full authority so to do; that said Bidder at the time of making this Bid is not included on the State of New Jersey, State Treasurer's List of Debarred, Suspended and Disqualified Bidders and Department of Labor's Workplace Accountability in Labor List; and all statements contained in said Bid and in this affidavit are true and correct and made with the full knowledge that the Morris County Municipal Utilities Authority relies upon the truth of the statements contained in said Bid and in the Statements contained in this affidavit in awarding Contract for said project.

The undersigned further warrants that should the name of the firm, company or corporation making this Bid appear on the State Treasurer's List of Debarred, Suspended and Disqualified Bidders and Department of Labor's Workplace Accountability in Labor List at any time prior to, and during the life of the Contract, including the Guarantee Period, that the Morris County Municipal Utilities Authority (MCMUA) shall be immediately so notified by the signatory to this Eligibility Affidavit.

The undersigned understands that the firm, company or corporation making the Bid as a CONTRACTOR is subject to debarment, suspension and/or disqualification in contracting with the State of New Jersey and the Department of Environmental Protection if the CONTRACTOR, pursuant to NJAC 7:1-5.2, commits any of the acts listed therein, and as determined according to applicable law and regulation.


(Signature of Bidder)

Anthony Grano, President

(Printed or Typed Name & Title of Bidder)

58 Industrial Ave, Fairview, NJ 07022

(Address of Bidder)

MORRIS COUNTY MUA

Subcontractor Utilization Plan Form

Before submitting his bid, the Bidder shall completely familiarize himself with Section 40A:11-16 of the New Jersey Local Public Contracts Law (New Jersey Statutes Annotated 40A:11-16). On contracts for the erection, alteration or repair of any public building, if the Bidder will use subcontractors for the plumbing work and gas fitting and all kindred work, steam and hot water heating and ventilating apparatus, steam power plants and kindred work, electrical work, structural steel and ornamental iron work he shall list below the name and address of each subcontractor to be used for these respective and kindred categories of work.

WORK CATEGORY	NAME	ADDRESS
Plumbing and Gas Fitting and all kindred work		
Steam Power Plants, Steam and Hot Water Heating and Ventilating Apparatus, and all Kindred Work		
Electrical Work		
Structural Steel and Ornamental Iron Work		

Speicalized Concrete Repairs Infrastructure Repair Serivce 163 Beaver Brook Rd, Lincoln Park, NJ 07035
(Attach Additional Pages as Required)

NOTE: Submission of the names and addresses of the subcontractors required by N.J.S.A. 40A:11-16 is essential and nonwaivable. The names and addresses for subcontractors must be provided for each work category above, otherwise the bid will be deemed nonresponsive. Where more than one subcontractor is named for a work category, the bidder must identify, in the Bid, the scope of work that is to be performed by each subcontractor, as required by P.L. 1997, c. 408. Failure to comply with these statutory requirements will result in the in the Bid being deemed nonresponsive.

MORRIS COUNTY MUA

Bid Security Statement

This Bid is accompanied by bid security either in the form of a certified check on the

_____ Bank of _____

in the amount of _____

Dollars or a Bid Bond in the amount of _____

Dollars guaranteed by the undersigned as Bidder and _____

as Surety. This Bid is also accompanied by a Consent of Surety for Performance and Payment Bond in accordance with the conditions in the Bid Documents.

The Bidder hereby agrees that if this Bid shall be accepted by the MCMUA and the Bidder fails to execute and deliver the Contract and Contract bonds in accordance with the terms of this Bid and the requirements of the foregoing Information for Bidders and Requirements of Bid, then the Bidder shall be deemed to have abandoned the Contract and forfeited the bid security and there-upon the Bid and its acceptance shall be null and void.

(Name of Firm or Individual)

(Title)

(Signature)

(Date)

Subscribed and sworn to before me this

_____ day of _____, 20 _____

Notary Public of

My Commission expires _____, 20 _____

MORRIS COUNTY MUA

Form of Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we, _____
_____, Hereinafter called the Principal, as Principal, and the _____
_____ of _____ a corporation duly organized
under the laws of the State of _____, hereinafter called the Surety, as Surety are held and
firmly bound unto _____ hereinafter called the Obligee, in the
sum of _____ Dollars, (\$ _____) for the payment of
which sum, well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs,
executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, The Principal has submitted a bid for _____

NOW, THEREFORE, if the Obligee shall accept the Bid of the Principal and the Principal shall enter into a Contract
with the Obligee in accordance with the terms of such bid and give bond or bonds as may be specified in the Bid
Documents with good and sufficient surety for the faithful performance of such Contract and the prompt payment of
labor and material furnished in the prosecution thereof, then this obligation shall be null and void, otherwise to remain
in full force and effect.

SIGNED AND SEALED this _____ day of _____, 20____. In the presence of:

(Principal) (SEAL)

(Witness)

(Title)

(Surety) (SEAL)

(Witness)

(Title) (SEAL)

MORRIS COUNTY MUA

Performance & Payment Bond

BOND NUMBER _____

KNOW ALL MEN/WOMEN BY THESE PRESENTS,

That we, the undersigned, _____

_____ as Principal, and _____, a

corporation of the State of _____ and

authorized to do business in the State of New Jersey, as Surety, are hereby held and firmly bound unto

_____ as Oblige, in the penal sum of _____

dollars \$ _____ (equal to the

annual value of the Contract as set forth in the Notice to Proceed) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the above named

Principal did on the _____ day of _____, 20____, enter a contract with _____,

which contract is made part of this bond the same as though set forth herein:

MORRIS COUNTY MUA

Performance & Payment Bond

NOW, if the said principal shall well and faithfully do and perform the things agreed by the said principal to be done and performed according to the terms of said contract, and shall pay all lawful claims of beneficiaries as defined by N.J.S. 2A:44-143 for labor performed or materials provisions, provender or other supplies or teams, fuels, oils, implements or machinery furnished, used or consumed in the carrying forward, performing or completing of said contract, we agreeing and assenting that this undertaking shall be for the benefit of any beneficiary as defined in N.J.S. 2A:44-143 having a just claim, as well as for the obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said Surety hereby stipulates and agrees that no modifications, omissions of additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in anyway effect the obligation of said Surety on its bond.

Recovery of any claimant under the bond shall be subject to the conditions and provisions of this article to the same extent as if such conditions and provisions were fully incorporated in the form set forth above.

This bond is given in compliance of the requirements of the statutes of the State of New Jersey in respect to bonds of contractors on public works. Revised statutes of the State of New Jersey, N.J.S.A. 2A:44-143 to 2A: 44-147, both inclusive and liability hereunder is limited as in said statutes provided.

Signed, sealed and dated this _____

day of _____, 20_____.

_____(SEAL)

_____(SEAL)

(Surety)

(Attorney-in-fact)

MORRIS COUNTY MUA

Consent of Surety

In consideration of the premises and of One Dollar (\$1.00), lawful money of the United States, to it in hand paid by the Contractor, the receipt whereof is hereby acknowledged, the undersigned surety consents and agrees that if the Contract, for which the preceding estimate and Bid is made, be awarded to the person or persons submitting the same as contracted, it will become bound as surety and guarantor for its faithful performance, and shall provide a one year performance bond in the amount equal to 100% of the contract amount prior to the execution of the contract. The Contractor shall also execute thereafter a bond as party of the third part thereto when required to do so by Owner.

In witness whereof, said surety has caused these present to be signed and attested by a duly authorized officer and its corporate seal to be hereto affixed this ____ day of _____, 20__.

(A corporate acknowledgment and statement of authority to be hereto attached by the surety company)

By _____
Surety Company
Attorney-in-Fact

Attest:

MORRIS COUNTY MUA

Surety Acknowledgement

STATE OF _____)
) SS:
COUNTY OF _____)

On this _____ day of _____ in the year 20 _____ before me personally came
_____ to me known, who being by me duly sworn, did depose

and say, that he resides in _____,

that he is the _____ of _____,

the Corporation described in and which executed the foregoing instrument; that he knows the seal of said
Corporation; that the seal affixed to said instrument is such Corporate seal; that it was so affixed

by order of the Board of Directors of said Corporation and that he signed his name thereto in like order.

(Seal)

CONTRACTOR ACKNOWLEDGMENT

STATE OF _____)
) SS:
COUNTY OF _____)

On this _____ day of _____ in the year 20 _____, before me personally
came _____ to me known, who being by me duly

sworn, did depose and say, that he resides in _____; that he is the

_____ of _____, the

Corporation described in and which executed the foregoing instrument, that he knows the seal of said
Corporation, that the seal affixed to said instrument is such corporate seal; that it was so affixed by
order of the Board of Directors of said Corporation and that he signed his name thereto in like order.

(Seal)

MORRIS COUNTY MUA

Surety Disclosure Statement and Certificate

_____, surety(ies) on the attached bond, hereby certifies(y) the following:

(1) The surety meets the applicable capital and surplus requirements of R.S.17:17-6 or R.S.17:17-7 as of the surety's most current annual filing with the New Jersey Department of Insurance.

(2) The capital (where applicable) and surplus, as determined in accordance with the applicable laws of this State, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ended December 31, 20__ (most recent calendar year for which capital and surplus amounts are available), which amounts have been certified as indicated by certified public accountants (indicating separately for each surety that surety's capital and surplus amounts, together with the name and address of the firm of certified public accounts that shall have certified those amounts):

(3) (a) With respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. sec. 9305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows (indicating for each such surety that surety's underwriting limitation and the effective date thereof):

(b) With respect to each surety participating in the issuance of the attached bond that has not received such a certificate of authority from the United States Secretary of the Treasury, the underwriting limitation of that surety as established pursuant to R.S.17:18-9 as of (date on which such limitation was so established is as follows (indicating for each such surety that surety's underwriting limitation and the date on which that limitation was established):

(4) The amount of the bond to which this statement and certification is attached is
\$ _____.

(5) If, by virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bond as set forth in items (3) (1) or (3) (b) above, or both, then for each such contract of reinsurance:

(a) The name and address of each such reinsurer under that contract and the amount of that reinsurer's participation in the contract is as follows:

MORRIS COUNTY MUA

Surety Disclosure Statement and Certificate

_____; and

(b) Each surety that is party to any such contract of reinsurance certifies that each re-insure listed under item (5) (a) satisfies the credit for reinsurance requirement established under P.L.1993, c.243 (c.17:513-1 et seq.) and any applicable regulations in effect as of the date on which the bond to which this statement and certification is attached shall have been filed with the appropriate public agency.

CERTIFICATE

**(to be completed by an authorized certifying agent
for each surety on the bond)**

I _____, as _____ for
(Name of Agent) (Title of Agent)

_____ a corporation/mutual insurance company/other (indicating
(Name of Surety)

type of business organization) (circle one) domiciled in _____, DO
(State of Domicile)

HEREBY CERTIFY that, to the best of my knowledge, the foregoing statements made by me are true
and ACKNOWLEDGE that if any of those statements are false, this bond is VOID.

(Signature of Certifying Agent)

(Printed Name of Certifying Agent)

(Title of Certifying Agent)

MORRIS COUNTY MUA

W-9

Form **W-9**
(Rev. November 2017)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to www.irs.gov/FormW9 for instructions and the latest information.

Give Form to the
requester. Do not
send to the IRS.

Print or type.
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
2 Business name/disregarded entity name, if different from above	
3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) <input type="checkbox"/> _____ Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) <input type="checkbox"/> _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ (Applies to accounts maintained outside the U.S.)
5 Address (number, street, and apt. or suite no.) See instructions.	Requester's name and address (optional)
6 City, state, and ZIP code	
7 List account number(s) here (optional)	

Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Social security number									
or									
Employer identification number									
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign
Here

Signature of
U.S. person^a

Date^a

General Instructions

Section references are to the Internal Revenue Code

MORRIS COUNTY MUA
Bid No. 2025-SW06

A-1340-0024-000/S3081
October 2025

unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such

W-9 Form
Page 158 of 165

MORRIS COUNTY MUA

W-9

as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

Cat No. 10231X

Form **W-9** (Rev. 11-2017)

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Use of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. Individual. Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. Sole proprietor or single-member LLC. Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. Partnership, LLC that is not a single-member LLC, C corporation, or S corporation. Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. Other entities. Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the letter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. Disregarded entity. For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual	Individual/sole proprietor or single-member LLC
• Sole proprietorship, or	
• Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	
• LLC treated as a partnership for U.S. federal tax purposes,	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or	
• LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

If the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a) J—

A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/Businesses and clicking on Employer Identification Number (EIN) under Starting a Business. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor ²
5. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee ¹ The actual owner ¹
6. Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor ⁴
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

*Note: The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at spam@uce.gov or report them at www.ftc.gov/complaint. You can contact the FTC at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see www.IdentityTheft.gov and Pub. 5027.

Visit www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

MORRIS COUNTY MUA

Lowest Bidder Prevailing Wage Certification

In the matter of an award of a contract for public) State of New Jersey - Department of Labor
Work for a project described as:) Workforce Development Division of Wage &
(Description of Work)) Hour Compliance

Anthony Grano, President, of full age and under oath, duly provides the following sworn statement:

1. I am the owner and/or highest-ranking official or officer of a company or firm named Persistent Construction, Inc, which holds a currently valid public works contractor registration pursuant to the New Jersey Public Works Contractor Registration Act, N.J.S.A. 34:11-56.48 et seq., certificate number 607567
2. I submitted a bid for a contract award in the above identified project and the public body has informed me that I am the lowest bidder by 10 percent or more as compared to the next lowest bid submitted.
3. The amount of my bid does include paying the prevailing wage rate to all workers who perform work on the project at rates of pay, including both base wage and fringe benefits, set forth in applicable Wage Determinations,
 - a. For appropriate locality
 - b. For the appropriate work classification (e.g. carpenter, electrician, mason, plumber)
 - c. For the appropriate job title (e.g. Apprentice, Journeyman, Forman), published by the New Jersey Department of Labor and Workforce Development (NJDOL) pursuant to the New Jersey Prevailing Wage Act (NJPWA) N.J.S.A. 34:11-56.25 et seq., and corresponding NJDOL rules, N.J.A.C. 12:60.

I certify under penalty of perjury that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are false, I am subject to punishment. See N.J.S.A. 2C:28-1 et seq., specifically, N.J.S.A. 2C:28-3, within the New Jersey Code of Criminal Justice.

Date: 11/21/25

Name (Printed): Anthony Grano

Signature: 

Title: President

SECTION 01 11 00
(01010)
STATEMENT OF WORK

MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY
PAR/TROY TRANSFER STATION
NORTH TIPPING FLOOR RESTORATION
BID NO. 2025-SW06

1.01 IN GENERAL, the work of this project consists of surface preparation, concrete floor topping, pre-cast trench drain installation, and other improvements to the Parsippany-Troy Hills Transfer Station Tipping Floor located at 1100 Edwards Road, Parsippany, Morris County, New Jersey complete as specified within these Contract Documents and shown on the Drawings entitled, "Par/Troy Transfer Station – North Tipping Floor Restoration, Bid No. 2025-SW06" prepared by the Richard A. Alaimo Associates, and consisting of nine (9) drawings as listed at the end of this Statement of Work. The Drawings are appended to these Specifications.

1.02 DESCRIPTION OF WORK

A. The work for this project includes, but is not limited to, the following items:

1. Providing an as-built drawing with dimensions of the existing tipping floor area showing:
 - a. the location of all bollards, hydrants and roof drain leaders;
 - b. the rim and invert elevations of the trench drains at 25' intervals as well as the rim and invert elevations of the sump;
 - c. the location of all piping, utilities and conduit protruding through the floor;
2. Providing preconstruction photographs.
3. Preserve and protect utilities to remain.
4. Surface preparation of existing tipping floor including concrete crack repairs by epoxy injections.

5. Demolition by means of saw cutting, and removal and disposal of existing trench drain, interior concrete tipping floor (at areas show on the drawings), and demolition concrete apron.
6. Removal and disposal of existing pipe bollards.
7. Construction of new custom pre-cast trench drain system with custom grate and catch basket.
8. Construction of new concrete apron.
9. Construction of new removable bollards.
10. Construction of a new concrete floor topping.
11. Construction of new concrete protection blocks.
12. Miscellaneous concrete work.
13. Replacement of hydrants including new shut-off valves.
14. Installation of a new underground gate valves including piping replacement and top concrete slab construction.
15. Construction of a new top slab for existing manhole including modification manhole risers.
16. Asphalt pavement restoration.
17. Miscellaneous concrete work.
18. Site cleanout and restorations.
19. Contract closeout documentation.

B. Construction Sequence.

1. In order to cause the least disturbance to the *OWNER'S* operations, the work of this contract shall be performed as described below and shown on the drawings, taking only one area out of service at a time.
 - a. Prepare as-built drawings.
 - b. Set temporary concrete barriers and dust protection tarp.

- c. Construct trench drain, aprons, bollards, and appurtenances.
 - d. Complete surface preparation of concrete areas designated to receive floor topping.
 - e. Construct new floor topping.
 - f. Cure new floor for not less than 48 hours.
 - g. Exterior work, including installation of a new gate valves, piping, and manhole modifications, may be performed independently of interior work. The work must be coordinated, tested and completed by the contract completion date.
 - h. The contract time allotted is 90 calendar days and includes making all submittals required by the contract documents.
 - i. Remove temporary barriers and cleanup site.
- B. The award of contract is expected to occur in December of 2025. The Contractor may proceed with as-builts and submittals once the Contract has been fully executed, but the Notice to Proceed for the field work is not expected until the Spring of 2026.

1.03 COORDINATION

- A. Contractor shall coordinate his operations with those of other Contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractors, including their subcontractors, shall keep informed of the progress and the detail work of other Contractors and Subcontractors, and shall notify the *ENGINEER* immediately of lack of progress or defective workmanship on the part of others. Failure of a Contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.
- B. Each Contractor shall lay out and install his work at such time or times and in such manner as to facilitate general progress of the project.
- C. Coordinate all work as further described in the General Conditions of the *Contract Documents*.

1.04 DRAWINGS

A. The following Drawings prepared by the Alaimo Group Consulting Engineers are appended hereto and are a part of these Contract Documents:

1. G1 Title Sheet
2. D1 North Tipping Floor Demolition Plan
3. C1 North Tipping Floor Existing Conditions Plan and Slab Elevations
4. S1 North Tipping Floor Slab Plan
5. S2 North Tipping Floor Structural Sections and Details
6. S3 North Tipping Floor Structural Sections and Details
7. S4 North Tipping Floor Sections and Details
8. S5 North Tipping Floor Sections, Details, and Notes
9. S6 Par/Troy Transfer Station Exterior Site Modifications

B. Reference Drawings:

1. The Reference Drawings listed below are provided for the Contractors information. These drawings are not part of the Contract Documents and *CONTRACTOR* may not rely upon or make any claim against *OWNER*, *ENGINEER*, or any of *ENGINEER*'s Consultants with respect to:
 - a. The accuracy or completeness of these drawings for *CONTRACTOR*'s purposes including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be completed by *CONTRACTOR* and safety precautions and programs incident thereto; or
 - b. Other data, interpretations, opinions, and information shown or indicated on the drawings; or
 - c. Any *CONTRACTOR* interpretation of, or conclusion drawn from any data, interpretations, opinions or information.
2. The following Drawings prepared by Clinton Bogert Associates are included for reference only.
 - a. 7, Dumping Pad and Maintenance and Personnel Facilities Floor Plan
 - b. 8, Dumping Pad Building Enclosure Elevations and Sections
 - c. 9, Dumping Pad Foundation Plan Phase II Construction
 - d. 9A, Dumping Pad Foundation Plan Phase I Construction
 - e. 10, Dumping Pad Structural Details Phase II Construction
 - f. 10A, Dumping Pad Structural Details Phase I Construction
 - g. 10B, Dumping Pad Structural Details Phase II Construction

- h. 10C, Dumping Pad Structural Details Phase II Construction
- i. 10D, Dumping Pad Structural Details Phase II Construction
- j. 13, Dumping Pad Platform Scales and Drainage System
- k. 13A, Dumping Pad Sections and Details
- l. 13B, Dumping Pad Sections and Details
- m. 13C, Dumping Pad Details
- n. 13D, Details and Schematic HVAC and Plumbing
- o. 13E, Dumping Pad Methane Exhaust System

1.05 The above Statement of Work outlines the general items and distribution of work, and should not be construed as being all-inclusive.

****END OF STATEMENT OF WORK****

SECTION 01 22 00
(01025)
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Requirements for determining measurement and payment of work specified on Unit basis or Lump Sum basis.
2. Requirements for a Schedule of Values.
3. Mobilization.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 00 41 00: Proposal*

1.02 DESCRIPTION

A. Unit price items:

1. Measurement of units of work for which payment will be made by unit prices are defined herein.
2. Payment for the units of work will be determined by multiplying the unit prices stated within the bid, times the quantity of the unit of work as determined by the measurement provisions stated herein. Payment for the units of work shall fully compensate the *CONTRACTOR* for furnishing all materials, labor, equipment, services, tools and all else incidental and necessary to complete the work.

B. Lump sum items:

1. Measurement of quantities of work will be estimated based on the accepted schedule of values as specified herein.

2. Payment for the quantities of work indicated in the accepted schedule of values will be at the prices stated in the accepted schedule of values, not to exceed the lump sum stated within the bid. Payment for the work to be performed under the lump sum shall fully compensate the *CONTRACTOR* for furnishing all material, labor, equipment, services, tools and all else incidental and necessary to complete the work.
- C. No specific measurement and payment will be made herein for work having no separate payment, but the costs thereof shall be included in the prices bid for the various other items of related work listed herein and in the *PROPOSAL*.

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Schedule of values:
 1. Submit a Schedule of Values for the work at the Pre-Construction Conference. Schedule shall reflect the specified construction stages if any, and the component parts of each stage.
 2. Upon request, support the values with data, which will substantiate their correctness.
 3. The Schedule of Values, unless objected to by the *ENGINEER*, shall be used only as the basis for the Contractor's Applications for Payments.
- C. Form and content of Schedule of Values:
 1. Type Schedule on 8½ x 11 in. white paper *CONTRACTOR'S* standard forms and automated printout will be considered for approval by *ENGINEER* upon *CONTRACTOR'S* request. Identify schedule with:
 - a. Title of project and location.
 - b. *ENGINEER* and project number.
 - c. Name and address of *CONTRACTOR*.
 - d. Contract designation.
 - e. Item designation as listed in the *PROPOSAL*.

- f. Date of submission.
- D. Schedule shall list the installed value of each of the items listed in the Proposal for all of the work in sufficient detail to serve as a basis for computing values for progress payments during construction.
- E. In the case of Lump Sum items, each item shall be divided into its component parts and be shown on a subschedule.
- F. Follow the 48 Division Construction Specification Institute (CSI) format for listing component items of each payment item listed in the *PROPOSAL*.
- G. The sum of all values listed in the schedule shall equal the total Contract Price.

PART 2 - PAYMENT

2.01 GENERAL

- A. The *CONTRACTOR* shall receive and accept the compensation provided for in the Contract as full payment for furnishing all labor, materials, tools, equipment and incidentals necessary to the completed work, and for performing all work contemplated and embraced under the Contract in a complete and acceptable manner; also, except where specifically provided elsewhere in the *Contract Documents*, for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof, or for the action of the elements, or for any unforeseen difficulties which may be encountered during the prosecution of the work until acceptance by the *OWNER*; also, except where specifically provided elsewhere in the *Contract Documents*, for all expenses incurred in consequence of the suspension or discontinuance of the work as provided in the Contract.
- B. If the payment clause relates to any unit price in the *PROPOSAL* and requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other Pay Item which may appear elsewhere in the *Contract Documents*.
- C. The *CONTRACTOR* shall receive payments in accordance with the completion of work as identified by the *Construction Schedules, Section 01 32 16*.

2.02 MOBILIZATION

- A. Mobilization shall consist of the cost of initiating the Contract and include such portions of the following as are required at the beginning of the Project: setting up the *CONTRACTOR'S* general plant, offices, shops, storage areas, sanitary and other temporary utilities, including but not limited to water, sewer, gas and electric including connections and appropriate metering from local utility and other facilities as required by the *Specifications*, by local or State law or by regulation; providing access to the Project site; obtaining necessary permits, grants and licenses, and payment of fees; protecting existing utilities; lighting work areas; providing shop drawings; sampling and testing of materials; but not including providing the required insurance and bonds. Payment for mobilization will be made at the lump sum price bid for this item in the *PROPOSAL*, which price shall include the cost of initiating the Contract.
- B. The provisions for payment for the item mobilization supersede any provisions elsewhere in the *Specifications* for including the cost of these initial services and facilities in the prices bid for the various items scheduled in the *PROPOSAL*. The lump sum price bid for mobilization shall be payable to the *CONTRACTOR* whenever he shall have completed 10 percent of the work of the Contract. For the purposes of this item, 10 percent of the work shall be considered completed when the total of payments earned, exclusive of the amount bid for this item, shown on the monthly certificates of the approximate quantities of work done, shall exceed 10 percent of the total price bid for the Contract.
- C. The lump sum price bid for mobilization is limited to the following maximum amounts:

Contract From More Than =====	Amount To and Including =====	Maximum Amount for Item of Mobilization =====
0	\$ 100,000	\$ 3,000
100,000	500,000	15,000
500,000	1,000,000	30,000
1,000,000	2,000,000	60,000
2,000,000	3,000,000	90,000
3,000,000	4,000,000	120,000
4,000,000	5,000,000	125,000
5,000,000	6,000,000	150,000
6,000,000	7,000,000	175,000
7,000,000	10,000,000	200,000
10,000,000	2.5% of amount bid	

SECTION 01 11 00
(01010)
STATEMENT OF WORK

MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY
PAR/TROY TRANSFER STATION
NORTH TIPPING FLOOR RESTORATION
BID NO. 2025-SW06

1.01 IN GENERAL, the work of this project consists of surface preparation, concrete floor topping, pre-cast trench drain installation, and other improvements to the Parsippany-Troy Hills Transfer Station Tipping Floor located at 1100 Edwards Road, Parsippany, Morris County, New Jersey complete as specified within these Contract Documents and shown on the Drawings entitled, "Par/Troy Transfer Station – North Tipping Floor Restoration, Bid No. 2025-SW06" prepared by the Richard A. Alaimo Associates, and consisting of nine (9) drawings as listed at the end of this Statement of Work. The Drawings are appended to these Specifications.

1.02 DESCRIPTION OF WORK

A. The work for this project includes, but is not limited to, the following items:

1. Providing an as-built drawing with dimensions of the existing tipping floor area showing:
 - a. the location of all bollards, hydrants and roof drain leaders;
 - b. the rim and invert elevations of the trench drains at 25' intervals as well as the rim and invert elevations of the sump;
 - c. the location of all piping, utilities and conduit protruding through the floor;
2. Providing preconstruction photographs.
3. Preserve and protect utilities to remain.
4. Surface preparation of existing tipping floor including concrete crack repairs by epoxy injections.

5. Demolition by means of saw cutting, and removal and disposal of existing trench drain, interior concrete tipping floor (at areas show on the drawings), and demolition concrete apron.
6. Removal and disposal of existing pipe bollards.
7. Construction of new custom pre-cast trench drain system with custom grate and catch basket.
8. Construction of new concrete apron.
9. Construction of new removable bollards.
10. Construction of a new concrete floor topping.
11. Construction of new concrete protection blocks.
12. Miscellaneous concrete work.
13. Replacement of hydrants including new shut-off valves.
14. Installation of a new underground gate valves including piping replacement and top concrete slab construction.
15. Construction of a new top slab for existing manhole including modification manhole risers.
16. Asphalt pavement restoration.
17. Miscellaneous concrete work.
18. Site cleanout and restorations.
19. Contract closeout documentation.

B. Construction Sequence.

1. In order to cause the least disturbance to the *OWNER'S* operations, the work of this contract shall be performed as described below and shown on the drawings, taking only one area out of service at a time.
 - a. Prepare as-built drawings.
 - b. Set temporary concrete barriers and dust protection tarp.

- c. Construct trench drain, aprons, bollards, and appurtenances.
 - d. Complete surface preparation of concrete areas designated to receive floor topping.
 - e. Construct new floor topping.
 - f. Cure new floor for not less than 48 hours.
 - g. Exterior work, including installation of a new gate valves, piping, and manhole modifications, may be performed independently of interior work. The work must be coordinated, tested and completed by the contract completion date.
 - h. The contract time allotted is 90 calendar days and includes making all submittals required by the contract documents.
 - i. Remove temporary barriers and cleanup site.
- B. The award of contract is expected to occur in December of 2025. The Contractor may proceed with as-builts and submittals once the Contract has been fully executed, but the Notice to Proceed for the field work is not expected until the Spring of 2026.

1.03 COORDINATION

- A. Contractor shall coordinate his operations with those of other Contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractors, including their subcontractors, shall keep informed of the progress and the detail work of other Contractors and Subcontractors, and shall notify the *ENGINEER* immediately of lack of progress or defective workmanship on the part of others. Failure of a Contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.
- B. Each Contractor shall lay out and install his work at such time or times and in such manner as to facilitate general progress of the project.
- C. Coordinate all work as further described in the General Conditions of the *Contract Documents*.

1.04 DRAWINGS

A. The following Drawings prepared by the Alaimo Group Consulting Engineers are appended hereto and are a part of these Contract Documents:

1. G1 Title Sheet
2. D1 North Tipping Floor Demolition Plan
3. C1 North Tipping Floor Existing Conditions Plan and Slab Elevations
4. S1 North Tipping Floor Slab Plan
5. S2 North Tipping Floor Structural Sections and Details
6. S3 North Tipping Floor Structural Sections and Details
7. S4 North Tipping Floor Sections and Details
8. S5 North Tipping Floor Sections, Details, and Notes
9. S6 Par/Troy Transfer Station Exterior Site Modifications

B. Reference Drawings:

1. The Reference Drawings listed below are provided for the Contractors information. These drawings are not part of the Contract Documents and *CONTRACTOR* may not rely upon or make any claim against *OWNER*, *ENGINEER*, or any of *ENGINEER*'s Consultants with respect to:
 - a. The accuracy or completeness of these drawings for *CONTRACTOR*'s purposes including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be completed by *CONTRACTOR* and safety precautions and programs incident thereto; or
 - b. Other data, interpretations, opinions, and information shown or indicated on the drawings; or
 - c. Any *CONTRACTOR* interpretation of, or conclusion drawn from any data, interpretations, opinions or information.
2. The following Drawings prepared by Clinton Bogert Associates are included for reference only.
 - a. 7, Dumping Pad and Maintenance and Personnel Facilities Floor Plan
 - b. 8, Dumping Pad Building Enclosure Elevations and Sections
 - c. 9, Dumping Pad Foundation Plan Phase II Construction
 - d. 9A, Dumping Pad Foundation Plan Phase I Construction
 - e. 10, Dumping Pad Structural Details Phase II Construction
 - f. 10A, Dumping Pad Structural Details Phase I Construction
 - g. 10B, Dumping Pad Structural Details Phase II Construction

- h. 10C, Dumping Pad Structural Details Phase II Construction
- i. 10D, Dumping Pad Structural Details Phase II Construction
- j. 13, Dumping Pad Platform Scales and Drainage System
- k. 13A, Dumping Pad Sections and Details
- l. 13B, Dumping Pad Sections and Details
- m. 13C, Dumping Pad Details
- n. 13D, Details and Schematic HVAC and Plumbing
- o. 13E, Dumping Pad Methane Exhaust System

1.05 The above Statement of Work outlines the general items and distribution of work, and should not be construed as being all-inclusive.

****END OF STATEMENT OF WORK****

SECTION 01 22 00
(01025)
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Requirements for determining measurement and payment of work specified on Unit basis or Lump Sum basis.
2. Requirements for a Schedule of Values.
3. Mobilization.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 00 41 00: Proposal*

1.02 DESCRIPTION

A. Unit price items:

1. Measurement of units of work for which payment will be made by unit prices are defined herein.
2. Payment for the units of work will be determined by multiplying the unit prices stated within the bid, times the quantity of the unit of work as determined by the measurement provisions stated herein. Payment for the units of work shall fully compensate the *CONTRACTOR* for furnishing all materials, labor, equipment, services, tools and all else incidental and necessary to complete the work.

B. Lump sum items:

1. Measurement of quantities of work will be estimated based on the accepted schedule of values as specified herein.

2. Payment for the quantities of work indicated in the accepted schedule of values will be at the prices stated in the accepted schedule of values, not to exceed the lump sum stated within the bid. Payment for the work to be performed under the lump sum shall fully compensate the *CONTRACTOR* for furnishing all material, labor, equipment, services, tools and all else incidental and necessary to complete the work.
- C. No specific measurement and payment will be made herein for work having no separate payment, but the costs thereof shall be included in the prices bid for the various other items of related work listed herein and in the *PROPOSAL*.

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Schedule of values:
 1. Submit a Schedule of Values for the work at the Pre-Construction Conference. Schedule shall reflect the specified construction stages if any, and the component parts of each stage.
 2. Upon request, support the values with data, which will substantiate their correctness.
 3. The Schedule of Values, unless objected to by the *ENGINEER*, shall be used only as the basis for the Contractor's Applications for Payments.
- C. Form and content of Schedule of Values:
 1. Type Schedule on 8½ x 11 in. white paper *CONTRACTOR'S* standard forms and automated printout will be considered for approval by *ENGINEER* upon *CONTRACTORS* request. Identify schedule with:
 - a. Title of project and location.
 - b. *ENGINEER* and project number.
 - c. Name and address of *CONTRACTOR*.
 - d. Contract designation.
 - e. Item designation as listed in the *PROPOSAL*.

- f. Date of submission.
- D. Schedule shall list the installed value of each of the items listed in the Proposal for all of the work in sufficient detail to serve as a basis for computing values for progress payments during construction.
- E. In the case of Lump Sum items, each item shall be divided into its component parts and be shown on a subschedule.
- F. Follow the 48 Division Construction Specification Institute (CSI) format for listing component items of each payment item listed in the *PROPOSAL*.
- G. The sum of all values listed in the schedule shall equal the total Contract Price.

PART 2 - PAYMENT

2.01 GENERAL

- A. The *CONTRACTOR* shall receive and accept the compensation provided for in the Contract as full payment for furnishing all labor, materials, tools, equipment and incidentals necessary to the completed work, and for performing all work contemplated and embraced under the Contract in a complete and acceptable manner; also, except where specifically provided elsewhere in the *Contract Documents*, for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof, or for the action of the elements, or for any unforeseen difficulties which may be encountered during the prosecution of the work until acceptance by the *OWNER*; also, except where specifically provided elsewhere in the *Contract Documents*, for all expenses incurred in consequence of the suspension or discontinuance of the work as provided in the Contract.
- B. If the payment clause relates to any unit price in the *PROPOSAL* and requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other Pay Item which may appear elsewhere in the *Contract Documents*.
- C. The *CONTRACTOR* shall receive payments in accordance with the completion of work as identified by the *Construction Schedules, Section 01 32 16*.

2.02 MOBILIZATION

- A. Mobilization shall consist of the cost of initiating the Contract and include such portions of the following as are required at the beginning of the Project: setting up the *CONTRACTOR'S* general plant, offices, shops, storage areas, sanitary and other temporary utilities, including but not limited to water, sewer, gas and electric including connections and appropriate metering from local utility and other facilities as required by the *Specifications*, by local or State law or by regulation; providing access to the Project site; obtaining necessary permits, grants and licenses, and payment of fees; protecting existing utilities; lighting work areas; providing shop drawings; sampling and testing of materials; but not including providing the required insurance and bonds. Payment for mobilization will be made at the lump sum price bid for this item in the *PROPOSAL*, which price shall include the cost of initiating the Contract.
- B. The provisions for payment for the item mobilization supersede any provisions elsewhere in the *Specifications* for including the cost of these initial services and facilities in the prices bid for the various items scheduled in the *PROPOSAL*. The lump sum price bid for mobilization shall be payable to the *CONTRACTOR* whenever he shall have completed 10 percent of the work of the Contract. For the purposes of this item, 10 percent of the work shall be considered completed when the total of payments earned, exclusive of the amount bid for this item, shown on the monthly certificates of the approximate quantities of work done, shall exceed 10 percent of the total price bid for the Contract.
- C. The lump sum price bid for mobilization is limited to the following maximum amounts:

Contract From More Than =====	Amount To and Including =====	Maximum Amount for Item of Mobilization =====
0	\$ 100,000	\$ 3,000
100,000	500,000	15,000
500,000	1,000,000	30,000
1,000,000	2,000,000	60,000
2,000,000	3,000,000	90,000
3,000,000	4,000,000	120,000
4,000,000	5,000,000	125,000
5,000,000	6,000,000	150,000
6,000,000	7,000,000	175,000
7,000,000	10,000,000	200,000
10,000,000	2.5% of amount bid	

- D. Payment for mobilization as hereinbefore specified will be made for the lump sum price bid therefore, regardless of the fact that the *CONTRACTOR* may have, for any reason, shut down his work on the project or moved equipment away from the project and back again.
- E. In the event the amount bid for the item "Mobilization" exceeds the limits specified above, the portion exceeding the limits specified above will be paid after all the work has been completed and accepted.

2.03 LIQUIDATED DAMAGES

- A. The *OWNER* will suffer significant financial loss if the project, or each stage thereof, is not substantially complete on the date(s) set forth in the *Contract Documents*. The *CONTRACTOR* and his surety shall be liable for and shall pay to the *OWNER* the sum stipulated, as fixed and agreed, as liquidated damages for each calendar day of delay until the project, or each stage thereof, is substantially complete.
- B. Liquidated damages in the amounts specified in the *PROPOSAL* will be assessed as required by the General Provisions and the Contract and collected through Current Estimate/Voucher deduct items implemented at completion of the various stages of construction specified.

****END OF SECTION****

SECTION 01 25 13
(01640)
SUBSTITUTIONS

1.01 GENERAL

A. Work included:

1. Procedures for requesting use of products, materials or methods in place of those specified.

B. Related requirements:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 33 23: Shop Drawings, Product Data and Samples*

1.02 SUBSTITUTIONS

A. After Notice to Proceed, *ENGINEER* will consider formal request from *CONTRACTOR* for products, materials or methods in place of those specified.

B. Submit six (6) copies of Request for Substitution together with Submittal Transmittal Form contained in *Section 01 33 23*. Include in request as applicable:

1. Complete data substantiating compliance of proposed substitution with *Contract Documents*.
2. For products:
 - a. Product identification, including manufacturer's name and address.
 - b. Manufacturer literature:
 - (1) Product description.
 - (2) Performance and test data.
 - (3) Reference standards.
 - c. Samples.

- d. Name and address of similar projects on which product was used, and date of installation.
 3. For construction methods:
 - a. Detailed description of proposed method.
 - b. Drawings illustrating methods.
 4. Itemized comparison of proposed substitution with product or method specified.
 5. Names of facilities at which the substitute material or product has been successfully used in a similar situation.
 6. Relation to separate contracts.
- C. In making requests for substitution, *CONTRACTOR* represents:
1. He has personally investigated proposed product or method, and determined that it is equal or superior in all respects to that specified.
 2. He will provide the same guarantee for substitution as for product or method specified.
 3. He will coordinate installation of accepted substitution into work making such changes as may be required for work to be completed in all respects.
 4. In the event the *CONTRACTOR* chooses to furnish and install a system or item of equipment of different arrangement from that shown or specified, and receives approval to do so, he shall furnish and install any additional wiring, conduit or other materials required by the system at no additional cost to the *OWNER*.
 5. He waives all claims for additional costs related to substitutions which consequently become apparent.
 6. Cost data is complete and includes all related costs under this contract.
 7. Redesign due to *CONTRACTOR'S* substitution shall be accomplished by a registered professional engineer in the State of New Jersey and will be subject to review and approval by the *ENGINEER* before implementation. Whether or not the *ENGINEER* accepts a proposed substitute, *CONTRACTOR* shall be responsible for all costs incurred for any redesign required as a result of any requested substitution. *ENGINEER* shall record

time required for review of *CONTRACTOR'S* submitted redesign and *OWNER* will deduct from *CONTRACTOR'S* payments all costs of the *OWNER's ENGINEER* in performing said review. *ENGINEER* shall bill the *OWNER* at the billing rates current at the time of review.

D. Substitutions will not be considered if:

1. They are indicated or implied on shop drawings of product data submittals without formal request submitted in accordance with Paragraph 1.02.
2. Acceptance will require substantial revision of *Contract Documents*.
3. *OWNER* or *ENGINEER* determines that the substitutions will cause operational issues.

E. If accepted, the *ENGINEER* will approve the substitution in writing.

****END OF SECTION****

REQUEST FOR SUBSTITUTION

Date of Request _____

Contract # _____

Project Title _____

SPECIFIED ITEM:

Specification Section #: _____ Paragraph # _____ Drawing # _____ Detail/Section # _____

Description: _____

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

REASON for REQUEST FOR SUBSTITUTION:

Cost savings to accrue to OWNER in amount of: \$ _____

Specified product no
longer manufactured

Specified product not
available for _____ weeks

Specified item does not
comply with Building Code

Manufacturer declares product not suitable for intended use and will not warrant its installation

Other (EXPLAIN) _____

In making requests for substitution, *CONTRACTOR* certifies that:

1. He has personally investigated proposed product or method and determined that it is equal or superior in all respects to that specified.
2. He will provide the same guarantee for substitution as for product or method specified.
3. Redesign due to substitution shall be subject to the provisions of the contract documents.
4. He will coordinate installation of accepted substitution into work making such changes as may be required for work to be completed in all respects.
5. He shall furnish and install any additional wiring, conduit or other materials required by the system at no additional cost to the *OWNER*.
6. He waives all claims for additional costs related to substitutions that consequently become apparent.
7. Cost data is complete and includes all related costs under this contract.

Submitted by:

For Use By A/E:

Signature

No Exceptions Taken

Note Markings, No Further
Submissions Required

CONTRACTOR

Note Markings, Further
Submission Required

Rejected

By: _____ Date: _____

MORRIS COUNTY MUA
Bid No. 2025-SW06

A-1340-0024-000/S3081
October 2025

Substitutions
01 25 13-4

SECTION 01 31 13
(01040)
PROJECT COORDINATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Administrative and supervisory requirements necessary for coordination of the Project.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 31 19: Project Meetings*
3. *Section 01 32 16: Construction Schedules*
4. *Section 01 33 23: Shop Drawings, Product Data and Samples*

C. Payment:

1. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
2. Include all costs for *PROJECT COORDINATION* in the prices bid for the various related items of work as designated in the Proposal.

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

- B. Submit Coordination drawings.

1.03 GENERAL COMMUNICATION

- A. The *ENGINEER* shall act as the Owner's Representative for this project.
- B. In case of an EMERGENCY, dial 9-1-1

1.04 CORRESPONDENCE

- A. Address all correspondence to *ENGINEER*.
- B. All correspondence to and from Contractor will be routed through the Owner's Representative.
- C. Format: Number correspondence sequentially beginning with Serial Number #1. Include project title and Contract number.

1.05 REQUEST FOR INFORMATION (RFI)

- A. When field conditions or Contract Document contents require clarification by the *ENGINEER*, a written RFI is to be submitted.
- B. Each RFI shall identify the nature and location of each clarification or verification; provide as a minimum the following information:
 - 1. Project name and number;
 - 2. Date;
 - 3. Date response required by;
 - 4. RFI number;
 - 5. Subject;
 - 6. Initiator of the question;
 - 7. Indication of costs, if known or anticipated;
 - 8. Indication of schedule impact;
 - 9. Location on site;
 - 10. Contract drawing reference;
 - 11. Contract specification section and paragraph reference;
 - 12. Descriptive text;
 - 13. Recommended solution(s); and
 - 14. Space for reply on same page as questions.
- C. Route RFI's in same manner as correspondence
- D. The Contractor shall be responsible for development and weekly maintenance of an RFI log.

1.06 COORDINATION

- A. Contractor shall coordinate its construction activities with those of its subcontractors and other entities involved to assure efficient and orderly installation of each part of the Work. The Contractor shall coordinate requirements included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
 - 1. Where installation of one part of the work is dependent on installation of other components, either before or after its own installation, Contractor shall schedule construction activities in the sequence required to obtain the best results.
 - 2. Where sleeves, cutouts, chases, and similar provisions are required for the Work of a particular trade, the Contractor shall coordinate the furnishing and placing of sleeves and other such required components .
 - 3. Where availability of space is limited, Contractor shall coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
 - 4. Contractor shall make adequate provisions to accommodate items scheduled for later installation.
- B. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include items such as required notices, reports, and attendance at meetings.
- C. Construction Schedules:
 - 1. Provide schedule in accordance with *Section 01 32 16*.
 - 2. Monitor schedules as work progresses.
 - a. Identify potential variances between scheduled and probable completion dates for each phase.
 - b. Recommend to Contractors adjustment in schedule to meet required completion dates.
 - c. Adjust schedules of contractors or subcontractors as required.
 - d. Document changes in schedule and submit to other involved contractors.

3. Monitor compliance with schedule.
 - a. Verify that labor and equipment are adequate for the work and the schedule.
 - b. Verify that product procurement schedules are adequate and transmitted to the *OWNER*.
 - c. Verify that product deliveries are adequate to maintain schedule.
 - d. Report noncompliance to *OWNER*. Present program to reestablish compliance with schedules.

B. Process Shop Drawings, Product Data and Samples:

1. Comply with requirements of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
2. Prior to submittal to *ENGINEER* review for compliance with contract documents.
 - a. Field dimensions and clearance dimensions.
 - b. Relation to available space.
 - c. Relation to other contracts and to other trades.
 - d. Effect of any changes on the work of any other contracts or other trades.

C. Provide coordination drawings as required to resolve conflicts and to assure coordination of the work of, or affected by, mechanical and electrical trades, or by special equipment requirements.

1. Layout Drawings:
 - a. Layout drawings shall be provided for all mechanical rooms, pipe galleries, process rooms, reflected ceilings, kitchens, chemical feed rooms and other spaces where conflicts may occur.
 - b. Contractor shall prepare composite layout drawings of all equipment, process piping, duct work, fire sprinkler piping, and plumbing piping at a scale of not less than 1/4" per foot. The building may be divided into area segments for development of the layout drawings. The building systems will be constructed in the

sequence of area layout drawing submissions. An overall drawing showing all the various layout area segments and showing the dates when each segment will be completed by the Contractor or his Subcontractor shall be prepared and submitted to the *ENGINEER* before any work is started that is the subject of the layout drawings.

- c. These drawings shall show equipment, valves, fittings, couplings, registers, grilles, diffusers and similar features, as well as locations of all valve dampers, operators, instrumentation, electrical connections and other items for service, operation and maintenance. The drawings shall also show structural beams, girders, columns, ceiling heights, walls, floor-to-floor Architectural and Structural features as shown on the Contract Drawings. Particular attention shall be given to the locations, size clearance dimensions of equipment items, shafts and similar features. Elevations and Sections shall be developed as needed to define the space needed for the various systems to fit around, near and between each other; to determine the construction installation sequence for each system and to show any conflicts.
- d. Any conflicts identified shall be immediately brought to the attention of the *ENGINEER*.
- e. CAD Requirements:
 - (1) Contractor shall prepare coordinated drawings using a CAD system that is compatible with or can be translated to AutoCAD, 2015 or later, which is the *ENGINEER*'s standard. Background drawings (CAD) will be made available by, the *ENGINEER* subject to the Contractor executing whatever Release/Waiver the *ENGINEER* may require. The Contractor will be responsible for including all disciplines on a final set of coordinated drawings (CAD) representing As-Built conditions for turnover to the *ENGINEER*.
 - (2) The Contractor shall comply with the *ENGINEER*'s Standards and all layering requirements contained therein. Contractor shall obtain copies of and comply with the CADD Standards.

f. Coordination Meetings:

- (1) Contractor shall schedule coordination meetings at the jobsite attended by a representative from each of the subcontractors involved in the coordination process. At these meetings, the subcontractors shall indicate where conflicts exist and resolve the problems through mutual agreement. Should an impasse occur, the *ENGINEER* shall decide the resolution. When all conflicts are resolved, the subcontractors shall indicate their agreement by signing the coordination drawings. Each subcontractor shall be issued copies of the finished drawings from which they can make final refinements on their shop drawings before submission to the *ENGINEER* for approval.
- (2) By signing off the composite drawings, each of the subcontractors shall be indicating their awareness of and agreement with the indicated routings and layouts and their interrelationship with the adjoining or contiguous work of all other subcontractors.
- (3) Thereafter, no unauthorized deviations shall be permitted, and if made without knowledge or agreement of the *ENGINEER*, this unauthorized work shall be subject to removal and correction at no additional cost to the Owner.

2. Composite Drawings:

- a. In preparing the composite drawings, minor changes in duct, pipe or conduit routings that do not affect the intended function may be made as required to avoid space conflicts, when mutually agreed, but items may not be resized nor exposed items relocated without the *ENGINEER's* written acceptance. No changes shall be made in wall or chase locations, ceiling heights, door swings or locations, window or other openings, or other features affecting the function or esthetic effect of the building. If conflicts or interferences cannot be satisfactorily resolved the *ENGINEER* shall be notified and his decision obtained.
- b. After the final composite drawings have been agreed upon and signed by the Contractor and all subcontractors, the Contractor shall provide and distribute four (4) prints to each subcontractor, the *ENGINEER* and to the *OWNER* for reference and record purposes. All subcontractors desiring additional prints of such

drawings, beyond the basic distribution indicated above, shall arrange for and pay the cost of same.

- c. The record copies of final composite drawings shall be retained by, the *ENGINEER* and each subcontractor as working reference. All shop drawings, prior to their submittal to the *ENGINEER*, shall be compared with the composite drawings and developed accordingly by the subcontractor responsible. Any revision to the composite drawings that becomes necessary during the progress of the work shall be noted by all subcontractors and shall be neatly and accurately recorded on the record copies. Each subcontractor shall be responsible for up-to-date maintenance of his record copies of the composite drawings and keep one (1) copy available at the site. The composite drawings and any subsequent changes thereto shall be utilized by, the Contractor and each subcontractor, in the development of his "as-built" drawings.
- d. The drawings need not be submitted as a whole but shall be sequenced as required by the Contractor in ample time to avoid construction delay. The coordination drawings may lack complete data in certain instances pending receipt of shop drawings, but sufficient space shall be allotted for the items affected. When final information is received, such data shall be promptly inserted on the composite.
- e. No additional payment will be made for relocating any duct, pipe, conduit, or other material that has been installed without proper coordination between all subcontractors or trades involved. Any improperly coordinated work or work installed that is not in accordance with the approved composite coordination drawings shall be corrected at no additional cost to the *OWNER*.
- f. All changes in the scope of work due to revisions formally issued and approved shall be shown on the composite drawings.
- g. All work on the coordination composite drawings shall be performed by competent draftsmen and shall be clear and fully legible. The *ENGINEER* shall be the sole judge of the acceptability of the drawings.

D. Safety:

- 1. Enforce compliance with all current OSHA, State and local regulations.

E. Inspection and testing:

1. Comply with requirements of *Section 01 45 29, Testing Laboratory Services*.
2. Inspect Work to assure performance in accord with requirements of Contract Documents.
3. Administer special testing and inspections of suspect Work. Submit results and summary to *OWNER*.
4. Reject Work that does not comply with requirements of Contract Documents.
5. Coordinate Testing Laboratory Services:
 - a. The Contractor shall at all times make his work safely accessible for inspection and testing as specified in the Contract Documents.
6. Report noncompliance with Contract Documents to the *ENGINEER* and *OWNER*. Submit data and summarize.

F. Monitor the use of temporary utilities:

1. Verify that adequate services are provided and maintained in a safe manner.
2. Provide alternate service with backup capabilities when critical work is involved.

G. Arrange for delivery of products furnished by *OWNER* and others:

1. Inspect for condition at delivery.
2. Submit in advance, complete schedule requirements for items furnished by others. Update on monthly basis showing material received to date and requirements for balance.

PART 2 - PRODUCTS - Not Used

PART 3 – EXECUTION – Not Used

****END OF SECTION****

SECTION 01 31 19
(01200)
PROJECT MEETINGS

1.01 DESCRIPTION

- A. *CONTRACTOR* shall attend pre-construction meeting, periodic progress meetings, and special meetings called throughout the progress of the work.
- B. Representatives of *CONTRACTORS*, subcontractors and suppliers attending the meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. *ENGINEER* may attend meetings to ascertain that work is expedited consistent with *Contract Documents* and the construction schedules.

1.02 PRECONSTRUCTION MEETING

- A. Will be scheduled by the *ENGINEER* within fifteen (15) days after date of Notice to Proceed.
- B. Location: A central site, convenient for all parties.
- C. Attendance:
 - 1. Owner's Representative
 - 2. Representative of local Police Department
 - 3. *ENGINEER* and his professional consultants
 - 4. Resident Project Representative
 - 5. Contractor's Superintendent
 - 6. Major Subcontractors
 - 7. Major Suppliers
 - 8. Others as appropriate.

D. Suggested agenda:

1. Distribution and discussion of:
 - a. List of major subcontractors and suppliers.
 - b. Projected construction schedules.
2. Critical work sequencing.
3. Major equipment deliveries and priorities.
4. Project coordination: Designation of responsible personnel.
5. Procedures and processing of:
 - a. Field decisions
 - b. Proposal requests
 - c. Submittals
 - d. Change orders
 - e. Applications for payment, including vouchers and current cost estimates.
6. Adequacy of distribution of *Contract Documents*.
7. Procedures for maintaining Record Documents.
8. Use of premises:
 - a. Office, work and storage areas
 - b. *OWNER'S* requirements.
9. Construction facilities, controls and construction aids.
10. Maintenance and Protection of Traffic.
11. Temporary utilities.
12. Safety and first-aid procedures.

13. Security procedures.
14. Housekeeping procedures.

1.03 PROGRESS MEETINGS

- A. Will be scheduled on a regular periodic basis, as required, by the *ENGINEER*.
- B. Additional meetings will be held as required by progress of the work.
- C. Location of the meetings: The project field office of the *CONTRACTOR*.
- D. Attendance:
 1. *ENGINEER*, and his professional consultants as needed.
 2. Representative of local Police Department
 3. Contractor's Superintendent.
 4. Subcontractors as appropriate to the agenda.
 5. Suppliers as appropriate to the agenda.
 6. Others.
- E. Suggested agenda:
 1. Review, approval of minutes of previous meetings.
 2. Review of work progress since previous meeting.
 3. Field observations, problems, conflicts, and recommendations.
 4. Problems that impede Construction Schedule.
 5. Review of off-site fabrication, delivery schedules.
 6. Corrective measures and procedures to regain projected schedule.
 7. Revisions to Construction Schedule.
 8. Plan progress, schedule, during succeeding work period.

9. Coordination of schedules.
10. Review submittal schedules, expedite as required.
11. Maintenance of quality standards.
12. Review proposed changes for:
 - a. Effect on Construction Schedule and on completion date.
 - b. Effect on other contracts of the Project.
13. Maintenance and Protection of Traffic.
14. Other business.

****END OF SECTION****

SECTION 01 32 16
(01310)
CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Promptly after award of the contract, the *CONTRACTOR* shall prepare and submit to the *ENGINEER* estimated construction progress schedules for the work, with subschedules of related activities, which are essential to its progress.
2. Submit revised progress schedules monthly.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 11 00: Statement of Work*
3. *Section 01 33 23: Shop Drawings, Product Data and Samples*

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

1.03 FORM OF SCHEDULES

- A. Prepare schedules in the form of a horizontal bar chart.
1. Provide separate horizontal bar for each trade or operation.
 2. Horizontal time scale: Identify the first workday of each week.
 3. Scale and spacing: To allow space for notation and future revisions.

- 4. Minimum sheet size: 18-inch by 24-inch.
- B. Format of listings: The chronological order of the start of each item of work.
- C. Identification of listings: By major specification section numbers.

1.04 CONTENT OF SCHEDULES

- A. Construction progress schedule:
 - 1. Show the complete sequence of construction by activity.
 - 2. Show the dates for the beginning, and completion of each element of construction.
 - 3. Show projected percentage of completion for each item, as of the first day of each month.
- B. Provide subschedules to define critical portions of prime schedules.

1.05 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
 - 1. Major changes in scope.
 - 2. Activities modified since previous submission.
 - 3. Revised projections of progress and completion.
 - 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
 - 1. Problem areas, anticipated delays, and the impact on the schedule.
 - 2. Corrective action recommended, and its effect.
 - 3. The effect of changes on schedules of other prime contractors.

1.06 SUBMISSIONS

- A. Submit initial schedules within five (5) days after Notice to Proceed.
 - 1. *ENGINEER* will review schedules and return review copy within ten (10) days after receipt.
 - 2. If required, resubmit within seven (7) days after return of review copy.
- B. Submit revised progress schedules with each application for payment.
- C. Submit one (1) reproducible transparency and one (1) opaque reproduction.

1.07 DISTRIBUTION

- A. Distribute copies of the reviewed schedules to:
 - 1. Job site file.
 - 2. Subcontractors.
 - 3. Other concerned parties.
- B. Instruct recipients to report promptly to the *CONTRACTOR*, in writing, any problems anticipated by the projection shown in the schedules.

PART 4 - PAYMENT

4.01 CONSTRUCTION SCHEDULES

- A. Unless otherwise noted in the *PROPOSAL* Section, no separate payment shall be made for this item.
- B. Include all costs for the *CONSTRUCTION SCHEDULES* in the prices bid for the various related items of work as designated in the *PROPOSAL*.

****END OF SECTION****

SECTION 01 32 33
(01380)
CONSTRUCTION PHOTOGRAPHS

PART 1 - GENERAL

1.01 SUMMARY

A. Work included:

1. Provide Preconstruction Photographs prior to beginning of construction activities including site and access clearing.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 32 16: Construction Schedules*
3. *Section 01 33 23: Shop Drawings, Product Data and Samples*

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Samples:

1. Submit three (3) representative samples of photographs to be provided, two of which will be retained by the *ENGINEER*.

C. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include same label information as corresponding set of photographs.

D. Obtain transfer copyright usage from photographer to OWNER for unlimited reproduction of photographic documentation.

E. Submit name and address of photographer.

1.03 QUALITY ASSURANCE

- A. Secure the services of a professional photographer who is skilled and experienced in construction photography and whose work samples are acceptable to the *ENGINEER*.
- B. Do not replace the photographer without the *ENGINEER'S* written approval.
- C. Acceptable Photographers:
 - 1. Stokes Creative Group
Vincentown, NJ 08088
609-859-8400
<http://stokescg.com>
 - 2. Protec Documentation Services
Rancocas, NJ 08073
609-267-2666
<http://www.protecservices.com>
 - 3. Rainbow Photographic Documentation Co.
Coopersburg, PA 18036
215-538-0707
800-538-0909
www.rainbowphotographic.photos
 - 4. Or equivalent

PART 2 - PRODUCTS

2.01 PHOTOGRAPHS

- A. All photographs shall be color digital photographs stored on a flash drive, CD-ROM, DVD or approved other media. Provide images in JPG format, produced by a digital camera with minimum sensor size of 8 megapixels, and at an image resolution of not less than 1600 by 1200 pixels and 400 dpi.

B. Identification:

1. Images shall be provided in separate digital folders named with yyyy mm dd prefix and title of work area.
2. Provide the following information on the storage media folder on individual photograph as appropriate.
 - a. Name of Project.
 - b. Orientation of view (Approximate station and direction or provide photo location map).
 - c. Name and address of photographer.
 - d. Name of *ENGINEER*.
 - e. Name of Contractor.
 - f. Date and time of exposure.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Prior to the work of this section verify that the work of other trades is complete to the point where this work may properly commence.

3.02 PHOTOGRAPHY

A. Photography required:

1. Consult with *ENGINEER* prior to photography for instructions concerning views required.
2. Provide Preconstruction Photos of environmentally critical areas including construction areas within tidal regions. [N.J.A.C. 7:22-10.11(q)]
3. Provide Preconstruction Photos of site.

B. Views:

1. Continuous coverage of existing conditions.
2. Photographs shall particularly address driveways; mailboxes; trees, shrubs, landscaping; existing pavement conditions; existing structures to include curbs, sidewalks, inlets, manholes, utility poles, signs and environmentally critical areas.
3. Photographs shall be labeled by station so that subsequent photographs can be taken from the same control points. [N.J.A.C. 7:22-10.11(q)]

C. Technique:

1. Factual presentation.
2. Correct exposure and focus:
 - a. High resolution and sharpness.
 - b. Maximum depth of field.
 - c. Minimum distortion.

3.03 DELIVERY

- A. Deliver photographs to *ENGINEER* within fourteen (14) calendar days after they are taken.
- B. Digital images shall be provided on a flash drive, CD-ROM, or external hard drive labeled to show date, project, contract number and location.

PART 4 - PAYMENT

4.01 CONSTRUCTION PHOTOGRAPHS

- A. Include all costs for construction photographs in the overall contract price.
- B. Parties requiring additional prints will pay photographer directly.

****END OF SECTION****

SECTION 01 33 23
(01340)
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.01 SUMMARY

A. Work included:

1. Prepare and submit to the *ENGINEER* a Schedule of Submittals showing all submittals required by the Specification sections or the Drawings.
2. Prepare and submit to *ENGINEER* shop drawings, product data and samples required by the Specification sections.
3. Prepare and submit to the *ENGINEER* engineering drawings and calculations for items indicated on the Plans or as otherwise required by the contract specifications.

B. Related Requirements:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 25 13: Substitutions*

C. Payment:

1. Unless otherwise noted in the *PROPOSAL* Section, no separate payment shall be made for this item.
2. Include all costs for the *SHOP DRAWINGS, PRODUCT DATA AND SAMPLES* in the prices bid for the various related items of work as designated in the *PROPOSAL*.
3. Shop drawings, product data and samples are an integral part of the construction process and are required as part of the construction contract. *CONTRACTOR'S* failure to provide shop drawings, product data and samples in a complete and timely manner may affect his payment and/or completion schedule. No extension of time will be granted due to untimely or incomplete submittals.

1.02 DEFINITIONS

- A. Shop drawings are original drawings, diagrams, schedules and other data specifically prepared for the work by the *CONTRACTOR* or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the work.
- B. Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information prepared by the manufacturer and furnished by the *CONTRACTOR* to illustrate materials or equipment for some portion of the work. All such data shall be the manufacturer's current materials.
- C. Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the work will be judged.

1.03 SCHEDULING

- A. Schedule submission for shop drawings, product data and samples at least twenty-one (21) days before dates reviewed submittals will be needed.
- B. Shop drawings for equipment foundations will not be reviewed by the *ENGINEER* until shop drawings for equipment have been submitted and approved.

1.04 PRESENTATION

- A. Present drawings and product data in a clear and thorough manner.
- B. Drawings and product data shall be clear, concise, readable and legible.
- C. Second, third, fourth, etc., generation photocopies are frequently illegible and may not be accepted as a required submission.
- D. Drawings and product data sent via facsimile (fax) machine are frequently illegible and may not be accepted as a required submission.
- E. *ENGINEER* will notify *CONTRACTOR* in the event submittals are illegible. No time extensions shall be allowed as a result of resubmittals due to illegibility.

1.05 SUBMITTALS

A. Schedule of Submittals:

1. Prepare and submit for approval a schedule showing each and every submittal required by the Contract Documents and their initial submittal dates required for coordination of the work.
2. Organize the schedule by the applicable specification Section number.
3. Submit the schedule within fourteen (14 days) after Notice to Proceed.
4. The schedule shall reflect the overall job schedule sequence so as to cause no delay in the Work of other Contractors, if any.
5. Revise and resubmit the schedule for approval when requested.
6. Prepare and transmit each submittal sufficiently in advance of scheduled performance to allow for adequate review and processing time, including time for re-submittal if necessary.
7. If processing time for a particular submittal will be critical to progress of the work, so advise on the submittal.
8. No extension of time will be authorized because of the contractor's failure to transmit submittals sufficiently in advance of the work.

B. Shop drawings:

1. Original drawings, prepared by *CONTRACTOR*, subcontractor, supplier or distributor, that illustrate some portion of the work; showing fabrication, layout, setting or erection details.
2. Present drawings in a clear and thorough manner: Details shall be identified by reference to sheet and detail, schedule or room numbers shown on *Contract Drawings*.
3. Minimum sheet size: 11 inches by 17 inches.

C. Product data:

1. Preparation:
 - a. Clearly mark each copy to identify pertinent products or models.

- b. Show performance characteristics and capacities.
 - c. Show dimensions and clearances required.
 - d. Show wiring or piping diagrams and controls.
2. Manufacturer's standard schematic drawings and diagrams:
- a. Modify drawings and diagrams to delete information not applicable to the work.
 - b. Supplement standard information to provide information specifically applicable to the work.
3. Manufacturer's catalog sheets, brochures, diagrams, illustrations and other standard descriptive data:
- a. Clearly mark each copy to identify pertinent materials, products or models.
 - b. Show dimensions and clearances required.
 - c. Show compliance with referenced standards.

D. Color selections:

- 1. All colors for all finished surfaces and materials will be selected or approved by the *OWNER*. The exterior color selections will be made at one time and the interior color selections will be made at one time to provide a complete and coordinated color schedule that, upon acceptance of the *OWNER*,
- 2. The Contractor shall submit all exterior color selections/samples within thirty (30) days and all interior color selections/samples within forty-five (45) days after "Notice to Proceed."
- 3. It is imperative that all color information be submitted to, the *ENGINEER* by the *CONTRACTOR* before color selections can be made. If any color selection information is not available when colors are needed to meet the project schedule, the *ENGINEER* will select colors from one of the named manufacturers in the specifications, and the *CONTRACTOR* will be required to exactly match that color. A claim for delay will not be accepted if the color schedule is late due to the failure of the

CONTRACTOR to provide the *ENGINEER* with all required color information, nor will an adjustment in price be entertained if the selected color is not available from the manufacturer the *CONTRACTOR* intended to use, but neglected to submit.

E. Samples:

1. Office samples will be of sufficient size and quantity to clearly illustrate:
 - a. Functional characteristics of product or material with integrally related parts and attachment devices.
 - b. Full range of color, texture, and pattern.
 - c. After review samples will be retained by *ENGINEER*. Upon completion of the work, *CONTRACTOR* may submit written request for return of samples.
2. Field samples and mock-ups:
 - a. Erect at project site or at location acceptable to *ENGINEER*.
 - b. Size or Area: As specified in the respective specification section.
 - c. Fabricate each sample and mock-up complete and finished.
 - d. Remove mock-ups at conclusion of work or when acceptable to *ENGINEER*.

1.06 CONTRACTOR'S RESPONSIBILITIES

- A. Review shop drawings, product data, and samples prior to submission.
- B. Determine and verify:
 1. Field measurements.
 2. Field construction criteria.
 3. Catalog numbers and similar data.
 4. Conformance with specifications.

- C. Coordinate each submittal with requirements of the work and of the *Contract Documents*.
- D. **All copies of all** shop drawings, product data and samples shall be accompanied by a transmittal containing Contractor Certification that he has determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and that he has checked and coordinated each item with other related submittals and all other contract requirements. **A copy of the required Submittal Form is included at the end of this specification section.**
- E. *CONTRACTOR'S* responsibility for errors and omissions in submittals is not relieved by *ENGINEER'S* review of submittals.
- F. *CONTRACTOR'S* responsibility for deviations in submittals from requirements of *Contract Documents* is not relieved by *ENGINEER'S* review of submittals, unless *ENGINEER* gives written acceptance of specific deviations.
- G. Notify *ENGINEER*, in writing at time of submission, of deviations in submittals from requirements of *Contract Documents*.
- H. Begin no fabrication or work that requires submittals until return of submittals with *ENGINEER'S* stamp and initials or signature indicating review and that no further submissions are required. Any manufacturing done, shipment made, workmanship performed, or work installed before the required shop drawings, product data, and samples are returned indicating that no further submissions are required will be at the sole expense and responsibility of the *CONTRACTOR* and subject to rejection.

1.07 ENGINEERS RESPONSIBILITIES

- A. Engineering duties:
 - 1. Review submittals with reasonable promptness.
 - 2. Review for:
 - a. Design concept of project.
 - b. Information given in *Contract Documents*.
 - 3. Review of separate item does not constitute review of an assembly in which item functions.

4. Affix stamp and initials or signature certifying to review of submittal.
 5. Return submittals to *CONTRACTOR* for distribution or resubmission.
- B. The *ENGINEER* shall review all shop drawings, product data, and samples. The submittal shall be marked as follows:
1. No exceptions taken; no further submission required.
 2. Note markings; no further submission required.
 3. Note markings; further submission required.
 4. Rejected.
- C. The *ENGINEER* will review the original submittal and one resubmittal at no additional cost to the *CONTRACTOR*.
- D. In the event there are more than two (2) submittals for the given product, the *ENGINEER* shall record the time required for the subsequent reviews. The *ENGINEER* shall deduct the cost of said review(s) from the current estimate, defining amounts due the *CONTRACTOR*. The costs shall be based upon the same rates paid to the *ENGINEER* by the *OWNER* for similar work.
- E. In the event that any submittal is rejected and a new submittal is prepared that must be resubmitted for review by the *CONTRACTOR*, the resubmittal shall be counted as the third submittal for the purposes of determining review costs(s).

1.08 SUBMISSION REQUIREMENTS

- A. Make submittals so as to cause no delay in the work or in the work of any other *CONTRACTOR*.
- B. Number of submittals required:
1. Shop drawings: Submit high resolution electronic copies.
 2. Product data: Submit high resolution electronic copies.
 3. Samples: Submit number stated in each specification section.
- C. Accompany submittals with Submittal Transmittal Form contained herein, in duplicate containing:

1. Date of submission and dates of any previous submissions.
2. Project title and contract number.
3. *CONTRACTOR'S* name.
4. The number of each shop drawing, product data and sample submitted.
5. Notification of deviations from *Contract Documents*.
6. Other pertinent data.

D. Submittals shall include:

1. Date and revision date.
2. Project title and number.
3. The names of:
 - a. *ENGINEER*
 - b. *CONTRACTOR*
 - c. Subcontractor
 - d. Supplier
 - e. Manufacturer
 - f. Separate details when pertinent.
4. Identification of product or materials.
5. Field dimensions, clearly identified as such.
6. Specification Section number.
7. Relation to adjacent or critical features of the work or materials.
8. Applicable standards, such as ASTM or Federal Specification numbers.
9. Identification of deviations from *Contract Documents*.

10. Identification of revisions on resubmittals.
11. An 8-inch by 3-inch blank space for *CONTRACTOR* and *ENGINEER* stamps.
12. *CONTRACTOR'S* stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of *Contract Documents*.

1.09 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in the submittals required by the *ENGINEER* and resubmit until no further submissions are required.
- B. Shop drawings and product data:
 1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
 2. Clearly indicate any and all changes made to the submittal.
- C. Samples: Submit new samples as required for initial submittals.

1.10 DISTRIBUTION

- A. Distribute reproductions of shop drawings and copies of Product data that carry the *ENGINEER* stamp to:
 1. Subcontractors.
 2. Supplier.
 3. Contractor's file.
- B. Distribute samples that carry the *ENGINEER* stamp as directed by *ENGINEER*.

****END OF SECTION****

SUBMITTAL TRANSMITTAL FORM

CONTRACTOR NAME

Contract #

Project Title

Date of this Submission

Date of Prior Submission

Submittal Number

Specification Section #: _____ Paragraph #: _____ Drawing #: _____ Detail/Section #: _____

TYPE OF SUBMITTAL:

___ Shop Drawings ___ Product Data ___ Sample ___ Test Report ___ Color Charts ___ O&M Manuals
___ Engineering Drawings ___ Engineering Calculations ___ Other

IS THIS A:

___ Complete Submission ___ Partial Submission ___ Resubmission ___ Substitution

(Substitutions must be identified and accompanied by a Request for Substitution in accordance with Section 01 25 13)

LIST EACH ITEM SUBMITTED

List and describe any deviations from the Contract Documents (attach additional sheets as required)

CONTRACTOR CERTIFICATION

By this submittal, the Contractor named above hereby represents that he has determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and has checked and coordinated each item with other applicable shop drawings and all contract requirements, except for the specific deviations noted.

Signature of Contractor's Authorized Representative

Date

MORRIS COUNTY MUA
Bid No. 2025-SW06

A-1340-0024-000/S3081
October 2025

Shop Drawings, Product Data and
Samples
01 33 23-10

SECTION 01 45 29
(01410)
TESTING LABORATORY SERVICES

1.01 GENERAL

- A. *CONTRACTOR* shall employ and pay for the services of an Independent Testing Laboratory to perform specified testing. Include such costs in overall contract price.
 - 1. Employment of the laboratory shall in no way relieve *CONTRACTOR'S* obligations to perform the work of the contract.
- B. Related requirements specified elsewhere:
 - 1. Inspections and testing required by law, ordinances, rules, regulations, orders or approval of public authorities: General Conditions.
 - 2. Certification of products. The respective sections of these *Specifications*.
 - 3. Test, adjust and balance equipment. The respective sections of these *Specifications*.
 - 4. Laboratory testing, sampling required, and standards for testing: See each Specification Section listed below:
 - a. *Section 03 30 00: Concrete*
 - b. *Section 31 23 00: Excavating, Filling and Grading*

1.02 QUALIFICATION OF LABORATORY

- A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.
- B. Meet basic requirements of ASTM E-329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction."
- C. Authorized to operate in the state in which the project is located, and acceptable to *OWNER*.

- D. Testing equipment: Calibrated at reasonable intervals by devices of accuracy traceable to either:
 - 1. National Bureau of Standards.
 - 2. Accepted values of natural physical constants.
- E. If requested by *ENGINEER*, submit copy of report of inspection of facilities made by Materials Reference Laboratory of National Bureau of Standards during the most recent tour of inspection.

1.03 LABORATORY DUTIES

- A. Cooperate with *ENGINEER* and *CONTRACTOR*. Provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials.
 - 1. Comply with specified standards for testing.
 - 2. Ascertain compliance of materials with requirements of *Contract Documents*.
- C. Promptly notify *ENGINEER* and *CONTRACTOR* of observed irregularities or deficiencies of work or products.
- D. Promptly submit six (6) copies of written report of each test and/or inspection to *ENGINEER*. Each report shall include:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Testing laboratory name, address and telephone number.
 - 4. Name and signature of laboratory inspector.
 - 5. Date and time of sampling or inspection.
 - 6. Record of temperature and weather condition.
 - 7. Date of test.
 - 8. Identification of product and specification section.

9. Location of sample or test in the project.
 10. Type of inspection or test.
 11. Results of tests and compliance with *Contract Documents*.
 12. Interpretation of test results, when requested by *ENGINEER*.
- E. Perform additional tests as required by *ENGINEER* or the *OWNER*.

1.04 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
1. Release, revoke, alter or enlarge on requirements of *Contract Documents*.
 2. Approve or accept any portion of the work.
 3. Perform any duties of the *CONTRACTOR*.

1.05 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel, provide access to work.
- B. Secure and deliver to the laboratory adequate quantities of representative samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the design mix proposed to be used for concrete, and other material mixes, which require control by the testing laboratory.
- D. Furnish incidental labor and facilities:
1. To provide access to work to be tested.
 2. To obtain and handle samples at the project site or at the source of the product to be tested.
 3. To facilitate inspections and tests.
 4. For storage and curing of test samples.
- E. Notify laboratory sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.

- F. Make arrangements with laboratory and pay for additional samples and tests required for *CONTRACTOR'S* convenience.
- G. Employ and pay for the services of a separate, equally qualified independent testing laboratory to perform additional sampling and testing required when initial tests indicate work does not comply with *Contract Documents*.

****END OF SECTION****

SECTION 01 56 00
(01530)
BARRIERS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Summary:

1. Furnish, install, and maintain suitable barriers to prevent unauthorized entry to construction areas, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
2. Relocate barriers to facilitate phases of construction and remove when no longer needed, or at completion of work.
3. Furnish, install, and maintain protective measures to prevent debris from entering the work area, keep prepared surface and cured surface protected.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 11 00: Statement of Work*

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with Federal, State and local codes and regulations.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.02 BARRIERS

- A. Construction barrier shall be precast curb construction barrier, Type I, conforming to Subsection 605.09 of the Standard Specifications. Construction barrier curb

delivered to the job site shall be in new condition and maintained throughout the duration of the project. The *ENGINEER* shall be the sole judge of the acceptability of the precast concrete curb. Precast concrete curb deemed unsatisfactory by the *ENGINEER* shall be replaced at no cost to the *OWNER*.

PART 3 - EXECUTION

3.01 GENERAL

- A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for the required purposes.
- B. Maintain barriers during entire phased construction period.
- C. Relocate barriers as required by progress of construction.

3.02 BARRIERS

- A. Construction barrier shall be installed in accordance with NJDOT Standard Roadway Construction Details 2016, CD-159.

3.03 REMOVAL

- A. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by *ENGINEER*.
- B. Clean and repair damage caused by installation, fill and grade the areas of the site to required elevations and slopes, and clean the area.

PART 4 - PAYMENT

4.01 BARRIERS

- A. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
- B. Include all costs for *BARRIERS* in the prices bid for the various related items of work as designated in the Proposal.

****END OF SECTION****

SECTION 01 66 00
(01620)
STORAGE AND PROTECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.
- B. Related work:
 - 1. Additional procedures also may be prescribed in other Sections of these *Specifications*.

1.02 QUALITY ASSURANCE

- A. Include within the *CONTRACTOR'S* quality assurance program such procedures as are required to assure full protection of work and materials.

1.03 MANUFACTURERS' RECOMMENDATIONS

- A. Except as otherwise approved by the *ENGINEER*, determine and comply with manufacturer's recommendations on product handling, storage, and protection.

1.04 PACKAGING

- A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. Promptly remove damaged materials and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the *OWNER*.
 - 3. Leave all plugs and caps in place on equipment and machinery.

- B. The *ENGINEER* may reject as non-complying such material and products that do not bear identification satisfactory to the *ENGINEER* as to manufacturer, grade, quality, and other pertinent information.

1.05 PROTECTION

- A. Protect finished surfaces, including jambs and soffits of openings used as passageways, through which equipment and materials are handled.
- B. Provide protection for finished floor surfaces in traffic areas prior to allowing equipment or materials to be removed over such surfaces.
- C. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the *OWNER*.
- D. During construction, properly cap all pipes and equipment nozzles so as to prevent the entrance of sand, dirt, etc.

1.06 REPAIRS AND REPLACEMENTS

- A. In event of damage, promptly make replacements and repairs to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- B. Additional time required to secure replacement and to make repairs will not be considered by the *ENGINEER* to justify an extension in the Contract Time of Completion.

****END OF SECTION****

SECTION 01 73 29
(01045)
CUTTING AND PATCHING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. *CONTRACTOR* shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the work or to:
1. Make its several parts fit together properly.
 2. Uncover portions of the work to provide for installation of ill-timed work.
 3. Remove and replace defective work.
 4. Remove and replace work not conforming to requirements of *Contract Documents*.
 5. Remove samples of installed work as specified for testing.
- B. Related work:
1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
 2. *Section 01 11 00: Statement of Work*
 3. *Section 01 25 13: Substitutions*
 4. *Section 02 41 19: Selective Demolition*

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Submit a written request to *ENGINEER* well in advance of executing any cutting or alteration which affects:
1. The work of the *OWNER* or any separate *CONTRACTOR*.

2. The structural value or integrity of any element of the project.
 3. The integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
 4. The efficiency, operational life, maintenance or safety of operational elements.
 5. The visual qualities of sight-exposed elements.
- C. The request shall include:
1. Identification of the project.
 2. Description of the affected work.
 3. The necessity for cutting, alteration or excavation.
 4. The effect on the work of the *OWNER* or any separate *CONTRACTOR*, or on the structural or weatherproof integrity of the project.
 5. Description of the proposed work:
 - a. The scope of cutting, patching, alteration, or excavation.
 - b. The trades who will execute the work.
 - c. Products proposed to be used.
 - d. The extent of refinishing to be done.
 6. Alternatives to cutting and patching.
 7. Cost proposal, when applicable.
 8. Written permission of any separate *CONTRACTOR* whose work will be affected.
- D. Should conditions of the work or the schedule indicate a change of products from the original installation, *CONTRACTOR* shall submit a request for substitution as specified in *Section 01 25 13*.
- E. Submit a written notice to *ENGINEER* designating the date and the time the work will be uncovered.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by, the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 MATERIALS

- A. As selected by *CONTRACTOR* and approved by the *ENGINEER*.
- B. Materials selected shall, as a minimum, be equivalent to existing adjacent materials.

2.03 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of the project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect the conditions affecting the installation of products, or performance of the work.
- C. Report unsatisfactory or questionable conditions to the *ENGINEER* in writing; do not proceed with the work until the *ENGINEER* has provided further instructions.

3.02 PREPARATION

- A. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the work.
- B. Provide devices and methods to protect other portions of the project from damage.
- C. Provide protection from the elements for that portion of the project, which may be exposed by cutting and patching work, and maintain excavations free from water.

3.03 PERFORMANCE

- A. Execute cutting and demolition by methods, which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods, which will prevent settlement or damage to other work.
- C. Employ the original installer or fabricator to perform cutting and patching for:
 - 1. Weather-exposed or moisture-resistant elements.
 - 2. Sight-exposed finished surfaces.
- D. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- E. Restore work, which has been cut or removed; install new products to provide completed work in accord with requirements of *Contract Documents*.
- F. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finish:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish the entire unit.

PART 4 - PAYMENT

4.01 CUTTING AND PATCHING

- A. Unless otherwise noted in the *PROPOSAL* Section, no separate payment shall be made for this item.
- B. Include all costs for the *CUTTING AND PATCHING* in the prices bid for the various related items of work as designated in the *PROPOSAL*.

****END OF SECTION****

SECTION 01 74 00
(01710)
CLEANING AND RESTORATIONS

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Maintain premises and public properties free from accumulations of waste, debris and rubbish caused by work operations.
2. At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials; clean all sight exposed surfaces; leave project clean and ready for occupancy.
3. At completion of work, restore or replace, any public or private property disturbed or damaged by *CONTRACTOR'S* work operations to a condition at least equal to that existing prior to beginning work, or as otherwise specified. Materials, equipment and methods, shall be approved by the *ENGINEER*.
4. In landscaped areas, environmental features shall be replaced or restored to pre-disturbance conditions or better. This includes sodding, replacement of trees, shrubs, fences, drives and other landscape features in-kind. [N.J.A.C. 7:22-10.11(e) 5]
5. Final restoration shall be undertaken as soon as an area is no longer needed for construction, stockpiling or access. Excavated material unsuitable for backfill as set forth in N.J.A.C. 7:14-2.13 and considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 shall be removed from the construction site and disposed of at a sanitary landfill approved and licensed by N.J.D.E.P. Excess excavated material which is not considered to solid waste pursuant to N.J.A.C. 7:26-1.6 shall be graded or removed in accordance with N.J.A.C. 7:22-10.11(l)3 and *Section 31 23 00, Excavating, Filling and Grading*. When access roads are no longer needed, road fill shall be removed and the access area shall be restored to pre-disturbance conditions. Care shall be taken to avoid damage to adjacent vegetation and to prevent the formation of depressions that would serve as mosquito pools. [N.J.A.C. 7:22-10.11(e) 1]

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. General requirements for cleaning and restorations: See the General Conditions.
3. In addition to standards described in the Section, comply with requirements for cleaning and restorations as described in pertinent other Sections of these *Specifications*.

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019, and all amendments thereto (Standard Specifications).

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by, the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.
- D. For restorations, use only materials approved by *ENGINEER*.

PART 3 - EXECUTION

3.01 REQUIREMENTS OF REGULATORY AGENCIES

- A. Dispose of all non-recyclable solid waste materials in permanently established licensed OSWA (Office of Solid Waste Administration, New Jersey Department of Environmental Protection) landfills, or in temporary landfill sites approved by OSWA.
- B. Dispose of all recyclable materials such as concrete, asphalt, wood waste, yard waste and similar materials at a recycling facility properly licensed to accept such waste materials.
- C. Waste materials include, but are not limited to, concrete, blacktop, trees, stumps, lumber and timbers, unacceptable backfill material including heavy clay soils, organic materials, silts and rock.

3.02 SAFETY REQUIREMENTS

- A. Hazards control:
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes, which create a hazardous condition.
 - 3. Provide adequate ventilation during use of volatile or noxious substances.
- B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws:
 - 1. Do not burn or bury rubbish and waste materials on project site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.

3.03 CLEANING DURING CONSTRUCTION

- A. Execute periodic cleaning to keep the work, the site, and adjacent properties free from accumulations of waste materials, rubbish and windblown debris resulting from construction operations.

- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from site periodically and legally dispose at location provided by *CONTRACTOR*.

3.04 DUST CONTROL

- A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.
- C. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- D. Handle waste or surplus materials in a controlled manner with as few handlings as possible; do not drop or throw material from heights.
- E. The *CONTRACTOR* shall employ construction methods and means that will keep flying dust to the minimum. He shall provide for the laying of water on the Project, and on roads, streets and other areas immediately adjacent to the Project limits, wherever traffic, or buildings that are occupied or in use, are affected by such dust caused by his hauling or other operations. The *CONTRACTOR* shall control dust using water. The cost of carrying out the foregoing provisions shall be included in the prices bid for the various items in the Contract.
- F. The *CONTRACTOR* shall provide for prompt removal from existing roadways of all dirt and other materials that have been spilled, washed, tracked or otherwise deposited thereon by his hauling and other operations whenever the accumulation is sufficient to cause the formation of mud, interfere with drainage, damage pavements or create a traffic hazard.
- G. In order to control dust, as often as required during each working day, and particularly prior to the conclusion of each working day, areas under immediate construction (including access roads and other areas affected thereby) shall be swept and wet down with water sufficiently to lay dust. In addition, these areas shall be wet down during non-working hours (including weekends) as often as required to keep the dust under control. The use of calcium chloride or petroleum products or other chemicals for dust control is prohibited. [N.J.A.C. 7:22-10.11 (m)]

3.05 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- D. Remove all temporary buildings and structures built by *CONTRACTOR*, all temporary works; tools, machinery or other construction equipment furnished by him.
- E. Clean insides of manholes, valve boxes, inlets or other structures constructed, reconstructed or reset during *CONTRACTOR'S* operations to remove debris, excess mortar or foreign materials.
- F. Prior to final acceptance, *CONTRACTOR* shall conduct an inspection of all work areas to verify that the entire work is clean.

3.06 RESTORATIONS

- A. General:
 - 1. All existing structures, unpaved areas and paved areas disturbed or damaged during the work under this Contract shall be restored or replaced to a condition at least equal to that existing prior to beginning work, or as otherwise specified.
 - 2. The methods of conducting this work shall, as a minimum, conform to the Standard Specifications.
- B. Grass restorations: Seeding shall conform to Section 806.
- C. Pavement restorations: Conform to Section 401.
- D. Restorations of Concrete Curbs & Islands: Conform to Section 607.
- E. Restoration of Sidewalks, Driveways, Curb Ramps and Aprons: Conform to Section 606.
- F. All other restorations: Restore in accordance with applicable Articles of the Standard Specifications, or as approved by the *ENGINEER* or authorities having jurisdiction.

PART 4 - PAYMENT

4.01 CLEANING AND RESTORATIONS

- A. All costs for *CLEANING AND RESTORATIONS* shall be included in prices bid for various items scheduled in the *PROPOSAL*.

****END OF SECTION****

SECTION 01 77 19
(01760)
CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Comply with requirements stated in the *General Conditions* of the Contract and in the specifications for administrative procedures in closing out the work.
- B. Related requirements in other parts of the Project Manual:
 - 1. Fiscal provisions, legal submittals and additional administrative requirements: Conditions of the Contract.
- C. Related requirements specified in other sections:
 - 1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
 - 2. *Section 01 11 00: Statement of Work*
 - 3. *Section 01 21 00: Cash Allowances*
 - 4. *Section 01 74 00: Cleaning and Restorations*
 - 5. *Section 01 78 36: Guarantees*
 - 6. *Section 01 78 39: Project Record Documents*
 - 7. Closeout submittals required of trades: The respective sections of specifications.

1.02 COMPLETION

- A. When Contractor considers the work is complete and ready for acceptance by the *OWNER*, he shall submit to the *ENGINEER*:
 - 1. A written notice that the work or designated portion thereof is complete and ready for acceptance.

2. Certification that equipment systems have been tested, in the presence of the *OWNER'S* representative and are operational.
 3. Guarantees: to requirement of Section 01 78 36.
 4. Project Record Documents: to requirements of Section 01 78 39.
 5. Contractors Certificate (N.J.S.A. 34:11-56.33): to requirements of Section 00 72 00, paragraph 37E and Section 00 65 01, Contractors' Certificate.
 6. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, *ENGINEER* will make or cause an inspection to be made to determine the status of completion.
- C. Should *ENGINEER* determine that the work is not complete:
1. *ENGINEER* will promptly notify the Contractor in writing, giving the reasons therefore.
 2. Contractor shall remedy the deficiencies in the work, and send a second written notice of completion to the *ENGINEER*.
 3. *ENGINEER* will reinspect the work.
- D. When *ENGINEER* concurs that the work is complete, he will:
1. Prepare a Certificate of Completion, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the *ENGINEER*.
 2. Submit the Certificate to *OWNER* and Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

1.03 FINAL INSPECTION

- A. When Contractor considers the work is complete, he shall submit written certification that:
1. Contract documents have been reviewed.
 2. Work has been inspected for compliance with *Contract Documents*.
 3. Work has been completed in accordance with *Contract Documents*.

4. Work is completed and ready for final inspection.
- B. *ENGINEER* will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should *ENGINEER* consider that the work is incomplete or defective:
 1. *ENGINEER* will promptly notify the Contractor in writing, listing the incomplete or defective work.
 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to Construction Manager that the work is complete.
 3. *ENGINEER* will reinspect the work.
- D. When the *ENGINEER* finds that the work is acceptable under the *Contract Documents*, he shall request the Contractor to make closeout submittals.

1.04 REINSPECTION FEES

- A. Should *ENGINEER* perform reinspections due to failure of the work to comply with the claims of status of completion made by the Contractor:
 1. *OWNER* will compensate *ENGINEER* for such additional services.
 2. *OWNER* will deduct the amount of such compensation from the final payment to the Contractor.

1.05 CONTRACTOR'S CLOSEOUT SUBMITTALS TO *ENGINEER*

- A. Evidence of compliance with requirements of governing authorities:
 1. Comply with the requirements of N.J.A.C. 5:23-2.23 for the Certificate of Occupancy.
- B. Evidence of payment and release of liens: to requirements of General and Supplementary Conditions.
- C. Certificate of Insurance for products and completed operations.

1.06 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to *ENGINEER*.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from:
 - a. Previous change orders.
 - b. Allowances.
 - c. Unit prices.
 - d. Deductions for uncorrected work.
 - e. Penalties and bonuses.
 - f. Deductions for liquidated damages.
 - g. Deductions for reinspection payments.
 - h. Other adjustments.
 - 3. Total Contract Sum, as adjusted.
 - 4. Previous payments.
 - 5. Sum remaining due.
- C. *ENGINEER* will prepare a final change order, reflecting approved adjustments to the Contract Sum that were not previously made by change orders.

1.07 FINAL APPLICATION FOR PAYMENT

- A. No separate measurement will be made for this work. Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the *General Conditions* of the contract after he has submitted the required Closeout Submittals.

*****END OF SECTION*****

SECTION 01 78 36
(01740)
GUARANTEES

1.01 GENERAL

- A. Compile specified warranties and bonds.
- B. Co-execute submittals.
- C. Review submittals to verify compliance with *Contract Documents*.
- D. Submit to *ENGINEER* for review and transmittal to *OWNER*.
- E. Related requirements in other parts of the *Contract Documents*:
 - 1. Bid or proposal bonds: See the *Instructions to Bidders*.
 - 2. Performance bond and maintenance bond: See the *General Conditions*.

1.02 SUBMITTAL REQUIREMENTS

- A. Assemble warranties and bonds executed by each of the respective manufacturers, suppliers and subcontractors.
- B. Number of original signed copies required: Two (2) each.
- C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
 - 1. Product or work item.
 - 2. Firm, with name of principal, address and telephone number.
 - 3. Scope.
 - 4. Date of beginning of warranty or bond.
 - 5. Duration of warranty or bond.
 - 6. Provide information for *OWNER'S* personnel:
 - a. Proper procedure in case of failure.

- b. Instances which might affect the validity of warranty or bond.
- 7. *CONTRACTOR*, name of responsible principal, address and telephone number.

1.03 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size: 8½" by 11", punch sheets for 3-ring binder.
Fold larger sheets to fit into binders.
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS." List:
 - a. Title of project.
 - b. Name of contractor.
- C. Binders: Commercial quality, 3-ring, D-type, with durable and cleanable plastic covers.

1.04 SUBMITTAL REQUIREMENTS

- A. Submit documents within ten (10) days after inspection and written acceptance by the *ENGINEER*
- B. Submit warranties by the manufacturers of all equipment furnished; or furnished and installed by the *CONTRACTOR*.
 - 1. Manufacturer shall issue warranties in the name of the *CONTRACTOR* and *OWNER*.
 - 2. Warranties shall be valid for a period of two (2) years from the date of acceptance by the *OWNER* of the structures and equipment, unless a longer period is specified.
 - 3. Warranties shall cover all costs for repairing or replacing defective materials and equipment.

- C. Submit warranties, service and maintenance contracts as specified in the respective sections of *Specifications*.
- D. In the event the equipment manufacturer's warranty does not comply with the conditions outlined above or are otherwise unavailable as required above, the *CONTRACTOR* may:
 - 1. Provide a dedicated security deposit in lieu of the specified warranties.
 - 2. Provide either a separate Maintenance Bond or certification of extended warranty coverage under the *CONTRACTOR'S* overall bonding to guarantee *OWNER* for warranty and deficiencies.

1.05 WARRANTY REPAIRS

- A. *CONTRACTOR* shall repair and/or replace as required all equipment which may be defective due to manufacturing errors or faulty installation, at his expense, during the maintenance period.
- B. The *CONTRACTOR* shall be responsible for all costs of the repair work including removal, shipping, reinstallation and start-up during the two (2) year maintenance period. The *OWNER* shall not incur any additional costs as a result of warranted equipment failure.

****END OF SECTION****

SECTION 01 78 39
(01720)
PROJECT RECORD DOCUMENTS

1.01 GENERAL

- A. Maintain for the *OWNER* one (1) record copy of:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the contract.
 - 5. Change Orders or written instructions.
 - 6. Approved shop drawings, product data and samples.
 - 7. Field test records.
 - 8. As-built record drawings.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- B. Make documents and samples available at all times for inspection by the *ENGINEER*.

1.03 MARKING DEVICES

- A. Provide felt-tip marking pens for recording information in the color code accepted by the *ENGINEER*.

1.04 RECORDING

- A. Label each document, "PROJECT RECORD" in neat large printed letters.

- B. Mark *CONTRACTOR* prints of working drawings to show the final horizontal and vertical locations of any revisions to the work. Record information concurrently with construction progress on a daily basis.
- C. Do not conceal any work until required information is recorded.
- D. Drawings: Legibly mark to record actual construction:
 - 1. Elevations of various structure elements in relation to finish floor or grade.
 - 2. All underground piping with elevations and dimensions. Changes in piping location. Horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements. Actual installed pipe material, class, etc.
 - 3. Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.
 - 4. Field changes of dimension and detail.
 - 5. Changes made by Field Order or by Change Order.
 - 6. Details not on original Contract Drawings.
 - 7. Equipment and piping relocations.
 - 8. Intersection details: Provide at least three ties to every valve and fitting, blow-off, fire hydrant and air release.
 - 9. Services based on distance from main line pipe and property lines.
 - 10. Backflow preventer assemblies locations with ties to physical features.
- E. All horizontal locations, if not in the right-of-way, must relate to easement.
- F. All elevations shall be in feet and tenths, referenced to NGVD 29.
- G. Specifications and Addenda; legibly mark each Section to record:
 - 1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
 - 2. Changes made by Field Order or by Change Order.

1.05 SUBMITTAL

- A. At contract closeout, deliver record information to the *OWNER*:
1. Record all information in electronic format and provide a disk or CD in AutoCAD or PDF format of the project record data.
 2. Submit the CD along with two (2) sets of blue/black line prints dated and with the words "Record Plan" above the title block and containing Contractor Certification as to the accuracy of the information shown. The plans must also be signed and sealed by a New Jersey licensed land surveyor.
 3. Submit original marked drawings, CDs and all other record documents to the *ENGINEER*.
- B. Accompany submittal with transmittal letter in duplicate containing:
1. Date
 2. Project title and number.
 3. Contractor's name and address.
 4. Title and number of each record document.
 5. Signature of Contractor or his authorized representative.

****END OF SECTION****

SECTION 02 41 19
(02070)
SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

A. Work included:

1. Surface preparation of existing concrete surfaces.
2. Demolishing designated construction areas in phased manner.
3. Demolition of aprons, trench drain, bollards, and methane vertical pipe risers.
4. Protecting items designated to remain.
5. Removing and disposing of demolished materials.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 73 29: Cutting and Patching*

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

1.03 QUALITY ASSURANCE

A. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for

their execution, and who shall direct all work performed under this section.

2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the method and materials to be used.
- B. Comply with the requirements of the Uniform Construction Code of the State of New Jersey.

1.04 PROJECT CONDITIONS

- A. Conduct demolition to minimize interference with adjacent and occupied building areas.
- B. Cease operations immediately if structure appears to be in danger and notify *ARCHITECT/ENGINEER*. Do not resume operations until directed.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.01 EXISTING CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 DEMOLITION - GENERAL

- A. By careful study of the *Contract Documents*, determine the location and extent of selective demolition to be performed.
- B. In company with the *ENGINEER*, visit the site and verify the extent and location of selective demolition required.
1. Carefully identify limits of selective demolition.

2. Mark interface surfaces as required to, enable workmen also to identify items to be removed and items to be left in place intact.
- C. Prepare and follow an organized plan for demolition and removal of items.
- D. Maintain protected egress from and access to adjacent existing buildings at all times.
- E. Demolished material shall be considered to be property of the *CONTRACTOR* and shall be completely removed from the job site.
- F. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.
- G. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.
- H. Remove temporary Work.

3.03 REPLACEMENTS

- A. In the event of demolition of items not so indicated to be demolished, promptly replace such items to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.

PART 4 - PAYMENT

4.01 SELECTIVE DEMOLITION

- A. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
- B. Include all costs for *SELECTIVE DEMOLITION* in the prices bid for the various related items of work as designated in the Proposal.

****END OF SECTION****

SECTION 03 11 00
(03110)
CONCRETE FORMWORK

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Formwork for cast-in-place concrete, with shoring, bracing, and anchorage.
2. Openings for other affected Work.
3. Form accessories.
4. Stripping forms.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 03 20 00: Concrete Reinforcement*
3. *Section 03 30 00: Concrete*
4. *Section 31 23 00: Excavating, Filling and Grading*

C. Payment:

1. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
2. Include all costs for *CONCRETE FORMWORK* in the prices bid for the various related items of work as designated in the Proposal.

1.02 SYSTEM DESCRIPTION

A. Design Requirements:

1. Design and construction of all forms and form supports, shoring and bracing methods, and their adequacy shall rest with the Subcontractor.

2. Design formwork so it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure with a minimum factor of safety of 2.0 and maximum deflection shall not exceed a clear span length $L/400$ minimum.
3. Carry vertical and lateral loads to ground by formwork system and in-place construction that has attained adequate strength for that purpose.
4. Design forms and falsework to include assumed values of live load, dead load, weight of moving equipment operated on the formwork, concrete mix, height of concrete drop, vibrator frequency, ambient temperature, foundation pressures, stresses, lateral stability, and other factors pertinent to safety of the structure during construction.
5. Provide shop drawings that have been signed and sealed by a qualified Professional Engineer in accordance with *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Performance Requirements:

1. Tolerances for construction of formwork shall be as necessary to provide completed concrete structures within the concrete tolerances specified in *Section 03 30 00, Concrete*.
2. Provide positive means of adjustment to maintain tolerances before and during concrete placement.

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
 1. Complete materials list of all materials proposed to be furnished and installed under this section.
 2. Specifications and other data required to demonstrate compliance with the specified requirements.
- C. Shop drawings showing precise dimensions of the work of this section, and all other data needed to ensure proper and adequate provisions in construction to accommodate the work of this section.

1. Show the forms to be used indicating form construction, type and location of form ties, reveal strips, chamfer, drip, groove, and method of sealing forms against grout leakage. Lay out form ties in regular, symmetrical patterns.
 2. Show pattern for exposed textured or Architectural concrete.
- D. Samples: Submit drawings and samples of formwork for textured or Architectural concrete illustrating full range of colors, finishes and patterns available.
- E. Manufacturer's recommended installation procedures.

1.04 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
- B. Qualifications of workmen:
1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
 2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the method and materials to be used.
 3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.
- C. Basis of acceptance:
1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.
- D. Perform the work of this Section in accordance with the following standards as modified and supplemented herein:
1. ACI 301; Specifications for Structural Concrete for Buildings

2. ACI 347; Recommended Practice for Concrete Formwork

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 FORM MATERIALS

- A. Plywood, lumber, steel, fiberglass reinforced plastic, or any material that will produce concrete with the required finish and within the specified tolerances.
- B. Except for metal forms, use new materials. Materials may be reused during progress of the work, provided they are completely cleaned and reconditioned, recoated for each use, and capable of producing formwork of the required quality.

- C. For footings and foundations, use boards or planks secured to wood or steel stakes, substantially constructed to shapes indicated and to support the required loads.
- D. For studs, wales, and supports, use standard grade or better lumber, dimensions as required to support the loads but not less than 2" x 4".
- E. Porous form materials shall be sealed to prevent absorption of water from the concrete.
- F. Use of aluminum form materials in contact with concrete is prohibited.
- G. Wall forms:
 - 1. Exposed concrete surfaces:
 - a. Minimum for surfaces indicated to receive smooth form finish or any rubbed finish:
 - (1) BB plyform, Class 1, conforming to U.S. Product Standard PS-1; 3/4-inch minimum thickness; free of raised grain, torn surfaces, worn edges, patches, or other defects which would impair the appearance of the concrete surface;
 - (2) Wood form materials shall be new at the start of the work and may be reused subject to the approval of the *ENGINEER*.
 - b. Seal edges and coat both faces with colorless coating, which will not affect application of applied finishes.
 - 2. Unexposed concrete surfaces:
 - a. Use 1" x 6" shiplap Douglas Fir boards, surfaced one side and two edges, or 3/4" minimum thickness BB plyform, Class I or II, conforming to U.S. Product Standard PS-1, sanded both sides, mill-oiled.
- H. Column forms, if required:
 - 1. For square or rectangular columns, use 2" thick Douglas Fir planks or joists, surfaced one side and two edges, or use metal forms.
 - 2. For round columns, use metal forms or patented paper tube forms approved by the *ENGINEER*.

3. Construct column forms with tight joints and securely clamped together with steel clamps.

2.03 FORM TIES

- A. Hold inner and outer forms for vertical concrete together with combination steel ties and spreaders approved by the *ENGINEER*.
 1. Space ties symmetrically in tiers and rows, each tier plumb from top to bottom and each row level.
 2. At horizontal pour lines, locate ties not more than 6" below the pour lines. Tighten after concrete has set and before the next pour is made.
 3. For exposed concrete surfaces, provide form ties of removable type with she-bolts equipped with permanent plugs and a system approved by the *ENGINEER* for fixing the plugs in place.

2.04 EARTH FORMS

- A. Side forms for footings may be omitted, and concrete may be placed directly against excavation, only when requested by the Contractor and approved by the *ENGINEER*.
- B. When omission of forms is accepted, provide additional concrete 1" on each side of the minimum design profiles and dimensions shown on the Drawings.

2.05 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 FORM CONSTRUCTION

A. General:

1. Construct forms complying with ACI 347 to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, and level and plumb work in the finished structure.
2. Provide for openings, offsets, keyways, recesses, moldings, reglets, chamfers, blocking, screeds, bulkheads, anchorages, inserts, and other features as required.
3. Tolerances shall be in accordance with Section 3.3.1 of ACI 347.
4. Erect, support, brace, and maintain formwork so it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure.
5. Carry vertical and lateral loads to ground by formwork system and in-place construction that has attained adequate strength for that purpose.
6. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position.
7. Provide shores and struts with positive means of adjustment capable of taking up formwork settlement during concrete placing operations, using wedges or jacks or a combination thereof.
8. Provide trussed supports when adequate foundations for shores and struts cannot be secured.
9. Support form materials by structural members spaced sufficiently close to prevent objectionable deflection.
10. Fit forms placed in successive units for continuous surfaces to accurate alignment, free from irregularities, and within the allowable tolerances.

11. Provide formwork sufficiently tight to prevent leakage of cement paste during concrete placement. Solidly butt joints, and provide backup material at joints as required to prevent leakage and prevent fins.
12. Provide camber in formwork as required for anticipated deflections due to weight and pressures of fresh concrete and construction loads.

B. Fabrication:

1. Fabricate forms for easy removal without hammering or prying against concrete surfaces.
2. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces.
3. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and assure ease of removal.
4. Provide top forms for inclined surfaces where so directed by the *ENGINEER*.

C. Forms for exposed concrete:

1. Drill forms to suit ties being used, and to prevent leakage of cement paste around tie holes. Do not splinter forms by driving ties through improperly prepared holes.
2. Provide sharp, clean corners at intersecting planes, without visible edges or offsets. Back the joints with extra studs or girts to maintain true, square intersections.
3. Use extra studs, wales, and bracing to prevent objectionable bowing of forms between studs, and to avoid bowed appearance in concrete. Do not use narrow strips of form material, which will produce bow.

D. Corner treatment:

1. Unless shown otherwise, form chamfers with 1" x 1" strips, accurately formed and surfaced to produce uniformly straight lines and tight edges.
2. Extend terminal edges to required limit, and miter the chamfer strips at changes in direction.

E. Locate control joints as indicated on the Drawings and, where required but not shown on the Drawings, as approved by the *ENGINEER*.

F. Provisions for other trades:

1. Provide openings in concrete formwork to accommodate work of other trades.
2. Verify size and location of openings, recesses, and chases with the trade requiring such items.
3. Accurately place and securely support items to be built into the concrete.

3.03 FORM COATINGS

A. Coat form contact surfaces with form coating compound before reinforcement is placed.

1. Do not allow excess form coating material to accumulate in the forms or to come in contact with surfaces, which will bond to fresh concrete.
2. Apply the form coating material in strict accordance with its manufacturer's recommendations.

3.04 REMOVAL OF FORMS

A. General:

1. Do not disturb or remove forms until the concrete has hardened sufficiently to permit form removal with complete safety.
2. Do not remove shoring until the member has acquired sufficient strength to support its own weight, the load upon it, and the added load of construction, but no sooner than seven (7) days.
3. Do not strip floor slabs in less than two(2) days.
4. Do not strip wall concrete in less than 24 hours. Do not backfill until concrete has cured seven (7) days.
5. When stripping time is less than specified curing time, measures shall be taken to provide adequate curing and thermal protection of the stripped concrete.

B. Finished surfaces:

1. Exercise care in removing forms from finished concrete surfaces so that surfaces are not marred or gouged, and that corners are true, sharp, and unbroken.
2. Release sleeve nuts or clamps, and pull the form ties neatly.
3. Do not permit steel spreaders, form ties, or other metal to project from, or be visible on, any concrete surface except where so shown on the Drawings.
4. Solidly pack form tie holes, rod holes, and similar holes in the concrete. For packing, use the cement grout specified in *Section 03 30 00, Concrete* of these Specifications, flushing the holes with water before packing, screeding off flush, and grinding to match adjacent surfaces.

3.05 FIELD QUALITY CONTROL

- A. Inspect and check complete formwork, falsework, shoring and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties and parts are secure.
- B. Contact *ENGINEER* when formwork is complete and has been cleaned.
- C. For all exposed concrete surfaces do not re-use wood type formwork more than three (3) times. Do not patch formwork.

****END OF SECTION****

SECTION 03 20 00
(03200)
CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Provide concrete reinforcement where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Related work:
 - 1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
 - 2. *Section 03 11 00: Concrete Formwork*
 - 3. *Section 03 30 00: Concrete*
- C. Payment:
 - 1. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
 - 2. Include all costs for *CONCRETE REINFORCEMENT* in the prices bid for the various related items of work as designated in the Proposal.

1.02 REFERENCE STANDARDS

- A. American Concrete Institute
 - 1. ACI-301, Specifications for Structural Concrete for Buildings.
 - 2. ACI-315, Details and Detailing of Concrete Reinforcement.
 - 3. ACI-318, Building Code Requirements for Reinforced Concrete Structures.
- B. Concrete Reinforcing Steel Institute:
 - 1. Manual of Standard Practice.

C. American Society for Testing and Materials:

1. ASTM A-615; Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
2. ASTM A-1064; Specification for Carbon Steel Welded Wire Reinforcement, Plain and Deformed for Concrete

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Comply with pertinent provisions of the following codes and standards, except as modified herein. Where there is a conflict, the more stringent code or standard shall govern.
1. ACI-301, Specifications for Structural Concrete for Buildings.
 2. ACI-315, Details and Detailing of Concrete Reinforcement.
 3. ACI-318, Building Code Requirements for Reinforced Concrete Structures.
 4. ICC, International Building Code, 2021, as modified by the Uniform Construction Code of the State of New Jersey.

1.04 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
1. Complete materials list of all materials proposed to be furnished and installed under this section.
 2. Specifications and other data required to demonstrate compliance with the specified requirements.

3. Submit copies of mill test reports for shipments of reinforcing steel prior to placing reinforcement into the work.
- C. Shop Drawings showing details of bars, anchors, and other items, if any, provided under this Section.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage:
 1. Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use.
 2. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.
 3. Store in a manner to prevent excessive rusting and fouling with dirt, grease, and other bond-breaking coatings.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 REINFORCEMENT MATERIALS AND ACCESSORIES

A. Bars:

1. Provide deformed billet steel bars complying with ASTM A615, using grades shown on the Drawings.
2. Where grades are not shown on the Drawings, use Grade 60.

B. Steel wire:

1. Comply with ASTM A1064: Standard Specification for Carbon Steel Welded Wire Reinforcement, Plain and Deformed for Concrete.
2. For tie wire, comply with Fed Spec QQ-W-461, annealed steel, black, 16 gage minimum (use coated wire for coated bars).

C. Welded wire reinforcement:

1. Provide plain welded steel, complying with ASTM A1064.
2. Provide epoxy coated welded wire fabric complying with ASTM A-884, Class A, Type 2.
3. Provide galvanized welded wire fabric complying with ASTM A-1060.
4. Provide stainless steel welded wire fabric complying with ASTM A-1022.

D. Synthetic Fiber Reinforcement:

1. Acceptable Manufacturers:
 - a. Propex Concrete Systems Corp., 6025 Lee Highway, Suite 425, Chattanooga, Tennessee 37427. Toll Free (800) 621-1273. Phone (423) 892-8080. Fax (423) 892-0157.
 - b. Or equivalent.
2. Synthetic fiber reinforcement: Fibermesh 150.
 - a. Material: 100 percent virgin homopolymer polypropylene multifilament fibers, containing no reprocessed olefin materials.
 - b. Conformance: ASTM C 1116, Type III.

- c. Fire classifications:
 - (1) UL Report File No. R8534-11.
 - (2) Southwest Certification Services (SWCS), Omega Point Laboratories No. 8662-1.
 - d. Fiber length: Graded.
 - e. Alkali resistance: Alkali proof.
 - f. Absorption: Nil.
 - g. Specific gravity: 0.91.
 - h. Melt point: 324 degrees F (162 degrees C).
- E. Welding electrodes: Comply with AWS A5.1, low hydrogen, E70 series.
- F. Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement in place:
- 1. Use wire bar type supports complying with CRSI recommendations, unless otherwise shown on the Drawings.
 - 2. Do not use wood, brick, or other non-complying material.
 - 3. For slabs on grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
 - 4. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with either hot-dip galvanized or plastic-protected legs.

2.03 FABRICATION

- A. General:
- 1. Fabricate reinforcing bars to conform to the required shapes and dimensions, with fabrication tolerances complying with the CRSI Manual.
 - 2. In case of fabricating errors, do not straighten or re-bend reinforcement in a manner that will weaken or injure the material.

3. Reinforcement with any of the following defects will not be acceptable.
 - a. Bar lengths, depths, and/or bends exceeding the specified fabrication tolerances;
 - b. Bends or kinks not shown on the Drawings;
 - c. Bars with reduced cross-section due to excessive rusting or other cause.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. General:
 1. Comply with the specified standards for detail and method of placing reinforcement and supports, except as may be modified herein.
 2. Clean reinforcement to remove loose rust and mill scale, earth, and other materials, which reduce or destroy bond with concrete.
 3. Position, support, and secure reinforcement against displacement by formwork, construction, and concrete placing operations.
 4. Locate and support reinforcement by metal chairs, runners, bolsters, spacers, and hangers, as required.
 5. Place reinforcement to obtain minimum coverages for concrete protection.
 6. Arrange, space, and securely tie bars and bar supports together with the specified tie wire.
 7. Set wire ties so twisted ends are directed away from exposed concrete surfaces.

B. Welded Wire Fabric:

1. Install welded wire fabric in as long lengths as practical, lapping adjoining pieces. Laps of adjoining pieces shall be not less than one spacing of the cross wires plus two inches and in no case less than six inches whichever is greater.
2. Epoxy coated or galvanized welded wire fabric shall be tied with coated tie wire or any suitable non-conductive material acceptable to the *ENGINEER* or purchaser that will not damage the coating and provide sufficient strength.
3. Stainless steel welded wire fabric shall be tied with stainless steel tie wire or any suitable non-conductive material acceptable to the *ENGINEER* or purchaser that will provide sufficient strength.

C. Synthetic Fiber Reinforcing:

1. Add synthetic fiber reinforcement to concrete mixture in accordance with manufacturer's instructions.
2. Add synthetic fiber reinforcement into concrete mixer before, during, or after batching other concrete materials.
3. Application Rate: Add synthetic fiber reinforcement at standard application rate of 1.5 pounds per cubic yard (0.90 kg/m³) of concrete.

F. Provide sufficient numbers of supports, and of strength to carry the reinforcement.

G. Do not place reinforcing bars more than 2" beyond last leg of any continuous bar support.

H. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.

3.03 SPLICES

A. Lap splices: Tie securely with the specified wire to prevent displacement of splices during placement of concrete.

B. Splice devices:

1. Obtain the *ENGINEER'S* approval prior to using splice devices.

2. Install in accordance with manufacturer's written instructions.
 3. Splice in a manner developing at least the full tensile strength of the bar.
- C. Welding: Do not weld reinforcing bars without written permission from *ENGINEER*. If welding is permitted, perform in accordance with AWS D1.4.79.
- D. Do not splice bars except at locations shown on the Drawings, except as otherwise specifically approved by the *ENGINEER*.

3.04 TESTING

A. Samples:

1. Samples for physical tests of reinforcement will consist of at least two pieces, each 18" long, of each size of reinforcement steel, selected by the testing agency from material at the building site or at the fabricator's or supplier's yard.
2. Material to be sampled at the building site shall have been delivered thereto at least 72 hours before it is needed.

B. Tests:

1. Where samples are taken from bundles as delivered from the mill, with the bundles identified as to heat number, and provided mill analyses accompany the report, then one tensile test and one bend test will be made from a specimen of each ten tons or fraction thereof of each size of reinforcement steel.
2. Where positive identification of the heat number cannot be made, or where random samples are taken, then one series of tests will be made from each 2½ tons or fraction thereof of each size of reinforcement steel.
3. Payment for testing is described in *Section 01 45 29, Testing Laboratory Services* of these Specifications.

****END OF SECTION****

SECTION 03 30 00
(03300)
CONCRETE :

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide all plain and reinforced cast-in-place concrete, complete in place, as indicated on the Plans, specified herein, and needed for complete and proper installation. This work includes, but is not limited to the following:
1. Fiber-reinforced structural and miscellaneous concrete.
 2. Fiber-reinforced bollard foundations, aprons, and protection blocks.
 - a. Foundations shall include all concrete, formwork, concrete finishing, grout, anchor bolts and subgrade preparation required to support and transfer all design loads to the soil in accordance with the specified design criteria.
- B. Related work specified elsewhere:
1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
 2. *Section 01 45 29; Testing Laboratory Services*
 3. *Section 03 11 00: Concrete Formwork*
 4. *Section 03 20 00: Concrete Reinforcement*
 5. *Section 03 35 00: Concrete Finishing and Curing*
 6. *Section 31 23 00: Excavating, Filling and Grading*
- C. Payment:
1. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
 2. Include all costs for *CONCRETE* in the prices bid for the various related items of work as designated in the Proposal.

1.02 REFERENCES

A. American Concrete Institute (ACI):

1. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavy-Weight and Mass Concrete.
2. ACI 223 - Standard Practice for use of Shrinkage Compensating Concrete.
3. ACI 301 - Specification for Structural Concrete.
4. ACI 305R - Hot Weather Concreting.
5. ACI 306.1 - Cold Weather Concreting.
6. ACI 309R - Guide to Consolidation of Concrete.
7. ACI 315 - Details and Detailing of Concrete Reinforcement.
8. ACI 318 - Building Code Requirements for Reinforced Concrete.
9. ACI 350 - Environmental Engineering Concrete Structures.

B. American Society for Testing and Materials (ASTM):

1. ASTM C31 - Test Methods for Making and Curing Concrete Test Specimens in the Field.
2. ASTM C33 - Specification for Concrete Aggregate.
3. ASTM C94 - Specification for Ready Mixed Concrete.
4. ASTM C109 - Test Method for Compressive Strength of Hydraulic Cement Mortars.
5. ASTM C143 - Test Method for Slump of Portland Cement Concrete.
6. ASTM C150 - Specification for Portland Cement.
7. ASTM C260 - Specification for Air-Entraining Admixtures for Concrete.
8. ASTM C494 - Specification for Chemical Admixtures for Concrete.
9. ASTM C920 - Specification for Elastomeric Joint Sealants.

10. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
 11. ASTM C1621 - Test Method for Compressive Properties of Rigid Cellular Plastic.
 12. ASTM D1751 - Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction.
 13. ASTM D1752 - Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
 14. ASTM E329 - Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.
- C. U.S. Army Corps of Engineers:
1. CRD C48 - Method of Test for Water Permeability of Concrete
 2. CRD-C572 - Corps of Engineers Specifications for Polyvinylchloride Waterstops.

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Provide specific submittals specified in ACI-301.
- C. Submit name and address of *CONTRACTOR's* testing laboratory.
- D. Submit sample concrete delivery slip.
- E. Manufacturer's product data:
 1. Complete materials list of all materials proposed to be furnished and installed under this section including but not limited to:
 - a. Concrete Accessories
 - b. Admixtures
 - c. Joint systems and fillers

d. Waterstops

2. National Sanitation Foundation (NSF) certification for materials to be used in contact with potable water.
3. Specifications and other data required that demonstrate compliance with the specified requirements.

F. Mixes:

1. The Contractor shall furnish for approval mix proportions prepared by a testing laboratory approved by the *ENGINEER*.
2. Submit mixture proportions and related data for each concrete mixture.
3. Provide chemical analysis of cement and gradation of aggregate.

G. Concrete delivery slips:

1. Submit 2 legible copies of the delivery slip for each load of concrete to the *ENGINEER* or his representative.
2. All deliveries of concrete shall be accompanied by delivery slips conforming to ASTM C-94 and shall show:
 - a. Name of ready-mix batch plant,
 - b. Serial number of ticket,
 - c. Date,
 - d. Truck number,
 - e. Name of purchaser,
 - f. Specific designation of job (name and location),
 - g. Specific class or designation of the concrete in conformance with that employed in job,
 - h. Amount of concrete in cubic yards,
 - i. Time loaded or of first mixing of cement and aggregates,
 - j. Water added by receiver of concrete and his initials,

- k. Type and brand, and amount of cement,
- l. Type and brand, and amount of admixtures,
- m. Information necessary to calculate the total mixing water added by the producer. Total mixing water includes free water on the aggregates, water, and ice batched at the plant, and water added by the truck operator from the mixer tank.
- n. Maximum size of aggregate,
- o. Weights of fine and coarse aggregate,
- p. Ingredients certified as being previously approved,
- q. Signature or initials of ready-mix representative.
- r. The batch plant shall indicate the amount of water that may be added at the jobsite without altering the water/cement ratio by adding the following statement to each batch ticket and filling in the blanks:

*“No more than ____ . ____ Gals/CY
of water may be added at the site.”*

- 3. Record on each delivery slip the location where placed in the work and the time of placement.

H. Quality Control Submittals:

- 1. Submit two (2) copies of all quality control test results for approval by the *ENGINEER*.

1.04 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.
- B. Codes and Standards: Comply with provisions of the following codes, specifications, and standards, except where more stringent requirements are shown or specified:

1. American Concrete Institute:
 - a. ACI-301, "Specification for Structural Concrete".
 - b. ACI-318, "Building Code Requirements for Structural Concrete".
 2. Concrete Reinforcing Steel Institute (CRSI):
 - a. "Manual of Standard Practice".
- C. Concrete Testing Service:
1. Employ a testing agency acceptable to *ENGINEER* to perform material evaluation tests and to design concrete mixes.
 2. Concrete testing shall be performed in accordance with *Section 01 45 29* by an approved laboratory and inspection service experienced in sampling and testing concrete. Testing agency shall meet the requirements of ASTM E329.
- D. Quality control:
1. Concrete Sampling and Testing:
 - a. Testing by the Contractor shall include sampling and testing concrete materials proposed for use in the work and testing the design mix for each class of concrete.
 - b. Quality control testing during construction shall also be performed by the Contractor.
 2. The testing services described in Section 1.6.3, 1.6.4, 1.6.5, 1.6.7, 1.6.8, 1.7.4, and 1.7.5 of ACI-301 which include compressive strength, air-content, slump and temperature tests shall be accomplished by the Contractor as further detailed in *Section 01 45 29* and test results submitted to the *ENGINEER* for approval.
 3. The testing for the amount of expansion of shrinkage compensating concrete shall be accomplished by the Contractor in accordance with ASTM C878.
 4. The *ENGINEER* shall have the right to make check tests of aggregates and concrete, using the same materials, and to order changes as may be necessary to meet the specified requirements. Cylinders made in the field shall be made and cured in accordance with ASTM C-31; Standard

Practice for Making and Curing Concrete Test Specimens in the Field. Laboratory tests and laboratory made cylinders shall conform to the appropriate tests and procedures specified above for testing aggregates and for determining the relation between water content and compressive strength.

5. If concrete of the required characteristics is not being produced, as the work progresses, the *ENGINEER* may order such changes in proportions of material as may be necessary to secure concrete of the specified quality. The Contractor shall make such changes at his own expense and no extra compensation will be allowed because of such change.

E. Field acceptance of concrete:

1. Air content: Concrete not within the limits of air-entrainment indicated in paragraph 2.03 and tested in accordance with paragraph 1.04D2 shall not be used in the Work.
2. Slump: Concrete not within the slump limits of paragraph 2.03 at the point of placement shall not be used in the Work.
3. Temperature: Concrete not within temperature limits of paragraph 1.05D shall not be used in the Work.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Comply with the requirements specified in ACI-301.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Concrete temperature:
 1. When the average of the highest and lowest temperature during the period from midnight to midnight is expected to drop below 40° F for more than three successive days, deliver concrete to meet the following minimum temperatures immediately after placement:

- a. 55° F for sections less than 12 in. in the least dimension;

- b. 50° F for sections 12 to 36 in. in the least dimension;
 - c. 45° F for sections 36 to 72 in. in the least dimension; and
 - d. 40° F for sections greater than 72 in. in the least dimension.
- 2. The temperature of concrete as placed shall not exceed these values by more than 20° F. These minimum requirements may be terminated when temperatures above 50° F occur during more than half of any 24 hour duration.
 - 3. Unless otherwise specified or permitted, the temperature of concrete as delivered shall not exceed 90 °F.

1.06 PROJECT CONDITIONS

- A. Do not commence placement of concrete until mix designs have been reviewed and approved by the *ENGINEER* and all governmental agencies having jurisdiction, and until copies are at the job site, the batch plant, and the building department.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.
- C. All concrete shall meet the requirements of ASTM C94, Option C.
- D. All concrete used around pre-cast trench drain shall be "lightweight high early strength."
- E. All other concrete shall be Class "E" unless otherwise specified or noted on the Contract Drawings.

2.02 MATERIALS

A. Cement:

1. Portland cement or blended cement:
 - a. Lightweight high early strength concrete: ASTM C150, Type I, Type II, or Type III.
 - b. Class E concrete: ASTM C150, Type I.
 - d. When ASTM C595 blended cement is used, the maximum weight of fly ash, natural pozzolans, silicon fume, or ground blast furnace slug that is included in the concrete shall not exceed the percentages of total weight of cementitious materials shown in the table below.

Requirements for Concrete Exposed to Deicing Chemicals	
Cementitious Materials	Maximum Percent of Total Cementitious Materials by Weight*
Fly ash or other pozzolans conforming to ASTM C 618	25
Slag conforming to ASTM C 989	50
Silica fume conforming to ASTM C 1240	10
Total of fly ash or other pozzolans, slag, and silica fume	50†
Total of fly ash or other pozzolans and silica fume	35†
*Total cementitious material also includes ASTM C 150, C 595, and C845 cement. The maximum percentages above shall include: a) Fly ash or other pozzolans present in Type IP or I(PM) blended cement, ASTM C 595; b) Slag used in manufacture of an IS or I(SM) blended cement, ASTM C 595; and c) Silica fume, ASTM C 1240, present in blended cement. †Fly ash or other pozzolans and silica fume shall constitute no more than 25 and 10%, respectively, of the total weight of cementitious materials.	

2. Use one brand of cement throughout Project unless otherwise approved by the *ENGINEER*.

B. Aggregate:

1. General:

- a. Provide lightweight aggregate complying with ASTM C330.
- b. Provide normal weight hardrock aggregate complying with ASTM C33, with additional attributes as specified herein.
- c. Provide aggregates from a single source for exposed concrete.

2. Fine aggregate:

- a. Provide washed natural sand having strong, hard, durable particles, and containing not more than 2% by weight of deleterious matter such as clay lumps, mica, shale, or schist.

3. Coarse aggregate:

- a. Provide coarse aggregate consisting of clean, hard, fine grained, sound crushed rock or washed gravel, or a combination of both, containing not more than 5% by weight of flat, chip-like, thin, elongated, friable, or laminated pieces, nor more than 2% by weight of shale or cherty material.
- b. Maximum size of coarse aggregate shall be 1", size #57.
- c. Maximum size of coarse aggregate for pea gravel concrete fill shall be 3/8 inch, size #8.

C. Water: Mixing water shall be potable, except that non-potable water may be used if mortar made with the water in question has 7- and 28- day strengths equal to at least 90 percent of the strength of similar specimens made with potable water, when tested in accordance with ASTM C109.

D. Admixtures:

- 1. All admixtures used in structures in contact with potable water shall be certified as meeting NSF/ANSI-61, Drinking Water System Components – Health Effects.
- 2. Air entraining:
 - a. Air entraining admixture conforming to ASTM C260 shall be used. Air entraining cement shall not be used.

- b. Measure air content in accordance with ASTM C138, C173 or C231.
- 3. Calcium chloride and admixtures containing calcium chloride shall not be used.
- 4. Water reducing admixture:
 - a. The *CONTRACTOR* may at his option use a water reducing admixture.
 - b. This admixture shall conform to the requirements of ASTM C494, Type "A", Normal Setting or Type "F", High Range and meet the following supplementary requirements:
 - (1) Concrete made using the proposed admixture shall have a Relative Durability Factor of one hundred percent (100%). Admixture shall be chloride free.
 - (2) Test data shall be furnished to substantiate compliance with these requirements.
- 5. No other admixtures shall be used without the written consent of the *ENGINEER*.

E. Chloride Content:

- 1. The maximum water-soluble chloride content, expressed as a percent of cement, contributed from all ingredients of the concrete mix, including water, aggregates, cementitious materials and admixtures shall not exceed 0.10 percent when tested in accordance with ASTM C1218.

F. Premolded joint filler:

- 1. Structures and surfaces containing liquids, sludge or compost:
 - a. Closed cell sponge rubber conforming to ASTM D1752, Type I.
 - b. Cork conforming to ASTM D1752, Type II.
- 2. All other concrete structures:
 - a. Pre-molded joint filler shall be fiber expansion joint filler conforming to ASTM D1751.

3. Joint filler shall be of the thickness shown on the Plans, except when no thickness is shown use ½-inch thick material.
- G. Joint sealer: Conforming to Section 914 of the NJDOT Standard Specifications.
- H. Mastic joint filler for contraction joints:
 1. Type 2, 0.95 to 0.155 inch thick Protection Course as manufactured by W.R. Meadows, Inc., Elgin, IL, or equivalent.
- I. Reinforcing: Conforming to *Section 03 20 00, Concrete Reinforcement*.

2.03 MIXES

A. General:

1. Provide a mix design prepared by the approved testing agency, based on strengths of the approved materials, and meeting the requirements specified herein or shown on drawings.
2. Secure the *ENGINEER* approval of each mix design, including new mix designs required to the prepared should there occur a change in materials being used.
3. All materials used should be so proportioned as to produce a well-graded mixture of high density and maximum workability, with a specified 28-day compressive strength of 4,000 psi.

B. Lightweight high early strength concrete:

1. The concrete shall be proportioned in accordance with ACI-211, subject to the following special requirements:
 - a. Minimum compression strength: 4000 psi at 7 days
5000 psi at 28 days
 - b. Slump (as determined in accordance with ASTM C143):
 - (1) Before any ASTM C494, Type F admixture is added.
 - (a) 1 inch minimum.
 - (b) 3 inch maximum for footings, caissons, substructure walls.

(c) 4 inch maximum for slabs, beams, reinforced walls, columns.

(2) After water reducing admixtures added maximum slump is 8".

c. Air entrained: 7% (1½" aggregate max.)
6% (¾" aggregate max.)

C. Class E Concrete:

1. General:

- a. Concrete for curb, gutter, sidewalk, exterior concrete pads, exterior concrete paving, or footings, grade walls, thrust blocks where concrete is expected to be exposed to deicing salts and moderate sulfate resistance not desired.
- b. Concrete shall conform to the general requirements and the following additional requirements.

2. Cement:

- a. See paragraph 2.02A.

3. Air entrained: 6% ± 1½ air content.

2.04 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXISTING CONDITIONS

A. Inspection:

- 1. Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

2. Verify that the work of this Section may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.

B. Discrepancies:

1. In the event of discrepancy, immediately notify the *ENGINEER*.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.02 CONCRETE MIXING

- A. Concrete for minor work, when approved by the *ENGINEER*, may be mixed at the site in a power mixer when the mixer has a capacity not less than one full sack batch.

- B. Unless otherwise approved by the *ENGINEER*, use ready mixed concrete complying with ASTM C94, except as may be modified by the following:

1. Mixing:

- a. Mix each batch of concrete not less than 15 minutes, five minutes of which shall be at the site.
- b. Rotate the drum at the rate specified by the manufacturer of the mixer as "mixing speed".
- c. Whenever there is a delay in unloading, rotate the drum at intervals to prevent incipient set of concrete.

C. Concrete consistency:

1. Use the amount of water established by the approved mix design.
 - a. Do not exceed the minimum quantity specified for the grade of concrete.
 - b. Use the minimum amount of water necessary to produce concrete of the workability required by the *ENGINEER*.
 - c. Do not supplement the predetermined amount of water with additional water for any reason.

2. Measure concrete consistency by ASTM C143 method.
 - a. As part of the routine testing and inspecting, test twice each day or partial day's run of the mixer.
 - b. Maintain a complete and accurate record of tests.
 3. Provide maximum concrete slumps as specified in Article 2.03B.
- D. Miscellaneous provisions:
1. Provide strengths of concrete as shown on the Drawings or specified herein.
 2. Provide concrete dense and free from honeycomb and other defects.
 3. Place and finish members to conform to the shapes and dimensions indicated, with all surface true to line, plumb, and level.

3.03 INSERTS, ANCHORS AND EMBEDDED ITEMS

- A. Powder driven concrete fasteners:
1. In addition to their use where the pins are loaded in shear, powder driven concrete fasteners may be used in tension for support of light loads such as acoustical ceilings, ductwork, conduit, pipes, and similar items when such loads are limited to less than 75 lbs.
 2. Testing:
 - a. Secure pre-qualification of operator, tool and fastener by an approved testing agency, who shall observe testing of the first ten fastener installations.
 - b. Apply a test "pull-out" load of not less than twice the design load or 150 lbs. whichever is the greater, to the pin in such a manner as not to resist the spalling tendency of the concrete surrounding the pin.
 - c. Thereafter, secure random tests by the approved testing agency of approximately one in ten pins; except that when the design load exceeds 75 lbs., test one-half of the pins.

- d. Should failure occur on any pin tested, test all installations under observation of the approved testing agency, and replace all unqualifying pins at no additional cost to the *OWNER*.
- e. Where Hilti "Kwik Bolts" or similar types of concrete anchor bolts are used for significant gravity loads or seismic anchorage, test in the presence of the approved testing agency:
 - (1) Proof test 50% of the bolts (alternate bolts in any group arrangement) to twice the allowable load;
 - (2) If there are any failures, also test the immediately adjacent bolt.
- 3. Where hanger rods, bolts, wire, or similar items are used to suspend construction items, place in the concrete as required and/or indicated.
- 4. Where suspended ceilings with metal carrying systems are called for on the Drawings:
 - a. Provide hanger wires in the slab, as shown on the Drawings or otherwise required, of sufficient length to extend 12" below the line of the finish ceiling;
 - b. Place the hanger wires in line to receive runner channels, beginning 6" from the walls parallel to the runners.

B. Reglets and rebates:

- 1. Form reglets and rebates as required to receive frames, flashing, and other equipment.
- 2. Verify the dimensions and positions of required reglets and rebates with trades whose work is related to or contingent upon such dimensions and positions.
- 3. If concrete slabs on earth join a wall or other perpendicular concrete surface, form a reglet in the wall to receive and carry the horizontal concrete work.
 - a. Provide reglet full thickness of the slab and 3/4" deep, unless otherwise shown on the Drawings.
 - b. Exterior walks need not be provided for in this way except where so detailed on the Drawings.

C. Embedded piping and rough hardware:

1. Coordinate the various trades who are required to fasten work to the structure, or are required to insert therein any sleeve, box, bolt, anchor, insert, or other rough hardware.
2. Provide every facility for setting all required items accurately in the forms.
3. Be responsible for changes in position of such items after they have been set.
4. Provide in the forms for all sleeves, boxes, bolts, anchors, inserts, strap anchors for frames, and other rough hardware required for the work, and which are shown or required to be embedded in the concrete.
5. Conduits and sleeves:
 - a. Locate so as not to reduce the strength of construction. Do not place pipes, except conduits, in a slab of less than 3½" thickness.
 - b. In supported concrete slabs, do not bury conduit having an outside diameter greater than 33% of the thickness of the slab. Increase slab thickness locally to meet this requirement.
 - c. Do not place conduit between the bottom of reinforcing steel and the bottom of supported slab.
 - d. In placing conduits at slabs on earth, place below the reinforcement, and encase in concrete by increasing thickness of the slab locally to at least 3" of concrete around the conduit on all sides.

D. Where openings in floors and walls are required by the various trades, but are not detailed on the Drawings, reinforce as directed by the *ENGINEER*.

3.04 CONTRACTOR FIELD ACCEPTANCE OF CONCRETE

- A. Review and accept concrete only with a completed delivery slip.
- B. Review and accept concrete only if it meets the requirements of paragraph 2.03, Mixes and 1.04, Final Acceptance of Concrete.

3.05 CONVEYING AND PLACING CONCRETE

A. General:

1. All concrete work shall comply with ACI-301 and ACI-318 except as modified by the Supplemental Requirements herein.

B. Cold-Weather Placement: Comply with provisions of ACI-306 and as follows.

1. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

C. When air temperature has fallen to or is expected to fall below 40 deg F (4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.

1. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
2. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise accepted in mix designs.

D. Hot-Weather Placement: When hot weather conditions exist that would impair quality and strength of concrete, place concrete in compliance with ACI-305R and as specified.

1. Cool ingredients before mixing to maintain concrete temperature at time of placement to below 90 deg F (32 deg C). Mixing water may be chilled or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedding in concrete.
3. Fog spray forms, reinforcing steel, and subgrade just before placing concrete. Keep subgrade moisture uniform without puddles or dry areas.
4. Use water-reducing retarding admixture when required by high temperatures, low humidity, or other adverse placing conditions, only when approved by the *ENGINEER*.

- E. Concreting under water will not be permitted.
- F. Before placing concrete, thoroughly clean forms, wash out with water, and make tight.
1. Do not place concrete until reinforcement, conduits, outlet boxes, anchors, sleeves, hangers, bolts, and other embedded materials are securely and properly fastened in their correct positions.
 2. Secure the *ENGINEER's* approval of reinforcement before commencing placement of concrete.
- G. Preparation:
1. Before new concrete is deposited upon or against concrete that has taken its initial set or has hardened, remove all incrustations from forms and reinforcement.
 2. Remove all laitance, oil, and loose particles from concrete and concrete surfaces, and thoroughly clean the forms with water under stiff pressure.
 3. Remove laitance after concrete has hardened partially (not less than two hours nor more than four hours after placing) by brushing with stiff bristles, or by directing a stream of water from a 1/4" nozzle, or by other method approved by the *ENGINEER*, to expose the clean to surface of the coarse aggregate.
 4. Where cleaning is not satisfactory to the *ENGINEER*, sandblast the surface and then wash again.
- H. Method of placing:
1. Place concrete only under the degree of inspection described elsewhere in these Specifications, and as required by governmental agencies having jurisdiction.
 2. Do not place concrete outside of regular working hours unless required inspection authorities have been notified properly and are present.
 3. Spouts, pipes, troughs, belts, chain buckets, and other equipment may be used in conveying concrete, but the manner and method used shall be only as approved by the *ENGINEER*.
 4. Do not permit concrete to free drop more than 5'-0".

5. Deposit concrete directly into conveyances, and direct from conveyances to final points of repose, except where troughs, buckets, or the like are used, in which case dump concrete into hoppers and then into the conveyances.
6. Where tremies are used, or where the free drop is 5'-0" or more, and through reinforcement, use a dumping box or board, moving the concrete therefrom by shovels or hoes.
7. Deposit concrete so that the surface is kept level throughout, a minimum being permitted to flow from one position to another, and place as rapidly as practicable after mixing.
8. Do not use in this Work any concrete not placed within 30 minutes after leaving the mixer.

I. Tamping and conveying:

1. Consolidation: All concrete shall be consolidated by vibration, spading, rodding or forking so that the concrete is thoroughly worked around the reinforcement, around embedded items, and into corners of forms, eliminating all air or stone pockets which may cause honeycombing, pitting, or planes of weakness. Internal vibrators used shall be the largest size and the most powerful that can be used properly in the work, as described in Table 5.1.5 of ACI 309R. They shall be operated by competent workmen. Use of vibrators to transport concrete within form shall not be allowed. Vibrators shall be inserted and withdrawn at points approximately eighteen inches (18") apart. At each insertion, the duration shall be sufficient to consolidate the concrete but not sufficient to cause segregation, generally from 5 to 15 seconds. A spare vibrator shall be kept on the job site during all concrete placing operations. Where the concrete is to have an as-cast finish, a full surface of mortar shall be brought against the form by the vibration process, supplemented if necessary by spading to work the coarse aggregate back from the formed surface.
2. Completely compact with tamping poles and by tapping forms until the concrete is thoroughly compact and without voids. Determine the number of tampers needed by the amount and method of placing concrete.
3. Exercise care to tamp concrete vigorously and thoroughly to obtain maximum density.
4. Use manual tampers as well as mechanical vibrators.

- a. Exercise care to direct the quick handling of vibrators from one position to another.
- b. Do not over-vibrate concrete.
- c. Do not move concrete by use of vibrator.

J. Stoppages:

1. Stop concrete placing only when and where approved by the *ENGINEER*.
2. Maintain flow surfaces of freshly placed concrete as level whenever a pour is stopped, providing tight dams to accomplish this.
3. Make construction joints only where unavoidable, and then only at points determined by the *ENGINEER*.
4. Make horizontal construction joints only where shown on the Drawings or specifically approved by the *ENGINEER*.
5. Provide keys and dowels at construction joints where indicated on the Drawings, and where concrete placement is interrupted.

K. Bonding:

1. When specified, the surface of joints shall be prepared in accordance with the methods specified in Section 5.3.2.6 of ACI-301.
2. The hardened concrete of construction joints and of joints between footings and walls or columns, between walls or columns and beams or floors they support, joints in unexposed walls and all others not mentioned below shall be dampened (but not saturated) immediately prior to placing of fresh concrete.
3. The hardened concrete of horizontal construction joints in exposed work; horizontal construction joints in the middle of beams, girders, joists, and slabs; and horizontal construction joints in work designed to contain liquids shall be dampened (but not saturated) and then thoroughly covered with a coat of cement grout of similar proportions to the mortar in the concrete. The fresh concrete shall be placed before the grout has attained its initial set.
4. Joints receiving an adhesive shall have been prepared and adhesive applied in accordance with the manufacturer's recommendations prior to placing of fresh concrete.

3.06 SODA AND ACID WASH

- A. At concrete surfaces to receive plaster, paint, or other finish, and which have been formed by oil-coated forms, scrub with a solution of 1½ lbs. caustic soda to one gallon of water.
- B. On surfaces where smooth wood or waste molds have been used, scrub with a solution of 20% muriatic acid or hydrochloric acid.
- C. After the surfaces have been scrubbed, wash with clean water as soon as possible.

3.07 DEFECTIVE CONCRETE

- A. The following concrete will be deemed to be defective and shall be removed promptly from the job site.
 - 1. Concrete, which is not formed as indicated, is not true to intended alignment, is not plumb or level where so intended, is not true to intended grades and levels;
 - 2. Has voids or honeycomb that have been cut, resurfaces, or filled, unless with the approval of the *ENGINEER*;
 - 3. Has sawdust, shavings, wood, or embedded debris;
 - 4. Does not conform fully to provisions of the *Contract Documents*.
- B. Repairs and replacements:
 - 1. Where defective concrete is found after removal of the forms, cut out the defective concrete, if necessary, and make the surfaces match adjacent surfaces.
 - 2. Work uneven surfaces and angles of concrete to a surface matching adjacent concrete surfaces.

3.08 GROUTING AND CEMENT POINTING

- A. After steel columns have been installed and leveled, drypack the space between the bottom of the plate and concrete, using cement grout driven in to completely fill the space and forming solid bearing for the column base plate.

****END OF SECTION****

SECTION 03 35 00
(03345)
CONCRETE FINISHING AND CURING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Finishing and curing of cast-in-place concrete as needed for a complete and proper installation.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 03 30 00: Concrete*
3. *Section 03 11 00: Concrete Formwork*

C. Payment:

1. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
2. Include all costs for *CONCRETE FINISHING AND CURING* in the prices bid for the various related items of work as designated in the Proposal.

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Manufacturer's product data:

1. Complete materials list of all materials proposed to be furnished and installed under this section.
2. Specifications and other data required that demonstrate compliance with the specified requirements.

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- B. Except as may be modified herein or otherwise directed by the Engineer, comply with ACI 301, "Specifications for Structural Concrete for Buildings."

1.04 PRODUCT HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacement necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Deliver materials in manufacturer's original unopened packaging with all tags and labels intact and legible of time of use.
- E. Store and handle material in strict accordance with manufacturer's directions and in such a manner as to avoid damage; store at site under cover.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 MATERIALS

A. General:

1. Carefully study the *Contract Documents* and determine the location, extent, and type of required concrete finishes.
2. As required for the work, provide the following materials, or equivalents approved in advance by the *ENGINEER*.

B. Concrete materials: Comply with pertinent provisions of Section 03300, except as may be modified herein.

C. Liquid bonding agent: "Weld-Crete," manufactured by the Larsen Products Corporation, or equal.

D. Curing and protection paper:

1. Approved products:
 - a. "Sisalkraft, Orange Label";
 - b. Equal products complying with ASTM C171.
2. Where concrete will be exposed and will be subjected to abrasion, such as floor slabs, use non-staining paper such as "Sisalkraft, Seekure 896," or equal paper faced with polyethylene film.
3. 6 mil, white polyethylene sheeting.

E. Liquid curing compound:

1. Concrete sealer: "VOCOMP-30" acrylic concrete curing and sealing material by W.R. Meadows or equivalent.

F. Slip-resistant abrasive aggregate:

1. Provide aluminum oxide, 14/36 grading.
2. Acceptable manufacturers:
 - a. Carborundum Company
 - b. Norton Company

c. L.M. Scofield Company

2.03 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 REQUIRED FINISHES

- A. Formed Surfaces:
1. Formed surfaces of concrete which will be exposed to view and which will not be painted shall receive a grout cleaned finish.
 2. Formed surfaces of concrete that will be painted shall receive a smooth form finish. Surfaces designated for immersion service shall not be "Bagged."
 3. Formed surfaces of concrete that will not be exposed to view but which will receive waterproofing shall be given a smooth form finish.
 4. Formed surfaces of concrete that will not be exposed to view and which are not scheduled to receive paint and/or waterproofing shall be given a rough form finish.
 5. Unspecified finish: If the finish of formed surfaces is not specified herein, provide the following finishes as applicable.

- a. Rough form finish:
 - (1) For all concrete surfaces not exposed to public view.
- b. Smooth form finish:
 - (1) For all concrete surfaces exposed to public view.

B. Slabs:

- 1. Floor slabs of buildings including stair landings and miscellaneous areas and garage floors shall receive a troweled finish. Floor slabs that will not receive tile, carpet or paint shall also receive floor sealer as specified herein.
- 2. Unformed surfaces of equipment foundations shall receive a floated finish.
- 3. Sidewalks, ramps and all exterior slabs on grade that are intended as walking surfaces shall receive a broom finish.
- 4. Exterior platforms, steps and landings and exterior and interior pedestrian ramps shall receive a non-slip finish.
- 5. Unspecified finish: If the finish of slab surfaces is not specified herein, provide the following finishes as applicable:
 - a. Scratched finish:
 - (1) For surfaces scheduled to receive bond-applied cementitious applications and slate or stone paving.
 - b. Floated finish:
 - (1) For surfaces intended to receive roofing.
 - c. Troweled finish:
 - (1) For floors intended as walking surfaces.
 - (2) Floors scheduled to receive floor coverings or waterproof membrane.
 - d. Broom finish:
 - (1) Exterior pedestrian ramps.

- e. Non-slip finish:
 - (1) Platforms, steps, and landings;
 - (2) Exterior or interior walkways near process equipment.

3.03 FINISHING OF FORMED SURFACES

A. General:

- 1. After removal of forms, give the concrete surfaces one or more of the finishes specified below.
- 2. Patch all bug holes, voids and cracks.
- 3. Revise the finishes as needed to secure the approval of the *ENGINEER*.

B. As-cast finish:

- 1. Rough form finish (below grade surfaces only):
 - a. Leave surfaces with the texture imparted by forms, except patch tie holes and defects.
 - b. Remove fins exceeding 1/4" in height.
- 2. Smooth form finish:
 - a. Coordinate as necessary to secure form construction using smooth, hard, uniform surfaces, with number of seams kept to a practical minimum and in a uniform and orderly pattern.
 - b. Patch tie holes and defects.
 - c. Remove fins completely.

C. Rubbed finishes:

- 1. Provide these finishes only on a "smooth form finish" base as described above.

2. Smooth rubbed finish:

- a. Produce on newly hardened concrete no later than the day following form removal.
- b. Wet the surfaces, and rub with carborundum brick or other abrasive until uniform color and texture are produced.
- c. Do not use a cement grout other than the cement paste drawn from the concrete itself by the rubbing process.

3. Grout cleaned finish:

- a. Do not start cleaning operations until all contiguous surfaces to be cleaned are completed and accessible.
- b. Do not permit cleaning as the work progresses.
- c. Mix one part portland cement and 1½ parts fine sand with sufficient water to produce a grout having the consistency of thick paint.
- d. Substitute white portland cement for part of the gray portland cement as required to produce a color matching the color of surrounding concrete, as determined by a trial patch.
- e. Wet the surface of the concrete sufficiently to prevent absorption of water from the grout, and apply the grout uniformly with brushes or spray gun.
- f. Immediately after applying the grout, scrub the surface vigorously with a cork float or stone to coat the surface and fill all air bubbles and holes.
- g. While the grout is still plastic, remove all excess grout by working the surface with a rubber float, sack, or other means.
- h. After the surface whites from drying (about 30 minutes at normal temperatures) rub vigorously with clean burlap.
- i. Keep the surface damp for at least 36 hours after final rubbing.

3.04 FINISHING SLABS

A. Definition of finishing tolerances:

1. "Class A": True plane within 1/8" in ten feet as determined by a ten foot straightedge placed anywhere on the slab in any direction.
2. "Class B": True plane within 1/4" in ten feet as determined by a ten foot straightedge placed anywhere on the slab in any direction.
3. "Class C" True plane within 1/4" in two feet as determined by a two foot straightedge placed anywhere on the slab in any direction.

B. Scratched finish: After the concrete has been placed, consolidated, struck off, and leveled to a Class C tolerance, roughen the surface with stiff brushes or rakes before the final set.

C. Floated finish:

1. After the concrete has been placed, consolidated, struck off, and leveled, do not work the concrete further until ready for floating.
2. Begin floating when the water sheen has disappeared and when the surface has stiffened sufficiently to permit the operation.
3. During or after the first floating, check the planeness of the surface with a ten-foot straightedge applied at not less than two different angles.
4. Cut down high spots and fill low spots, and produce a surface with a Class B tolerance throughout.
5. Refloat the slab immediately to a uniform sandy texture.

D. Troweled finish:

1. Provide a floated finish as described above, followed by a power troweling and then a hand troweling.
 - a. Produce an initial surface which is relatively free from defects, but which still may show some trowel marks.
 - b. Provide hand troweling when a ringing sound is produced as the trowel is moved over the surface.
 - c. Thoroughly consolidate the surface by hand troweling.

2. Provide a finished surface essentially free from trowel marks, uniform in texture and appearance, and in a plane of Class A tolerance.

a. On surfaces intended to support floor coverings, use fringing or other means as necessary and remove all defects in such magnitude as would show through the covering.

E. Broom finish:

1. Provide a floated finish as described above.

2. While the surface is still plastic, provide a textured finish by drawing a fiber bristle broom uniformly over the surface.

3. Unless otherwise directed by the *ENGINEER*, provide the texturing in one direction only.

4. Provide "light," "medium," or "coarse" texturing as directed by the *ENGINEER* or otherwise called for on the Drawings.

3.05 CURING, SEALING AND PROTECTION

A. Beginning immediately after placement, protect concrete from premature drying, excessively hot and cold temperatures and mechanical injury.

B. Where application of specified finish materials will be inhibited by use of curing or sealing agents, cure the surface by water only; do not use chemical cure. Do not use curing or sealing compound on surfaces to receive tile or crystalline waterproofing.

C. Liquid curing or sealing compounds shall not be used on any surface against which additional concrete or other material is to be bonded unless it is proven that the curing compound will not prevent or reduce bond, or unless positive measures are taken to remove it completely from such areas.

D. Preservation of moisture:

1. Unless otherwise directed by the *ENGINEER*, apply one of the following procedures to concrete not in contact with forms, immediately after completion of placement and finishing.

a. Ponding or continuous sprinkling.

b. Application of absorptive mats or fabric kept continuously wet.

- c. Application of sand kept continuously wet.
- d. Continuous application of steam (not exceeding 150°F) or mist spray.
- e. Application of waterproof sheet materials specified in Part 2 of this section.
- f. Application of other moisture retaining covering as approved by the *ENGINEER*.
- g. Application of the curing agent specified in Part 2 of this section or elsewhere in the contract Documents.
 - (1) Apply curing compound when the surface water has disappeared and walking workmen will not mar the concrete surface.
 - (2) Apply at the rate of 1/10 of a gallon per minute. Spray on in a fine, fog pattern without spurts and dribbles to form a thin, continuous film. Avoid puddling in low areas. Brush or roll out all puddles.

- 2. Where forms are exposed to the sun, minimize moisture loss by keeping the forms wet until they can be removed safely.
- 3. Cure concrete by preserving moisture as specified above for at least seven days.

E. Sealing:

- 1. Apply specified sealing compound to concrete curbs, sidewalks, driveways and aprons, designated floors and exterior flat work not designated to receive other finishes. Material may be used as a curing compound on these surfaces in accordance with manufactures directions.

F. Temperature, wind, and humidity:

- 1. Cold weather:
 - a. When the mean daily temperature outdoors is less than 40°F, maintain the temperature of the concrete between 50°F and 70°F for the required curing period.

- b. When necessary, provide proper and adequate heating system capable of maintaining the required heat without injury due to concentration of heat.
 - c. Do not use combustion heaters during the first 24 hours unless precautions are taken to prevent exposure of the concrete to exhaust gases, which contain carbon dioxide.
- 2. Hot weather: When necessary, provide wind breaks, fog spraying, shading, sprinkling, ponding, or wet covering with a light colored material, applying as quickly as concrete hardening and finishing operations will allow.
 - 3. Rate of temperature change: Keep the temperature of the air immediately adjacent to the concrete during and immediately following the curing period as uniform as possible and not exceeding a change of 5°F in any one hour period, of 50°F in any 24-hour period.

G. Protection from mechanical injury:

- 1. During the curing period, protect the concrete from damaging mechanical disturbances such as heavy shock, load stresses, and excessive vibration.
- 2. Protect finished concrete surfaces from damage from construction equipment, materials, and methods, by application of curing procedures, and by rain and running water.
- 3. Do not load self-supporting structures in such a way as to overstress the concrete.

****END OF SECTION****

SECTION 03 53 00

CONCRETE FLOOR TOPPING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Supply and installation of Ultra High Performance Cementitious topping.
2. Survey mapping of prepared and finished surfaces to ensure minimum topping thickness of 1½".

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 03 30 00: Concrete*
3. *Section 03 35 00: Concrete Finishing and Curing*

C. References:

1. American Concrete Institute (ACI):
 - a. ACI 212.3R-91 –Chemical Admixtures for Concrete
 - b. ACI 301- Specifications for Structural Concrete
 - c. ACI 302.1R – Guide for Concrete Floor and Slab Construction
 - d. ACI 304R-00 – Guide for Measuring, Mixing, Transporting and Placing Concrete
 - e. ACI 305R-Hot Weather Concreting
 - f. ACI 306R-Cold Weather Concreting
 - g. ACI 318-Building Code Requirements for Structural Concrete
 - h. ACI 347R– Guide to Formwork for Concrete
 - i. ACI 503.5R-92 – Guide for Polymer Adhesives in Concrete
2. American Society for Testing and Materials (ASTM):
 - a. ASTM A-615 – Standard Specification for Deformed and Plain Steel Bars for Concrete Reinforcement (Including Supplementary Requirements S1)

- b. ASTM C-31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field
- c. ASTM C-33-01a – Standard Specification for Concrete Aggregates
- d. ASTM C-39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- e. ASTM C-94 – Standard Specification for Ready-Mixed Concrete
- f. ASTM C-150-00 – Standard Specification for Portland Cement
- g. ASTM C-171-97a – Standard Specification for Sheet Materials for Curing Concrete
- h. ASTM C-172-99 – Standard Practice for Sampling Freshly Mixed Concrete
- i. ASTM C-173 – Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
- j. ASTM C309-98a – Standard Specification for Liquid Membrane Compounds for Curing Concrete
- k. ASTM C-494 – Standard Specification for Chemical Admixtures for Concrete
- l. ASTM C1315-00 – Standard Specification for Liquid Membrane forming Compounds Having Special Properties for Curing and Sealing Concrete
- m. ASTM D-4259-88 (1999) – Standard Practice for Abrading Concrete
- n. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.
- o. Personnel conducting field shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI –1 or an equivalent certification program.

3. International Concrete Repair Institute (ICRI)

- a. Guideline 310.2 – Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays

D. Separate payment:

- 1. Separate payment will be made for this item. Include all costs for *CONCRETE FLOOR TOPPING* as indicated under the specific proposal item.
- 2. The cost for this item shall include all materials, equipment, labor, and tools necessary and shall include those items that are considered to be an integral part of this work that may be specified elsewhere in these specifications.

1.03 SYSTEM DESCRIPTION

- A. Ultra-High Performance Cementitious Topping: Pre-formulated heavy-duty aggregate combined with a high strength cement based mortar topping as indicated on the Contract Drawings and specified in this section.
- B. The topping applicator shall provide and place heavy duty pre-formulated and pre-mixed topping, blended and packaged at the manufacturer's owned and controlled factory and deliver to the job site ready to apply. Work shall include materials and procedures for the required concrete surface preparation, including bonding, mixing, placing, finishing and curing.

1.04 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data: Within 45 days after award of the Contract submit:
 - 1. Complete materials list of all materials proposed to be furnished and installed under this section.
 - 2. Specifications and other data required that demonstrate compliance with the specified requirements.
 - 3. Manufacturer's recommended installation instructions. The manufacturer's recommended installation procedures will become the basis for inspecting and accepting or rejecting actual installation procedures on this work.
 - 4. Hold pre-slab construction conference per section 2.5.
- C. Shop drawings showing precise dimensions of the work of this section, and all other data needed to ensure proper and adequate provision in concrete forming, reinforcement, and placement to accommodate the work of this section.
- D. Manufacturer's recommended installation procedures.

1.04 QUALITY ASSURANCE

A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Installer Qualifications: Typical projects requiring a high performance topping also require a very experienced installer which has been previously approved by the manufacturer. An installer with a minimum of 10 years' experience who has completed topping Work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of similar size and application is required. Recent experience (dating no earlier than year 2010) must include at least 5 successful in-service projects, especially for public agencies and/or waste disposal facilities. A list of the previous installs shall be provided prior to bid date. Installer must be approved in writing by material manufacturer prior to bid. Contractors who are qualified members of NACT (North American Construction Technologies) have been trained and meet the qualified installer criteria for Ultra high performance toppings.
3. Topping Material Manufacturer Qualifications: Material manufacturers shall be ISO 9001/9002 registered and provide proof thereof. They also must provide proof of documented quality assurance system. Quality system must be registered by an independent registrar who is accredited by the American National Standards Institute, Registrar Accreditation Board (ANSI-RAB) or by another internationally recognized body. ISO 9001/9002 certification shall be included with material submittals.
4. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.

- a. Personnel conducting field testing shall be qualified as ACI

Concrete Field Testing Technician, Grade 1, according to ACI -1 or an equivalent certification program.”

- b. Compressive Strength Testing: Samples using 2x2" cubes or 2x3" cylinders are acceptable. Larger units are not acceptable.
 - c. Tensile Bond (Elcometer) Testing: Testing lab must show proficiency in running this test for bond quality of the topping to the substrate.
 - d. Prior to testing, a representative must review the testing procedures with the manufacturer's representative.
5. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.
- C. Basis of acceptance: The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

1.05 WARRANTY AND WARRANTY REPAIRS

- A. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.
 - 1. The contractor shall furnish the owner a 1-year minimum material and labor warranty signed jointly by the topping manufacturer and installer.

The warranty shall include the following:

- a. Suitability of topping material for the project;
 - b. Service preparation and bonding of topping for 1 year; and
 - c. Wear resistance: a wear failure shall be construed if the topping material wears through down to the substrate at any point during the warranty period.
 - d. A sample warranty must be submitted prior to bid date.
- B. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including removal, shipping, reinstallation and re-start-up during the maintenance period.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.
- C. Acceptable manufacturers:
1. The Euclid Chemical Company
 2. Or equivalent

2.02 MATERIALS

- A. Ultra-High Performance Cementitious Topping: "EucoFloor 404", manufactured by The Euclid Chemical Company or approved equivalent. Product shall be a pre-formulated specially processed and graded aggregate, tested cement and other high performance proprietary complementary components. Material shall be formulated and processed under stringent quality control free from n, in

manufacturer's owned and controlled facilities. Product must attain a minimum strength of 10,000 psi @7 days and 14,000 psi @ 28 days.

- B. Bonding Agent: "EucoFloor Epoxy Primer", manufactured by The Euclid Chemical Company or approved equivalent. A 100 percent reactive, two component aliphatic/amine type epoxy resin bonding agent, sand saturated, designed for bonding EucoFloor 404 to a well cured and properly prepared and hardened base concrete. Application rate of epoxy not to exceed 125 sq.ft. per gallon.
- C. Evaporation Retarder: "Eucobar", manufactured by The Euclid Chemical Company or approved equivalent. Water-based mono-molecular film applied to plastic concrete to reduce the rapid, early evaporation of water from the surface.
- D. Curing Compound: "Super Aqua Cure VOX" or "Super Diamond Clear VOX" manufactured by The Euclid Chemical Company or approved equivalent. Applied at a maximum rate of 300 square feet per gallon.

2.03 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02. EXISTING FLOOR SLAB SURFACE PREPARATION

- A. Saw cut perimeter of work areas and prepare existing slab surface to receive new

topping as shown in the Drawings along the repair and overlay boundaries.

- B. Prepare all remaining surfaces to be repaired or overlaid using shotblasting, scabblers, concrete milling machines or other suitable equipment to remove all deleterious material and create a surface profile of 1/4" amplitude. Acid-etched surface preparations are not acceptable. Surface preparation shall result in a surface profile acceptable to the bonding agent manufacturer, both in terms of amplitude and removal of surface grease, oils, or other materials that may adversely affect the bond of the topping. Surface preparation must meet a minimum of ICRI CSP 7 per Guideline 310.2.
- C. At all termination points around the perimeter of the product placement, the topping material must be keyed into the existing concrete to a minimum depth that matches or exceeds the overall floor topping thickness requirement.
- D. Clean scarified surface thoroughly until all laitance, dirt and similar deleterious materials have been removed.
- E. Survey the surface of the existing slab. Map and report to the Owner any existing cracks that might telegraph through the new concrete repair or topping. The Owner shall evaluate any such cracks for the need for additional repair prior to repair or topping placement.
- F. Apply bonding agent to the prepared surface to receive repair or topping in accordance with the manufacturer's recommended instructions (application rate dependent upon floor surface profile) and sand saturate the wet epoxy until refusal (recommended 16-20 mesh sand gradation). . Strict adherence to the working life of the bonding agent will be enforced. Allow the epoxy to cure and remove all loose sand prior to placement of performance cementitious topping by sweeping and or vacuuming the area.
- G. Wear Monitoring: If required, install triangular shaped wear Indicators as shown on Plans.

3.03 MIXING

- A. Thorough mixing of the topping material shall be in accordance with the manufacturer's written recommendations.

3.04 INSTALLATION

- A. Slab preparation, topping termination, bonding agents, topping placement, finishing and curing shall be in accordance with material manufacturer's written instructions.

- B. Materials manufacturer shall provide continual construction inspection during slab preparation and topping application. This inspection may be performed by the Contractor, as long as the Contractor is certified in writing by the manufacturer to do so prior to installation.
- C. Any deviations from the manufacturer's installation instructions must be approved by the manufacturer in writing prior to execution.

3.05 TOPPING APPLICATION (to determine proper installation technique, contact manufacturer.)

A. Bonding to Existing Concrete:

- 1. All slabs in the topping area shall receive a minimum of 1 ½" thick topping over a properly prepared based slab. Prior to the topping placement the surface shall be coated with bonding agent, sand saturated and fully cured. The bond coat shall be mixed and placed in strict accordance with the written instructions of the manufacturer.

- B. New Construction: Unless otherwise recommended, base concrete should be a minimum of 28 days old prior to placing the topping.

3.06 PLACING AND FINISHING

- A. Immediately after thorough mixing is completed, discharge topping material for immediate placing and screeding. Use evaporation retarder to keep moisture in topping material.

3.07 CURING AND PROTECTION

- A. Protect concrete from physical damage or reduced strength due to weather extremes and plant operations.
- B. After finishing and as soon as applicable, apply the curing compound on the topping. Maximum coverage rate of 300 sq.ft. per gallon. As soon as the curing compound has dried, the surface should have water applied and/or covered with polyethylene sheeting to minimize moisture lose.

3.08 NEW FLOOR SLAB TOPPING

- A. Topping thickness shall be a minimum of 1.5 inches. To accommodate the topping thickness, block out the area to receive the topping and recess the new concrete 1.5 inches or the topping thickness specified whichever is greater. Tolerance for topping block out recess thickness is +/- 1/8". Areas that will receive the topping are to be given a smooth float finish.

3.09 NEW FLOOR SLAB TOPPING SURFACE PREPARATION

- A. Prepare all surfaces to be overlaid using shot-blasting machines or other suitable equipment to create a surface profile of CSP 4-6. Acidetched surface preparations are not acceptable. Surface preparation shall result in a surface profile acceptable to the bonding agent manufacturer, both in terms of amplitude and removal of surface grease, oils, or other materials that may adversely affect the bond of the topping. Surface preparation must be meet a minimum of ICRI CSP 4 per Guideline 310.2.
- B. Clean prepared surface thoroughly until all laitance, dirt and similar deleterious materials have been removed.
- C. Survey the surface that will receive the topping. Map and report to the Owner any existing cracks that might telegraph through the topping. The Owner shall evaluate any such cracks for the need for additional repair prior to repair or topping placement.
- D. Apply bonding agent to the prepared surface to receive topping in accordance with the manufacturer's recommended instructions (application rate dependent upon floor surface profile) and sand saturate the wet epoxy until refusal. (recommended 16-20 mesh sand gradation). . Strict adherence to the working life of the bonding agent will be enforced. Allow the epoxy to cure and remove all loose sand prior to placement of performance cementitious topping by sweeping and or vacuuming the area.
- E. Wear Monitoring: If required, install triangular shaped wear Indicators as shown on Plans.

3.10 MIXING

- A. Thorough mixing of the topping material shall be in accordance with the manufacturer's written recommendations.

3.11 INSTALLATION

- A. Slab preparation, topping termination, bonding agents, topping placement, finishing and curing shall be in accordance with material manufacturer's written instructions.
- B. Materials manufacturer shall provide continual construction inspection during slab preparation and topping application. This inspection may be performed by the Contractor, as long as the Contractor is certified in writing by the manufacturer to do so prior to installation.
- C. Any deviations from the manufacturer's installation instructions must be approved by the manufacturer in writing prior to execution.

3.12 TOPPING APPLICATION (to determine proper installation technique, contact manufacturer.)

- A. Bonding to New Construction Concrete: Unless otherwise recommended, base concrete should be a minimum of 28 days old prior to placing the topping.

3.13 PLACING AND FINISHING

- A. Immediately after thorough mixing is completed, discharge topping material for immediate placing and screeding. Use evaporation retarder to keep moisture in topping material.

3.14 CURING AND PROTECTION

- A. Protect concrete from physical damage or reduced strength due to weather extremes and plant operations.
- B. After finishing and as soon as applicable, apply the curing compound on the topping. Maximum coverage rate of 300 sq.ft. per gallon. As soon as the curing compound has dried, the surface should have water applied and/or covered with polyethylene sheeting to minimize moisture loss.

3.15 CLEANING

- A. Comply with requirements of *Section 01 74 00, Cleaning and Restorations*.
- B. Remove and dispose of all debris.

3.16 TESTS

- A. Upon completion of this portion of the work and prior to acceptance by the *OWNER*, make all required tests and adjustments for free and smooth operation.
- B. Secure all approvals from agencies having jurisdiction.

****END OF SECTION****

SECTION 03 62 00
(03600)
NONSHRINK CEMENT GROUT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Grouting of baseplates and setting anchor bolts.
2. All other miscellaneous nonshrink grout work shown on the *Contract Drawings*.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. Cement-based grouting as indicated in Specifications, equipment manufacturer's specifications and on drawings shall comply with this section.
3. *Section 05 50 00: Metal Fabrications*

C. References:

1. ASTM C 109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
2. ASTM C 191 Standard Test Method for Time of Set of Hydraulic Cement by Vicat Needle
3. ASTM C 827 Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens from Cementitious Mixtures
4. CRD C 621 Corps of Engineers Specification for Nonshrink Grout
5. ASTM C 1090 Standard Test Method for Measuring Changes in Height of Cylindrical Specimens from Hydraulic Cement Grout

6. ASTM C 1107 Standard Specification for Packaged Dry, Hydraulic-Cement Grout (nonshrink)

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
 1. Complete materials list of all materials proposed to be furnished and installed under this section.
 2. Specifications and other data required that demonstrate compliance with the specified requirements.
 3. The Contractor must submit, prior to installation, for approval, manufacturer's literature and certified test data that material complies with specified requirements.
- C. Manufacturer's recommended installation procedures.

1.03 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
 2. All material suppliers shall be approved suppliers under NRC regulation 10 CFR 50, Appendix B Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.
- B. Qualifications of workmen:
 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.

2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
 3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.
- C. Basis of acceptance:
1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. All cement-based grouts shall be preblended, prepackaged materials requiring only the addition of water. They shall be delivered to the job site in original, unopened packages, clearly labeled with the manufacturer's identification and printed instructions. All cement-based materials shall be stored and handled in accordance with the recommendations of the manufacturer and the American Concrete Institute.

1.05 ENVIRONMENTAL CONDITIONS

- A. Refer to the manufacturer's literature for any physical or environmental limitations or contact the manufacturer directly.

1.06 WARRANTY AND WARRANTY REPAIRS

1. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.
2. The material manufacturer shall warrant that the non-shrink grout shall never go below its initial placement volume when tested in accordance with ASTM C827.

3. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including removal, shipping, reinstallation and re-start-up during the warranty period.

PART 2 - PRODUCT

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 PRODUCTS

- A. Grout shall be as specified herein and as manufactured by Five Star Products, Inc., Fairfield, Connecticut (203) 336-7900 or equivalent.
- B. Grouts:
 1. Five Star Grout: General Purpose
 2. Five Star Instant Grout:
 - a. Grouting of heavy equipment where start-up will occur in four (4) hours.
 - b. Rapid anchoring.
 3. Five Star Special Grout 110: Pumpable
 4. Five Star Special Grout 150: Areas subject to Sulfate attack.
 5. Five Star Special Grout 550: Hot weather grouting at temperatures to 115°F.

2.03 MATERIALS

A. Cement-based grouts shall have a history of successful use and meet the following performance requirements at maximum water. They shall not contain expansive cement or metallic particles such as aluminum powder or iron filings.

1. Plastic Volume Change: The grout shall show no shrinkage (0.0%) and a maximum 4.0% expansion from time of placement until final set when tested according to ASTM C 827.
2. Hardened Volume Change: The grout shall show no shrinkage (0.0%) and a maximum 0.2% expansion in the hardened state when tested according to C1090.
3. Compressive Strength: The grout shall show a minimum 28-day compressive strength of 5,000 psi when tested according to ASTM C 109, restrained.
4. Working Time: The grout shall show a consistency greater than 125% for a minimum 45 minutes when tested according to applicable consistency sections of ASTM C 827 at 15-minute intervals.
5. Tests: The Cylinder Plate Test shall be run on all field shipments.
6. Meet all requirements of ASTM C1107 for a Grade "C" Grout.

2.04 OTHER MATERIALS

A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.

- C. Do not proceed until unsatisfactory conditions are corrected.
- D. Inspect concrete surfaces to receive grout and verify that they are free of ice, frost, dirt, grease, oil, curing compounds, paints, impregnations and all loose material or foreign matter likely to affect the bond or performance of the grout.
- E. Newly placed concrete shall have been placed and cured sufficiently to attain its design strength.
- F. Inspect baseplates for rust, oil, and other deleterious substances.

3.02 PREPARATION

- A. In order to ensure proper bond to the baseplate and the concrete, all grease, oil, dirt, curing compounds, laitance rust and other deleterious materials must be completely removed from the concrete and bottom of baseplate.
- B. Roughen the surfaces by chipping, sandblasting or other mechanical means to assure bond of the grout to the existing concrete. Loose or broken concrete shall be removed.
- C. After concrete surfaces have been washed clean, they shall then be saturated with water for 24 hours prior to placement of cement-based grout.
- D. Upon completion of saturation period excess water shall be removed with clean compressed air prior to grouting.
- E. Forms to be built as needed.

3.03 INSTALLATION

- A. Carefully read and understand the manufacturer's instructions as printed on the unit.
- B. Mixing: A mortar mixer is recommended. Pre-wet the mixer, empty excess water. Add pre-measured amount of potable water to mixer then add grout. Mix for at least 3, but not more than 5 minutes, then place.
- C. Placing: Grout may be dry packed, flowed, vibrated or pumped into place. All grouting shall take place from one side of a plate to the other to avoid trapping air.

- D. Cutback: Just before the grout has reached its final set, the grout must be cutback to the lower edge of the plate. A 45 degree angle or vertical cutback is recommended.
- E. Curing: The grout shall be kept moist for a minimum of three days. The method needed to protect the grout will depend on temperature, humidity and wind. Wet burlap, a soaker hose, sun shading, ponding and in extreme conditions a combination of methods shall be employed.
- F. Clean-up: Upon completion of placement, equipment and tools shall be cleaned in such a manner as recommended by manufacturer.

****END OF SECTION****

SECTION 03 64 23
(03740)
CONCRETE CRACK REPAIR BY EPOXY INJECTION

PART 1 GENERAL

1.01 DESCRIPTION

A. Description:

1. Repair of structural and non-structural cracks in concrete slab by the pressure injection of an epoxy resin adhesive, if and where directed by the *ENGINEER*.
2. The work includes excavation to expose below grade foundations and restoration of finishes.

B. Related Work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 32 23 00: Excavating, Filling and Grading*
3. *Section 03 30 00: Concrete*

1.02 PERFORMANCE CRITERIA

A. Pressure injection gravity materials.

1. Properties of the mixed epoxy resin adhesive used for the pressure injection grouting:
 - a. Tack-free time to touch (3-5 mils): 2.5 - 4 hours.
 - b. Initial viscosity (Brookfield Viscometer, Spindle #2; speed 100): 300-450 cps.
 - c. Color: Clear, amber.

2. Properties of the cured epoxy resin adhesive used for pressure injection grouting:
- a. Compressive properties (ASTM D-695) at 28 days:
 - (1) Compressive strength: 10,000 psi min.
 - (2) Modulus of elasticity: 210,000 psi min.
 - b. Tensile properties (ASTM D-638) at 14 days:
 - (1) Tensile strength: 7,000 psi min.
 - (2) Elongation at break: 3 - 10%.
 - (3) Modulus of elasticity: 340,000 psi min.
 - c. Flexural properties (ASTM D-790) at 14 days:
 - (1) Flexural strength (modulus of rupture): 8,600 psi min.
 - (2) Tangent modulus of elasticity in bending: 300,000 psi min.
 - d. Shear strength (ASTM D-732) at 14 days: 4,500 psi min.
 - e. Total water absorption (ASTM D-570) at 7 days: 1.5% max. (2 hour boil).
 - f. Bond strength (ASTM C-882) hardened concrete to hardened concrete:
 - (1) 2 day (dry cure): 2,300 psi min.
 - (2) 14 day (moist cure): 2,300 psi min.
 - g. Deflection temperature (ASTM D-648) at 14 days: 108°F min. (fiber stress loading = 264 psi).
 - h. The epoxy resin adhesive shall conform to ASTM C-881, Type I, Grade 1, Class B and C.
 - i. The epoxy resin adhesive shall be approved by the United States Department of Agriculture.

B. Sealant for cracks and porting devices.

1. Properties of the mixed epoxy resin adhesive used for the sealing of cracks and porting devices:
 - a. Tack-free time to touch: 2 - 3 hours.
 - b. Consistency (½ inch thick): Non-sag.
 - c. Color: Gray.
2. Properties of the cured epoxy resin adhesive used for the sealing of cracks and porting devices:
 - a. Compressive properties (ASTM D-695) at 28 days:
 - (1) Compressive strength: 10,000 psi min.
 - (2) Modulus of elasticity: 700,000 psi min.
 - b. Tensile properties (ASTM D-638) at 14 days:
 - (1) Tensile strength: 3,000 psi min.
 - (2) Elongation at break: 0.3%.
 - (3) Modulus of elasticity: 630,000 psi min.
 - c. Flexural properties (ASTM D-790) at 14 days:
 - (1) Flexural strength (modulus of rupture): 3,700 psi min.
 - (2) Tangent modulus of elasticity in bending: 850,000 psi min.
 - d. Shear strength (ASTM D-732) at 14 days: 3,800 psi min.
 - e. Total water absorption (ASTM D-570) at 7 days: 1.0% max. (2 hour boil).
 - f. Bond strength (ASTM C-882) hardened concrete to hardened concrete:
 - (1) 2 day (dry cure): 2,800 psi min.

- (2) 14 day (moist cure): 2,000 psi min.
- g. Deflection temperature (ASTM D-648) at 14 days: 104°F min. (fiber stress loading = 264 psi).
- h. The epoxy resin adhesive shall conform to ASTM C-881, Type I, Grade 3, Class B and C.
- i. The epoxy resin adhesive shall be approved by the United States Department of Agriculture.

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
 - 1. Complete materials list of all materials proposed to be furnished and installed under this section.
 - 2. Specifications and other data required to demonstrate compliance with the specified requirements.
 - 3. Material Safety Data Sheets (MSDS).
- C. Manufacturer's recommended installation procedures.

1.04 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
 - 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
- B. Qualifications of workmen:
 - 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for

their execution, and who shall direct all work performed under this section.

2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

C. Basis of acceptance:

1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.05 PRODUCT DELIVERY STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

1.06 PROJECT CONDITIONS

- A. Environmental conditions: Do not apply material if it is raining or snowing or if they appear to be imminent.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified repair material.

1.07 WARRANTY AND WARRANTY REPAIRS

- A. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.
- B. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including removal, shipping, reinstallation and re-start-up during the warranty period.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.
- C. Acceptable manufacturers:
 - 1. Sika
Lyndhurst, NJ
201-933-8800
 - 2. Sonneborn
Chemrex, Inc.
Shakopee, MN
1-800-433-9517
 - 3. Prime Resins, Inc.
Conyers, GA
1-800-321-7212
 - 4. Or equivalent.

2.02 PRODUCTS

- A. Epoxy resin adhesive for pressure injection of cracks:

1. Sika "Sikadur 35, Hi-Mod LV".
 2. Sika "Sikadur 52".
 3. Sonneborn "Epofil".
 4. Prime Resins "Prime Rez 1000, High-Mod".
- B. Epoxy resin adhesive for sealing of cracks and porting devices.
1. Sika "Sikadur 31, Hi-Mod Gel".
 2. Sonneborn "Epogel".
 3. Prime Resins "Prime Gel 2000, High Mod".
- C. Or equivalent.

2.03 MATERIALS

- A. Epoxy resin adhesive for the pressure injection of cracks:
1. Component "A" shall be a modified epoxy resin containing suitable viscosity control agents.
 2. Component "B" shall be primarily a reaction product of a selected amine blend with an epoxy resin containing suitable viscosity control agents and accelerators.
 3. The ratio of Component "A": Component "B" shall be 2:1 by volume.
- B. The epoxy resin adhesive for the sealing of cracks and porting devices:
1. Component "A" shall be a modified epoxy resin containing suitable viscosity control agents and pigments.
 2. Component "B" shall be primarily a reaction product of a selected amine blend with an epoxy resin containing suitable viscosity control agents, pigments and accelerators.
 3. The ratio of Component "A": Component "B" shall be 2:1 volume.
 4. The material shall not contain asbestos.

- C. Porting devices as required for either manual or automated application. Porting devices for automated application shall be supplied by the manufacturer of the pressure injection equipment.

2.04 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Cracks and adjacent substrate must be clean, sound and free of frost.
- B. Remove dust, laitance, grease, curing compounds, waxes, impregnations, foreign particles, efflorescence and other bond inhibiting materials from the surface by mechanical means, i.e. - sandblasting, high pressure waterblasting, etc., as approved by the *ENGINEER*.
- C. Repair area may be dry or damp, but shall be free of standing water prior to product application.
- D. Mixing the epoxy resin adhesive for sealing cracks and porting devices:
 - 1. Premix each component in accordance with manufacturers instructions.

2. Mix only that quantity of material that can be used within its pot life.

E. Mixing of the epoxy resin adhesive used for pressure injection grouting:

1. Manual: Premix each component in accordance with manufacturer's instructions. Mix only that quantity of material that can be used within its pot life (20-30 minutes at 73F).
2. Automated: The injection equipment shall meter and mix the two (2) components of the epoxy resin adhesive and dispense the product into the prepared cracks. The unit shall be portable and be equipped with positive displacement-type pumps with interlock to provide positive ratio control of exact proportions of the two (2) components of the epoxy resin adhesive at the nozzle. The pumps shall be air powered or electric and shall provide an in-line mixing and metering system and shall contain drain-back plugs.

3.03 INSTALLATION

- A. General: Install the work of this section in strict accordance with the manufacturer's recommendations.

B. Placement procedure:

1. Sealing cracks and porting devices: Set porting devices as required by the manufacturer. Spacing of the porting devices shall not exceed the thickness of the substrate. Spacing of the porting devices shall be accomplished as required to achieve the travel of the epoxy resin adhesive for the pressure injection grouting between ports and fill the cracks to the maximum. On structures open on both sides, provide porting devices on opposite sides at staggered elevations. Apply the mixed epoxy resin adhesive for sealing over the cracks and around each porting device to provide an adequate seal to prevent the escape of the epoxy resin adhesive for the injection grouting. Where required by the *ENGINEER*, apply the epoxy resin adhesive for sealing in such a manner that minimal defacing or discoloration of the substrate shall result.
2. Pressure injection grouting:
 - a. Manual: Load the mixed epoxy resin adhesive for grouting into a disposable caulking cartridge or bulk-loading caulking gun. Inject the prepared cracks with a constant pressure in order to achieve

maximum filling and penetration without the inclusion of air pockets or voids in the epoxy resin adhesive. Begin the pressure injection at the lowest port and continue until there is the appearance of the epoxy resin adhesive at an adjacent port, thus indicating travel. Continue the procedure until all pressure injectable cracks have been filled.

- b. Automated: Dispense the epoxy resin adhesive for grouting under constant pressure in accordance with procedures recommended by the equipment manufacturer or as required to achieve maximum filling and penetration of the prepared cracks without the inclusion of air pockets or voids in the epoxy resin adhesive. Continue the approved procedure until all pressure injectable cracks have been filled.
- C. If penetration of any cracks is impossible, consult the *ENGINEER* before discontinuing the injection procedure. If modification of the proposed procedure is required to fill the cracks, submit said modification in writing to the *ENGINEER* for acceptance prior to proceeding.
- D. Adhere to all limitation and cautions for the epoxy resin adhesives in the manufacturers current printed literature.

3.04 CLEANING

- A. After the epoxy resin adhesive for grouting has cured, the epoxy resin adhesive for sealing cracks and porting devices shall be removed as required by the *ENGINEER*. Clean the substrate in a manner to produce a finish appearance acceptable to the *OWNER*.
- B. The uncured epoxy resin adhesive can be cleaned from tools with an approved solvent. The cured epoxy resin adhesive can only be removed mechanically.
- C. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

PART 4 - PAYMENT

4.01 CONCRETE CRACK REPAIR BY EPOXY INJECTION

- A. Measurement: The quantity for which payment will be made will be the length of crack actually repaired measured in linear feet along the visible line of the crack.
- B. Payment: Payment will be made for the quantity as above determined at the unit price per linear foot bid in the proposal for the item *CONCRETE CRACK REPAIR – EPOXY INJECTION, IF AND WHERE DIRECTED* which prices shall include all materials, equipment, preparation, excavation; removal and disposal of sidewalks and paving, relocation of shrubbery, grouting, clean-up, restorations, and all else necessary or required for a complete and proper installation.

****END OF SECTION****

SECTION 05 50 00
(05500)
METAL FABRICATIONS

PART 1 - GENERAL

1.01 SUMMARY

A. Work included:

1. Aluminum slab wear indicators.
2. Anchors, base plates, and inserts.
3. All other miscellaneous metal work shown on the *Contract Drawings*.
4. Shop or field painting of all metal fabrications and miscellaneous metals.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 03 30 00: Concrete*
3. *Section 03 62 00: Non-Shrink Grout*
4. *Section 09 90 00: Painting*

C. Payment:

1. Unless otherwise noted in the *Proposal* Section, no separate payment shall be made for this item.
2. Include all costs for *METAL FABRICATIONS* in the prices bid for the various related items of work as designated in the *Proposal*.

D. Standards: Comply with the provisions of the following (as applicable):

1. AISC – “Specification for Design, Fabrication, and Erection of Structural Steel for Building”.
2. The Aluminum Association – “Aluminum Design Manual”.

3. AWS – “Structural Welding Code D1”.
4. ASME – “Structural Welding code Section IX”.
5. FEMA Bulletin 3-93, #102 and #114.

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
 1. Complete materials list of all materials proposed to be furnished and installed under this section.
 2. Specifications and other data required that demonstrate compliance with the specified requirements.
- C. Shop drawings.
 1. Show each type of structure, details of anchor bolt settings; longitudinal and transverse cross sections; framing and details; and all accessory items; materials; finishes; construction and installation details; and other pertinent information required for proper and complete fabrication, assembly and erection.
 2. Submit an anchor bolt setting plan with the following information included:
 - a. Where using cast-in place anchor bolts, show anchor bolt locations, diameters, material, plate washer sizes (if used), and projection and embedment lengths above and below the bearing face of concrete.
 - b. Where anchor bolts are drilled in concrete, show anchor bolt locations, diameters, material, projection and embedment lengths above and below the bearing face of concrete, the anchor bolt manufacturer's model number and description along with the manufacturer's current allowable load tables with recommended installation, use and safety factor data. The manufacturer's dimensional limits regarding bolt spacing, edge distance, embedment length and their effect upon allowable stresses shall be included.

- c. For all types of anchor bolts, provide base plate thickness and size and depth of grout to be provided.
- D. Manufacturer's current recommended installation procedures.

1.03 QUALITY ASSURANCE

A. Qualifications of manufacturer:

- 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Qualifications of workmen:

- 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
- 2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
- 3. Perform shop and/or field welding required in connection with the work of this Section in strict accordance with pertinent recommendations of the American Welding Society. Welders shall be certified as meeting the requirements of the American Welding Society AWS D1.1.
- 4. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

C. Basis of acceptance:

- 1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.04 PROJECT CONDITIONS

A. Field Measurements:

- 1. Check actual locations and other construction to which metal fabrications must fit, by accurate field measurements before fabrication.

2. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 MATERIALS

- A. In fabricating items that will be exposed to view, limit materials to those that are free from surface blemishes, pitting, rolled trade names, and roughness.

2.03 IRON AND STEEL

- A. All steel shapes, plates and bars shall be hot dip galvanized after fabrication in accordance with ASTM A123.
- B. Comply with following standards, as pertinent.
1. Steel plates, shapes, and bars:
 - a. ASTM A36, except “W” and “WT” shapes; 36 KSI minimum yield.
 - b. ASTM A572 or ASTM A992 for “W” and “WT” shapes; 50 KSI minimum yield.
 2. Steel plates to be bent or cold-formed: ASTM A283, Grade C;
 3. Steel tubing (hot-formed, welded, or seamless): ASTM A501;
 4. Steel bars and bar-size shapes: ASTM A306, Grade 65, or ASTM A36;
 5. Cold-finished steel bars: ASTM A108;
 6. Cold-rolled carbon steel sheets: ASTM A336;
 7. Cast steel: ASTM A27, Grade N2;
 8. Galvanized carbon steel sheets: ASTM A526, with G90 zinc coating in accordance with ASTM A525;
 9. Gray iron castings: ASTM A48, Class 10;
 10. Malleable iron castings: ASTM A47;
 11. Steel pipe: ASTM A53, Grade B, Schedule 40, black finish unless otherwise noted;
 12. Checkered floor plate shall conform to ASTM A36 with a symmetrical raised diamond pattern.

2.04 ALUMINUM

- A. Aluminum work shall be fabricated of plates and rolled or extruded shapes. All aluminum shall conform to the appropriate current ASTM Specification and alloy listed below.

<u>Application</u>	<u>Designation</u>	<u>Alloy</u>
Permanent Mold Castings	B108	SG-70B-T61
Sand Castings	B26	SG-70A-T6
Plate	B209	6061-T6
Bolts, Screws	B211	2024-T4*
Nuts, 5/16" Tap and Under	B211	6061-T6
Rolled or Extruded Shapes	B308	6061-T6
Extruded Bar and Tube	B221	6061-T6
Drawn Tube	B210	6061-T6
Pipe	B241	6061-T6
Shims	B209	1100-0
Flat Washers	B209	2024-T4
Lock Washers	B211	7075-T6

*This alloy should have an anodic coating of 0.002-inch minimum thickness, with dichromate or boiling water seal.

B. Checkered plate:

1. Checkered plates and frames: Aluminum checkered plates shall be of an approved non-slip pattern and the thickness indicated on the *Contract Drawings*. Sheared edges shall be ground smooth.
2. Checkered plates shall be set in neatly made and fitted angle frames, as indicated on the *Contract Drawings* or approved. Checkered plates shall be divided into sections and provided with handles as indicated on the *Contract Drawings* or approved.

2.05 STAINLESS STEEL

- A. Pipe: ASTM A312, Type 316 unless otherwise shown and with a mill finish.
- B. Shapes and Bars: A276, Type 316 unless otherwise shown and with a mill finish.
- C. Sheet: ASTM 666, type and gage as shown with a mill finish for areas not visible to the public and a #4 finish otherwise.
- D. Forgings: ASTM A473.
- E. Wire: ASTM A580.
- F. Checkered Plate: ASTM A793.

G. Wire Rope:

1. Wire conforming to ASTM A492, Type 304.
2. Type II for cargo handling conforming to MIL-DTL-83140A, Wire Rope, Steel, (Stainless Steel) Preformed, Nonrotating, for Aircraft Rescue Hoist and Cargo Handling (Winching)

H. Stainless steel checkered floor plates shall incorporate an anti-slip stainless steel surface covering 100% of the substrate and consisting of a random hatch matrix with a surface hardness between 55 – 63 on the Rockwell “C” scale and a surface to substrate bond strength of at least 4,000 psi. The non-slip surface shall have a minimum coefficient of friction of 0.8 and be listed as slip resistant by Underwriters Laboratories.

1. Acceptable manufacturers
 - a. Algrip
 - b. SlipNot

2.06 FASTENERS

A. General:

1. For exterior use and where built into exterior walls, provide zinc-coated fasteners.
2. Provide fasteners of type, grade and class required for the particular use.
3. Thread lubricant to prevent galling: Molybdenum disulfide reinforced grease.

B. Comply with following standards as pertinent:

1. Carbon steel:
 - a. Bolts and nuts: Provide hexagon-head regular type complying with ASTM A307, Grade A;
 - b. Lag bolts: Provide square-head type complying with Fed Spec FF-B-561;
 - c. Machine screws: Provide cadmium plated steel type complying with Fed Spec FF-S-111;

d. Washers:

- (1) Plain washers: Comply with Fed Spec FF-W-92, round, carbon steel;
- (2) Lock washers: Comply with Fed Spec FF-W-84, helical spring type carbon steel;

e. Toggle bolts: Provide type, class, and style needed but complying with Fed Spec FF-B-588;

2. Stainless Steel:

a. Bolts: Hexagon-head Type 316 Stainless Steel complying with ASTM F-593, Alloy Group 1.

b. Nuts: Hexagon-head Type 316 Stainless Steel complying with ASTM F-594, Alloy Group 1. Cotter pins for castle type lock nuts shall also be stainless steel.

c. Washers: Type 316 Stainless Steel complying with ASTM F-593, Alloy Group 1.

3. Aluminum:

a. Bolts: Hexagon-head aluminum bolts, Alloy 6061-T6 complying with ASTM F-468.

b. Nuts: Self-locking, hexagon-head aluminum nuts, Alloy 6061-T6, complying with ASTM F-467.

c. Washers: Aluminum washers, Alloy 6061-T6.

C. Concrete stud anchors shall be H4L headed concrete anchors as manufactured by Nelson Stud Welding Division of TRW, Incorporated. Anchors shall be welded to steel in accordance with manufacturer's instructions.

2.07 CONCRETE ANCHOR BOLTS

A. General: Concrete anchor bolts are either cast-in or drilled-in concrete as indicated on the plans. Drilled-in concrete anchors shall be either adhesive or expansion anchors. However, unless specifically indicated as otherwise on the plans, all drilled-in concrete anchor bolts shall be adhesive anchors.

B. Materials:

1. Cast-in concrete anchors shall be either stainless steel ASTM F593 (AISI 304) or carbon steel ASTM A36. Unless specifically indicated as otherwise on the plans, all cast-in concrete anchors shall be stainless steel ASTM F593 (AISI 304).
2. Drilled-in concrete anchors:
 - a. Adhesive anchors: All adhesive anchors shall consist of an all thread anchor rod, nut, washer and adhesive material. Anchor rods shall be AISI Type 304 stainless steel that meets the requirements of ASTM F593. The adhesive anchors shall be Hilti "HIT-HY 200" injection adhesive anchors or equivalent. All drilled-in concrete anchors shall be adhesive anchors unless specifically indicated as otherwise on the plans.
 - b. Expansion anchors shall be Hilti Kwik Bolts III concrete expansion anchors as manufactured by Hilti Fastening Systems, Tulsa, Oklahoma. Expansion anchors shall be made of AISI Type 304 stainless steel. Expansion anchors shall be used only when specifically indicated on the plans.

2.08 SHOP PAINT

A. Primer: As specified in *Section 09 90 00, Painting*.

B. Galvanizing Repair:

1. All damage to galvanized surfaces shall be repaired using an organic, zinc-rich coating containing 95% metallic zinc by weight in the dried film. Material shall be recognized under the Component Program of Underwriter's Laboratories, Inc., as an equivalent to hot-dip galvanizing and conform to Federal Specification DOD-P-21035 (formerly MIL-P-21035A) for repair of hot-dip galvanizing and meet requirements of Military Specification MIL-P-26915A USAF Specification for Zinc-Rich Paints. Repair coating shall be "DEVCON Z," "KoldGalv 920Z," "ZRC COLD GALVANIZING COMPOUND," or equivalent.
2. Galvanizing repair
 - a. Surface preparation: SSPC-SP11, Power Tool Cleaning to Bare Metal.

- b. Cold galvanizing compound: 1 coat at 4 mils DFT

2.09 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

2.10 FABRICATION

- A. General:

1. Except as otherwise shown on the *Contract Drawings* or the approved *Shop Contract Drawings*, use materials of size, thickness, and type required to produce reasonable strength and durability in the work of this Section.
2. Form metal fabrications from materials of size, thickness, and shapes indicated but not less than that needed to comply with performance requirements indicated. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support. Use type of materials indicated or specified for various components of each metal fabrication.
3. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.
4. Allow for thermal movement resulting from the following maximum change (range) in ambient temperature in the design, fabrication, and installation of installed metal assemblies to prevent buckling, opening up of joints, and overstressing of welds and fasteners. Base design calculations on actual surface temperatures of metals due to both solar heat gain and nighttime sky heat loss. Temperature change (Range): 100 deg F (38 deg C).
5. Shear and punch metals cleanly and accurately. Remove burrs.
6. Ease exposed edges to a radius of approximately 1/32 inch, unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
7. Remove sharp or rough areas on exposed traffic surfaces.

8. Weld corners and seams continuously to comply with AWS recommendations and the following:
 - a. When welding painted or galvanized steel, the zinc or paint coating shall be removed to bare metal at least 1" to 4" (2.5-10 cm) from either side of the intended weld zone and on both sides of the pieces.
 - b. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - c. Obtain fusion without undercut or overlap.
 - d. Remove welding flux immediately.
 - e. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and contour of welded surface matched those adjacent.
9. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type indicated or, if not indicated, Phillips flat-head (countersunk) screws or bolts. Locate joints where least conspicuous.
10. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use.
11. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
12. Cut, reinforce, drill and tap miscellaneous metal work as indicated to receive finish hardware, screws, and similar items.
13. Fabricate joints that will be exposed to weather in a manner to exclude water, or provide weep holes where water may accumulate.
14. Prior to shop painting or priming, properly clean metal surfaces as specified in *Section 09 90 00, Painting*, for the applied finish and for the proposed use of the item.

15. On surfaces inaccessible after assembly or erection, apply two (2) coats of the specified primer. Change color of second coat to distinguish it from the first.
16. Insulate aluminum surfaces that will come in contact with concrete, masonry, plaster, or metals other than stainless steel, zinc or white bronze by giving a coat of heavy-bodied alkali resisting bituminous paint or other approved paint in shop.
17. Stainless steel materials and fabrications shall be cleaned and passivated in accordance with ASTM A380 after fabrication.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 COORDINATION

- A. Coordination as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.

3.03 INSTALLATION

- A. General:
 1. Set work accurately into position, plumb, level, true, and free from rack.
 2. Anchor firmly into position.
 3. Where field welding is required, comply with AWS recommended procedures of manual-shielded metal-arc welding for appearance and quality of weld and for methods to be used in correcting welding work.

4. When welding painted or galvanized steel, the zinc or paint coating shall be removed to bare metal at least 1" to 4" (2.5-10 cm) from either side of the intended weld zone and on both sides of the pieces.
5. Grind exposed welds smooth, and touch-up shop prime coats or galvanized surfaces as applicable.
6. Do not cut, weld, or abrade surfaces which have been hot-dip galvanized after fabrication and which are intended for bolted or screwed field connections.

3.04 FIELD PAINTING

- A. Immediately after erection, clean the field welds, bolted connections, and abraded areas of shop priming. Paint the exposed areas with same material used for shop priming.
- B. Field paint all surfaces in accordance with *Section 09 90 00*.
- C. Do not paint aluminum or stainless steel unless otherwise indicated.

****END OF SECTION****

SECTION 09 90 00
(09900)
PAINTING
(GENERAL)

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Surface preparation, priming and finish coat(s) painting of all ferrous metals not shop primed or galvanized and installed under this contract using the "exterior condition" specification for all conditions, including inside the building.
2. Restore and repaint areas damaged.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 74 00: Cleaning and Restorations*
3. *Section 03 30 00: Concrete*
4. *Section 05 50 00: Metal Fabrications*
5. *Section 31 23 00: Excavating, Filling and Grading*

C. Payment:

1. Unless otherwise noted in the *PROPOSAL* Section, no separate payment shall be made for this item.
2. Include all costs for *PAINTING* in the prices bid for the various related items of work as designated in the *PROPOSAL*.

1.02 REFERENCE STANDARDS

A. Steel Structures Painting Council:

1.	SSPC-SP1	Solvent Cleaning
2.	SSPC-SP2	Hand Tool Cleaning
3.	SSPC-SP3	Power Tool Cleaning
4.	SSPC-SP5	White Metal Blast Cleaning
5.	SSPC-SP6	Commercial Blast Cleaning
6.	SSPC-SP7	Brush-Off Blast Cleaning
7.	SSPC-SP10	Near-White Blast Cleaning
8.	SSPC-SP11	Power Tool Cleaning to Bare Metal
9.	SSPC-SP12	High & Ultrahigh-Pressure Water Jetting
10.	SSPC-SP13	Surface Preparation of Concrete
11.	SSPC-TR3	Dehumidification & Temperature Control
12.	SSPC-Vis 1	Pictorial Surface Preparation Standards
13.	SSPC-Vis 3	Visual Std. for Power and Hand tool Cleaned Steel
14.	SSPC-PA 1	Shop, Field and Maintenance Painting
15.	SSPC-PA2	Measurement of Dry Paint Thickness

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's literature:
 - 1. Manufacturer's descriptive literature to include color charts, and recommend method of application for paints and related materials.
 - 2. Manufacturer's standard and custom color charts and decks showing full range of colors available.
- C. Upon completion of high performance coating application, provide certification from paint material supplier indicating that quantity of each coating material purchased was sufficient to properly coat all surfaces. Such certification shall list the square footage figure for all areas coated and the number of gallons of each material used as provided by *CONTRACTOR*.

1.04 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
 - 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Applicator qualifications:

1. Completion of minimum of five (5) equal applications for each coating system specified.
2. Provide listing of experience as outlined in *PROPOSAL*.
3. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
4. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
5. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

B. Labels: Include the following information on each paint material container label:

1. Manufacturer's name.
2. Distinctive product name.
3. Manufacturer's stock number and lot number.

C. Product information:

1. Manufacturer shall include the following on paint material label, or submit on accompanying instruction sheet for *CONTRACTOR'S* use.
2. Submit detailed information as specified in AWWA D102, Section 4.
 - a. Mixing instructions
 - b. Percent solids
 - c. Spreading rate
 - d. Weight
 - e. Drying time
 - f. Pot life

- g. Thinning instructions
 - h. Safety precautions
3. Provide Material Safety Data Sheets (MSDS) for all materials delivered to site.

D. Requirements of regulatory agencies:

- 1. Comply with all Local, State, and Federal safety regulations, laws and ordinances.
- 2. Federal:
 - a. Worker protection:
 - (1) 29 CFR 1910.94, Ventilation
 - (2) 29 CFR 1910.95(a-p), Occupational Noise Exposure
 - (3) 29 CFR 1910.97, Non-Ionizing Radiation
 - (4) 29 CFR 1910.134, Respiratory Protection Standard
 - (5) 29 CFR 1910.146, Permit-Required Confined Spaces
 - (6) 29 CFR 1926.20, General Safety and Health Provisions
 - (7) 29 CFR 1926.353, Protection in Welding, Cutting and Heating
 - (8) 29 CFR 1926.55, Gases, Vapors, Fumes, Dusts and Mists
 - (9) 29 CFR 1926.57, Ventilation
 - (10) 29 CFR 1926.59, Hazard Communication Program
 - (11) 29 USC 654, Section 5(a)(1) General Duty Clause of the 1970 OSH Act, which requires employers to provide safe work conditions for their employees.
 - b. Ambient air quality:
 - (1) 40 CFR 50.6, National Primary and Secondary Ambient Air Quality Standards for Particulate Matter.
 - c. Water quality:
 - (1) 40 CFR 122, Administered Permit Programs: The National Pollutant Discharge Elimination System
 - (2) 40 CFR, Parts 141, 142 and 143; Federal Safe Drinking Water Act

- d. Hazardous waste:
 - (1) 40 CFR 261, Identification and Listing of Hazardous Waste
 - (2) 40 CFR 262, Standards Applicable to Generators of Hazardous Waste
 - (3) 40 CFR 263, Standards Applicable to Transporters of Hazardous Waste
- 3. State of New Jersey:
 - a. NJAC 7:10-1 et. seq.; New Jersey Safe Drinking Water Regulations.
 - b. NJAC 7:27-16; Misc. Metal Parts and Products Rule.
 - c. NJAC 7:27-23; Architectural Coatings Rule.
 - d. NJAC 8:59-5.1, et. seq.; New Jersey Worker and Community Right to Know Act.
- 4. All other Federal, State and local regulations applicable to the work.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.
- E. Deliver sealed containers with labels legible and intact.
- F. Storage of materials:
 - 1. Store only acceptable project materials on project site.

2. Store in suitable location. Comply with manufacturer's storage recommendations.
3. Restrict storage to paint materials and related equipment.
4. Comply with health and fire regulations.
5. Storage of materials shall be subject to approval of *ENGINEER*.
6. All paint cans, opened and unopened, shall remain on job site for inspection by *ENGINEER*. Do not discard until directed to do so by *ENGINEER*.

1.06 JOB CONDITIONS

- A. Sequencing, scheduling: Do not begin painting until environmental conditions meet the requirements of these Specifications.
- B. Environmental requirements:
 1. Do not blast when relative humidity exceeds 85 percent (85%), and/or surface temperature of steel is less than 5° F. above the dew point.
 2. Comply with paint supplier's recommendations as to environmental conditions under which coatings and coating systems can be applied. The following shall be considered as general requirements, and shall not be exceeded unless recommended by paint supplier and approved by *ENGINEER*.
 - a. Interior coating systems:
 - (1) Do not apply when surrounding air temperature, as measured in shade, is below 50° F. and when temperature of surface to be painted is below 50° F.
 - (2) Do not apply paint to wet or damp surfaces during periods of rain, snow, fog, or mist, or when relative humidity exceeds 85 percent. If dew or condensation is present, delay painting until mid-morning or as required to insure that surfaces to be painted are dry.
 - (3) Do not apply paint when it is expected that air temperature in shade will drop below 50° F., or that relative humidity will exceed 85 percent within 18 hours after application of

paint. Complete days painting to allow minimum of 6 hours drying time prior to time of day when condensation will occur.

b. Exterior coating systems:

- (1) Same general environmental requirements as specified for interior coating system.
- (2) Do not apply paint when wind velocity exceeds 15 m.p.h.

C. Protection:

1. Cover or otherwise protect surfaces not being painted concurrently.
2. *CONTRACTOR* shall promptly remedy all paint damage to existing structures and other property at site or adjacent thereto not designated for painting under this Contract. See paragraph 9 of General Conditions, as amended by Supplementary Conditions.

D. Safety precautions:

1. Comply with all OSHA regulations.
2. Provide adequate air exhaust equipment to eject blast dust and solvent fumes from tank interiors or confined spaces; and to prevent accumulation of solvent fumes that will retard curing of the paint or create an explosion or fire hazard.
3. During blasting operations, provide nozzle men with air-supplied helmets and other persons exposed to blasting dust with filter-type respirators and safety goggles.
4. When applying coatings inside of tanks or confined spaces, all persons exposed to toxic vapors shall wear air-supplied masks.
5. Provide access facilities, ventilation, grounding, lighting, protective clothing; and handle paint and solvent as specified in AWWA D102, Section 7. Comply with paint supplier's safety precautions.

1.07 WARRANTY AND WARRANTY REPAIRS

- A. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.

- B. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including surface preparation, recoating, removal and reinstallation of equipment and re-start-up during the warranty period.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, character and quality of material, serviceability and other described essential characteristics.
- B. Substitutions:
1. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.
 2. No request for substitution will be considered that decreases the film thickness specified and/or number of coats to be applied; or that offers a change from the generic type of coating specified.
 3. Submit additional information for substitutions as specified below:
 - a. Certification that coating meets regulatory requirements.
 - b. List at least five (5) equivalent applications where each coating material has been used and rendered satisfactory service.
- C. Acceptable manufacturers:
1. Tnemec Company, Inc.
Kansas City, MO
816- 474-3400
 2. Carboline Company
St. Louis, MO
314- 644-1000
 3. Sherwin-Williams Company
Malvern, PA
Jim Criss – Cell: 609-577-4034

4. ICI Devoe Coatings
Sykesville, MD
410- 795-3234
5. Finnaren & Haley
Conshohocken, PA
800- 843-9800
6. Benjamin Moore & Co.
Montvale, NJ
201-573-9600
7. NSP Specialty Products
Pinehurst, NC 28374
800-248-8907
910-235-0468
8. International Paint
Union, NJ 07083
908-686-1300
9. Or equivalent.

2.02 MATERIALS

A. Paint:

1. Materials are specified in the Painting Schedule.
2. Use manufacturer's standard colors or custom colors as selected by the *ENGINEER* from the manufacturer's full range of standard and custom colors.

B. Primers and undercoats: As specified in Painting Schedule or as recommended by paint manufacturer and approved by *ENGINEER*.

C. All coatings shall be in compliance with NJAC 7:27-23 and NJSA 7:27-16.

D. All coatings shall be lead free.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Inspection:

1. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that the work of this section may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.
3. Verify that the specified coatings are compatible with the surface and service for which they are to be used.
4. Examine surfaces scheduled to receive paint for conditions that will adversely affect execution, permanence or quality of work and that cannot be put into acceptable condition through preparatory work specified below. *CONTRACTOR* shall be solely responsible for providing a surface acceptable to the application of coatings utilizing the indicated cleaning methods as a minimum.

B. Discrepancies:

1. In the event of discrepancy, immediately notify the *ENGINEER*.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.02 PREPARATION

A. General:

1. Before painting, remove hardware, accessories, plates, lighting fixtures and similar items or provide ample protection of such items.
2. Upon completion of each space, replace above items.
3. Use only skilled mechanics for removing and replacing above items.
4. All welding, burning, etc., shall be completed prior to the blasting operation. All flux, spatter, slag or other laminations left from welding

must be chipped or ground off. Rough welds and other sharp projections shall be ground smooth.

5. Clean surfaces shall be coated with the specified coating system during the same day as blasted and prior to sundown of that day.
6. Blasting media shall be fresh, with sharp angular surfaces to insure fast, positive cleaning action with a minimum of dust.
7. Blasting media shall be confined as closely as possible to the area being blasted. If necessary, shields of sheeting or other such barriers shall be erected to confine the media to the blast area. Rotating equipment near blasting operations shall have a tent placed over it to protect it from drifting, spent media.
8. Nameplates, valve stems, rotating equipment, etc., shall be protected from blasting and coating by suitable masking materials.
9. Dials, gauges, and indicators on operating equipment shall be covered with clear material so as to afford visual access.

B. Preparation of surfaces:

1. Concrete:

- a. Concrete shall be permitted to age at least 28 days prior to applying coating system.
- b. The *CONTRACTOR* may elect to use a paintable curing compound to permit coating in seven (7) days.
- c. All surface contaminants shall be removed and there shall be no evidence of laitance on the surface prior to painting. Hardeners and sealers shall be removed. Surface shall be acid etched or brush blasted.
- d. Patch all bug holes, voids and cracks.
- e. Surfaces to be used for immersion service shall not be "bagged".

2. Iron and steel surfaces:

- a. All sharp edges and welds shall be ground smooth to a rounded contour and all weld splatter shall be removed prior to blast cleaning.

- b. Iron and steel shall be prepared in accordance with SSPC-SP6 unless otherwise specified and prime coated the same day whether shop primed or field painted.
 - c. Primed iron and steel shall be cleaned of all construction debris and hand tool cleaned in accordance with SSPC SP2 prior to touch-up and field painting.
 - d. Surface profile for blasted surfaces shall be between 20 and 30 percent of the total dry film thickness of the complete system.
 - e. Compressed air for blasting shall be clean, dry and oil free. Place oil and water separators in air hose as close as possible to blast cleaning equipment. Water shall be continuously bled from moisture traps.
 - f. After blasting, remove all dust and grit with vacuum cleaner or compressed air (clean and dry).
 - g. Coat blasted surfaces before they become contaminated with rust, oil, grease, dust or other foreign matter.
 - h. If blast cleaned surfaces become contaminated by rust, oil, grease, hand-prints or other foreign matter, solvent clean and reblast to original specifications to insure same degree of cleanliness.
 - i. Blasted surfaces shall be prime coated the same day.
 - j. Feather edges of sound paint during spot-blasting operations.
3. Galvanized steel:
- a. New Galvanized Metal: Remove grease, oil, dirt, soil, drawing compounds, and other contaminants by use of solvents, emulsions, cleaning compounds or steam cleaning per SSPC-SP1. If galvanized metal has not weathered for at least 6 months or if the metal has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a paint test patch (minimum area of 2 sq ft) and allow the paint to dry for at least one week before testing adhesion. If adhesion is unacceptable, Brush-Off Blast per SSPC-SP7 or NACE 4 to remove these treatments.
 - b. Old Galvanized Metal: If metal is covered with a white powder (white rust) and there is little or no rusting, solvent clean per SSPC-SP1.

4. Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning SSPC-SP1.
 - a. Aluminum.
 - b. Aluminum surfaces in contact with concrete shall be coated with a bituminous barrier coat prior to installation.
5. Below grade exterior surfaces of concrete or steel process tanks.
 - a. Below grade exterior surfaces shall be prepared and coated as specified.
 - b. Excavate adjacent to tank down to top of foundation and expose all exterior wall surfaces.
 - c. Prepare and coat exterior tank surfaces as specified and allow to fully cure prior to backfilling.
 - d. After coating has fully cured, backfill adjacent to tank with excavated material unless otherwise specified.
 - e. All excavation, backfilling and grading shall conform to *Section 31 23 00, Excavating, Filling and Grading*.
 - f. All restorations shall conform to *Section 01 74 00, Cleaning and Restorations*.

3.03 APPLICATION

- A. Prior to painting, meet with *ENGINEER* to review all aspects of surface preparation and application.
 1. Do not apply coatings until air temperature, surface temperature, relative humidity, and surface moisture content are within specified limitations.
 2. Check temperature and humidity using pyrometers and hygrometers, or similar equipment.
- B. Sequencing:
 1. Sequence painting to allow coating of surfaces that may be inaccessible after fixtures, partitions, or other facilities are installed and so that minimum damage to finish coatings will result.

2. All structural steel shall be finish painted.
- C. Prepare surfaces to be painted and apply all paint and other materials in accordance with paint manufacturer's recommendations unless otherwise specified as approved by the *ENGINEER*.
 - D. Each coat of paint shall be slightly darker than preceding coat unless otherwise directed. Undercoats shall be tinted similar to finish coats.
 - E. Surfaces to be painted shall be clean, dry, smooth and adequately protected from dampness.
 1. Each coat of paint shall be well brushed on, worked out evenly and allowed to dry before a subsequent coat is applied.
 2. Use rollers or airless spray except that sharp corners, inside angles, welds, and rivets shall be brushed and allowed to dry before remaining surfaces are rolled or sprayed.
 3. Rate of application shall not exceed that recommended by paint manufacturer.
 4. Keep brushes, rollers, and spraying equipment clean, dry, free from contamination. Use equipment suitable for the finish desired.
 5. Comply with recommendation of product manufacturer for drying time between succeeding coats.
 - F. Mixing, thinning, pot life, application procedure, equipment, coverage, curing, recoating, storage, and number of coats shall be in accordance with coating manufacturer's instructions or these specifications, whichever are more stringent.
 - G. Avoid contamination of blasted surfaces and avoid between coat contamination. Surface contamination shall be removed before applying next coat.
 - H. Striping of Irregular Surfaces:
 1. Stripe paint all edges, corners, crevices, rivets, bolts, welds, sharp edges and similar surface irregularities with the priming paint before the steel receives its first full prime coat of paint. The stripe coat shall be applied by brush or spray to thoroughly work the coating into or on the irregular surfaces and shall extend onto the surrounding steel a minimum of 1 in. in all directions.

2. The full prime coat can be applied first to protect the steel after blasting followed by the stripe coat after the prime coat has dried. Stripe coat shall be tinted to differentiate it from the prime coat.
 3. The stripe coat can also be applied as part of the application of the prime coat unless prohibited by the coating manufacturer. If applied as part of the application process of the prime coat, the stripe coat shall be allowed to dry for a minimum of ten (10) minutes in order to allow *ENGINEER* to verify that the coat was applied. If a wet-on-wet stripe coat is prohibited by the coating manufacturer or brush or roller application of the full coat pulls the underlying stripe coat, the stripe coat shall be permitted dry according to the manufacturers' recommendations prior to the application of the full coat.
- I. Spraying techniques that result in a uniform, wet pattern shall be used and dry spraying shall be avoided. Dry spray shall be removed prior to sound coating being applied.
 - J. Coated surfaces shall be allowed to cure prior to allowing traffic or other work to proceed that might damage coating.
 - K. No coating shall be applied over scale, oil, grit or other foreign material. All grit shall be removed by brush, airblast or vacuum type cleaner prior to applying coating system. Care shall be taken to assure that blast cleaned surfaces are not contaminated with foreign material prior to applying primer.
 - L. Regulators and gauges in good working order shall be provided on both air and material lines. Operating pressures in accordance with those required for the particular coating will be used.
 - M. Temperature of the surface to be painted shall not be less than 50° F (10° C) or greater than 120° F (49° C) unless approved otherwise by the *ENGINEER*.
 - N. The coating system shall not be applied closer than 6 inches to a non-blasted area. Any subsequent blasting operation shall not result in sand or grit particles being embedded in the paint film.
 - O. Spray guns must be held perpendicular to the surface being painted and handled and adjusted in such a manner that dry overspray is kept to a minimum.
 - P. The final dry film thickness of the applied coating system shall be within the range of thicknesses specified per coat, and the thicknesses of the totals of each coat for a coating system as specified in the "Coating Schedule".

- Q. All spray equipment to be used for the application of a particular coating will be available for inspection by *ENGINEERS* representative before application is begun.
- R. The air source must be sufficient to provide a continuous volume of 20 cfm air at each spray gun nozzle at 80 pounds per square inch pressure for applying coatings by conventional spray technique. When coatings are applied by airless spray, the input pressures to the pump shall be such that a uniform spray pattern is developed for application.
- S. Drop cloths shall be used to protect all previously painted surfaces and all surfaces not to be coated.
- T. All zinc rich primers shall be applied under continuous agitation.
- U. Runs or sags shall be brushed out immediately or the coating shall be removed from the surface.
- V. Finished work shall be uniform, of approved color, smooth and free from runs, sags, defective brushing, clogging, mud cracking or excessive flooding. Make edges of paint adjoining other materials or colors sharp and clean without overlapping.
- W. At completion, touch up and restore finish where damaged and leave in good condition.
- X. All methods of application shall be in accordance with paint manufacturer's recommendations as approved by *ENGINEER*.

3.04 CLEANING

- A. Touch up and restore finish where damaged.
- B. Remove spilled, splashed or splattered paint from all surfaces.
- C. Do not mar surface finish of item being cleaned.
- D. Refer to *Section 01 74 00, Cleaning and Restorations*.

3.05 FIELD QUALITY CONTROL

- A. Tests by CONTRACTOR: Check wet film thickness steel surfaces during paint application using a Nordson Wet Film Gauge or similar approved instrument.

Take 1 wet film thickness measurement for each 100 square feet of surface painted.

- B. All surfaces, preparation, and paint applications are subject to inspection by the *ENGINEER* Representative.
- C. Painted exterior and interior surfaces shall be rejected if any of the following defects are apparent to the *ENGINEER*.
 - 1. Brush/roller marks, streaks, laps, runs, sags, drips, stippling, mud cracking, blistering, blushing, checking, cratering, flaking, orange peel, over spray, wrinkling, pinholes, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.
 - 2. Evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners and re-entrant angles.
 - 3. Damage due to touching before paint is sufficiently dry or any other contributory cause.
 - 4. Damage due to application on moist surfaces or caused by inadequate protection from the weather.
 - 5. Damage and/or contamination of paint due to blown contaminants (dust, spray paint, etc.).
 - 6. Insufficient film thickness.
 - 7. Insufficient surface profile on blasted steel surfaces.
 - 8. The final coat on any surface exhibits a lack of uniformity of color, sheen, texture, and hiding across full surface area.
- D. Painted surfaces rejected by the *ENGINEER* shall be repaired or replaced at the Contractors expense.
 - 1. Correct deficiencies in film thickness by application of additional coat(s) of paint.
 - 2. Correct defective work or work not meeting specifications by removal and recoating.

3.06 INSPECTION PRIOR TO RELEASE OF MAINTENANCE BOND

- A. General: Within two (2) years time from acceptance of work by *ENGINEER*, the surfaces coated under this Contract shall be inspected by representatives of *OWNER*, *ENGINEER* and *CONTRACTOR* to determine if any repair work is necessary.
- B. Arrangements:
1. *OWNER* will establish date for the inspection and will notify *CONTRACTOR* at least thirty (30) days in advance.
 2. *OWNER* will drain tank (if required). *CONTRACTOR* shall provide suitable interior lighting and ventilation for the tank inspection.
- C. Remedial work:
1. Any location where coats of paint have peeled off, bubbled, or cracked and any location where rusting is evident shall be considered failure of paint system.
 2. *CONTRACTOR* shall make repairs at all points where failures are observed by removing deteriorated coating, cleaning surface, and recoating with same paint system. If area of failure exceeds 25 percent of the area of a portion of a surface, then for that portion, remove and repaint the entire paint system.
 3. For purposes of determining need for complete repainting of a tank, the outside roof, shell, floor, riser, and tank supporting structure consisting of columns, rods, struts, and other members; and inside roof, shell, floor and riser shall be considered separately.
- D. Inspection Report: *OWNER* will have prepared, by an independent inspection agency, an inspection report covering the inspection describing the number and types of failures observed, the percentage of surface area where failure has occurred, and names of persons making the inspection. The report will include color photographs illustrating each type of failure.
- E. All work relating to the inspection shall conform to the requirements of Paragraph 36 of General Conditions entitled, "Approval and Acceptance of Work".

3.07 PAINTING SCHEDULES

A. EXTERIOR EXPOSURE:

(Exposure to weather, freezing and/or ultraviolet within Transfer Station):

1. Ferrous Metal:

- a. Surface preparation: Existing steel structure, Blast to SSPC-SP6, commercial blast cleaning. New Steel. (First coat must be specified epoxy, see below.)
- b. Sherwin-Williams:
1 coat "Macropoxy 646- FC Epoxy" (4-6 mils DFT)
2 coats "Hi-Solids Polyurethane" (3-5 mils DFT)
- c. Carboline:
1 coat "Carboguard 890" (4-6 mils total DFT)
1 coat "Carbothane 133 Series" (3-5 mils DFT)
- d. PPG/Amercoat:
1 coat "Amercoat 385" (4-12 mils DFT)
1 coat "Amercoat 450H" (3-4 mils DFT)
- e. Or approved equivalent

2. Concrete:

- a. Surface preparation: SSPC-SP13/NACE-6, or ICRI No. 310.2R, CSP 3-5.
- b. Sherwin Williams:
1 coat "Kem Cati-Coat HS" Epoxy Block Filler
2 coats "Macropoxy 646 Fast Cure Epoxy" (5-10 mils DFT/coat)
- c. Carboline:
1 coat "Sanitile 500" Epoxy Block Filler
1 coat "Carboguard 890" Epoxy Coating (4-6 mils DFT)
- d. PPG/Amercoat:
1 coat "Amerlock 400BF" Epoxy Block Filler
1 coat "Amercoat 385" Multi-Purpose Epoxy
- e. Or approved equivalent

3.08 COLOR AND FINISH SCHEDULE

- A. Colors shall be selected by the *ENGINEER* from the manufacturer's full range of standard and custom color selections.

****END OF SECTION****

SECTION 22 14 26

PRE-CAST FACILITY TRENCH DRAINS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Pre-cast surface drainage system complete with heavy duty custom gratings, sitting on embedded cast iron angle style frames with anchor lugs.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 03 30 00: Concrete*
3. *Section 31 23 00: Excavating, Filling and Grading*

C. Payment

1. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
2. Include all costs for the work of this Section in the prices bid for the various related items of work as designated in the Proposal.

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Manufacturer's product data:

1. Complete materials list of all materials proposed to be furnished and installed under this section.

2. Specifications and other data required that demonstrates compliance with the specified requirements.
- C. Manufacturer's recommended installation procedures.

1.03 QUALITY ASSURANCE

- A. Qualifications of manufacturer:
 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
- B. Qualifications of workmen:
 1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
 2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the method and materials to be used.
 3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.
- C. Basis of acceptance:
 1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.

- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

1.05 WARRANTY AND WARRANTY REPAIRS

- A. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.
- B. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including removal, shipping, reinstallation and re-start-up during the warranty period.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by, the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.
- C. Acceptable Manufacturers:
1. US Foundry
8351 NW 93rd Street
Medley, FL 33166
Tel: 800-432-9709
 2. Neenah Foundry
2121 Brooks Avenue
Neenah, WI 54956
Tel: 920-725-7000
 3. EJ Group, Inc.
301 Spring Street

P.O. Box 439
East Jordan, MI 49727
Tel: 800-626-4653

4. Or equivalent.

2.02 SURFACE DRAINAGE SYSTEM

- A. The trench system bodies shall be manufactured from precast concrete and steel reinforcement with minimum properties as follows:
1. Compressive strength: 5,000 psi
 2. Reinforcement steel yield strength: 60,000 psi (ASTM 615)
 3. Fiber reinforcement: 1.5 pounds per cubic yard of concrete
- B. The pre-cast units shall be manufactured with tapered walls and a continuous minimum invert slope of 0.5% (alternatively, it is permissible to provide slope using non-shrink grout/mortar after trench drain installation). The clear opening shall taper from 8" minimum to 10" maximum. Each unit shall have a male to female interconnecting end profile. The upper 6" portion of the trench drain shall be made of topping material with embedded cast iron angle style frame.
- C. Grates:
1. Grates shall be, custom made, hot-rolled plate 14" wide by 1 ½" deep with a ½" thick support grate plate (cont.), and slotted opening as shown on *Contract Drawings*.
- D. Grate Support Frame:
1. Grate support frames shall be cast iron angle style type with 2" seat depth and anchor lugs with holes as manufactured by EJ Group, US Foundry, Neenah Foundry, or approved equivalent.
- E. Concrete Catch Basin:
1. The custom catch basin shall be precast concrete structure similar to trench drain construction, with top 1 ½ " galvanized grating and custom removable stainless steel catch basket with stainless steel fine wire mesh screen insert by "Fabco Industries Inc." or approved equivalent as shown on the *Contract Drawings*.

2.03 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Do not begin installation until substrates have been properly prepared.
- C. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.

3.02 INSTALLATION

- A. Excavation and backfill shall comply with requirements of *Section 31 23 00, Excavating, Filling and Grading*.
- B. Concrete work shall comply with *Section 03 30 00, Concrete*.
- C. The trench drain system shall be installed in accordance with the manufacturer's installation instructions and recommendations.

3.03 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair, or replace damaged products before Substantial Completion.

****END OF SECTION****

SECTION 31 10 00
(02110)
CLEARING SITE

PART 1 - GENERAL

1.01 SUMMARY

A. Work included:

1. Removal and disposal of bollards, structures, aprons, trench drains, catch basin, grates, and equipment as well as all other obstructions which are designated for removal by the *ENGINEER* during construction and for which payment is not otherwise provided in the contract.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*

C. References:

1. New Jersey State Highway Department Standard Specifications for Road and Bridge Construction, 2019, and all amendments thereto (Standard Specifications).
 - a. Section 201: Clearing Site
 - b. Section 917: Landscaping Materials
2. New Jersey Administrative Code:
 - a. N.J.A.C. 5:23-8.1(c) (pertaining to educational facilities and public buildings as defined in N.J.A.C. 5:23-8.2).
 - b. N.J.A.C. 7:26; Solid Waste Rule.
3. Code of Federal Regulations:
 - a. 29 CFR 1926; Safety and Health Regulations for Construction.

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Submit receipts for disposal of all materials.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Protection: Roads, structures, pavement areas, grass or landscaping to, remain shall be protected by *CONTRACTOR* in a manner approved by the *ENGINEER*.
- B. Prior to performing any excavation work, contact New Jersey One Call at 1-800-272-1000 for a utility mark-out.

3.02 CONSTRUCTION

- A. Clearing Site shall conform to Section 201 of the Standard Specifications, and as designated on Plans or as directed by the *ENGINEER*, except that Paragraph of said Section entitled, "Demolition" shall not apply to this Contract.
- B. Clear the project site within the limits of construction shown on the Plans, or as directed by the *ENGINEER*. [N.J.A.C. 7:22-10.11(d)]

3.03 CLEANING

- A. Dispose of accumulated waste materials as specified in *Section 01 74 00, Cleaning and Restorations*.

PART 4 - PAYMENT

4.01 SITE CLEARING

- A. There shall be no separate measurement and no separate payment for Clearing Site, include all costs for *CLEARING SITE* in the price bid in the Proposal for related items of work.

****END OF SECTION****

SECTION 31 23 00
(02220)
EXCAVATING, FILLING AND GRADING

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Excavating for trench drain, bollards, and piping.
2. Filling and backfilling to attain indicated grades.
3. Furnishing and installing broken stone subbase material for trench drain, apron, slab, and bollards.
4. Disposal of excess material.
5. Testing Services.
6. Any additional work as may be specified in the Statement of Work.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 02 41 19: Selective Demolition*
3. *Section 31 10 00: Clearing Site*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019, and all amendments thereto (Standard Specifications):
 - a. Section 204: Borrow Excavation
 - b. Sections 301: Subbase
 - c. Subsection 901.03: Aggregate, Coarse

- d. Subsection 901.03.01: Broken Stone
 - e. Subsection 901.03.02: Washed Gravel
 - f. Subsection 901.10: Dense Graded Aggregate
 - g. Subsection 901.11: Soil Aggregates
2. American Society for Testing and Materials (ASTM):
- a. D-698: Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort.
 - b. D-1556: Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - c. D-1557: Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
 - d. D-4254: Test Method for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
 - e. D-2166: Unconfined Compressive Strength of Cohesive Soil.
 - f. D-2922: Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth).

1.02 DEFINITIONS

- A. Excavation: Removal and disposal of all material encountered when establishing required grade elevations, including pavements and other obstructions visible on the ground surface, and underground structures and utilities indicated to be demolished and removed.
- B. Unauthorized excavation: Removal of materials beyond specified subgrade elevations without approval of *ENGINEER*.

1.03 SUBMITTALS

- A. Comply with the provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

- B. All materials shall be accompanied by a delivery ticket indicating the name and address of the supplier and the origin of the material.
- C. All materials shall be free of contaminants or hazardous materials and substances that may be harmful to human, animal, plant or aquatic life and meets any applicable NJDEP regulations regarding the material composition. Recycled materials shall be accompanied by a certification from the supplier that the material meets the above requirements.
- D. Every load of incoming fill material shall meet current NJDEP Residential Direct Contact Soil Remediation Standards and be certified by the Generator/Agent as clean fill consistent with NJDEP regulations at N.J.A.C. 7:26D-4.2 and N.J.A.C. 7:26E-2. Delivery slips showing and certifying that the material meets this criteria shall be provided for each load of material entering the site.
- E. Test reports:
 - 1. One optimum moisture, maximum density curve for each type of soil encountered, including a complete test report as specified in ASTM D-1557.
 - 2. Field Density test reports.
 - 3. Report of actual Unconfined Compressive Strength and/or results of bearing tests for each stratum encountered at footing subgrades. The report shall be prepared in accordance with ASTM D-2166.
 - 4. Test reports on all borrow material and select backfill material in accordance with the following standards:
 - a. Particle Size Analysis of Soils: ASTM D-422.
 - b. Liquid Limit, Plastic Limit and Plasticity Index of Soils: ASTM D-4318.
 - 5. Submit test reports as specified in the Specification Section entitled, "Testing Laboratory Services".

1.04 QUALITY ASSURANCE

- A. Requirements of regulatory agencies:
 - 1. All excavations shall be in compliance with Federal Occupational Safety and Health Act and rules and regulations of State of New Jersey

Department of Labor and Workforce Development, "Construction Safety Act," N.J.S.A. 34:5-166, et seq.

2. Excavation work shall be in compliance with applicable requirements of other governing authorities having jurisdiction.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Transport materials from outside project limits in accordance with General Conditions, paragraph entitled, "Operations and Storage Areas."

1.06 PROJECT CONDITIONS

- A. Site information: Data on indicated subsurface conditions are not intended as representations or warranties of accuracy or continuity between soil borings. It is expressly understood that *OWNER* will not be responsible for interpretations or conclusions drawn there from by *CONTRACTOR*. Data are made available for the convenience of *CONTRACTOR*.
- B. Prior to performing any excavation work, contact New Jersey One Call at 1-800-272-1000 for a utility mark-out.
- C. Existing utilities:
 1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the Utility Owner immediately for directions. Cooperate with *OWNER* and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of Utility Owner.
 2. Do not interrupt existing utilities serving facilities occupied and used by *OWNER* or others, except when permitted in writing by *ENGINEER* and then only after acceptable temporary utility services have been provided.
- C. Weather conditions: Do not place, spread, roll or fill material during freezing, raining, or otherwise unfavorable weather conditions. Do not resume work until conditions are favorable as determined by the *ENGINEER*.

PART 2 - PRODUCTS

2.01 GENERAL

MORRIS COUNTY MUA
Bid No. 2025-SW06

A-1340-0024-000/S3081
October 2025

Excavating, Filling and Grading
31 23 00-4

- A. General: All fill and backfill materials shall be subject to the approval of the *ENGINEER*.
- B. Notifications:
 - 1. For approval of borrow materials, notify the *ENGINEER* at least five (5) working days in advance of intention to import material, designate the proposed borrow area, and perform sampling and testing at *CONTRACTOR'S* expense, if directed by the *ENGINEER*, to prove the quality and suitability of the material.
 - 2. For approval of on-site materials, notify the *ENGINEER* at least five (5) working days in advance of placing material and perform sampling and testing at the Contractor's expense to prove the quality and suitability of the material.
- C. All materials provided shall be free of contaminants or hazardous materials and substances that may be harmful to human, animal, plant or aquatic life and shall meet any applicable NJDEP regulations regarding the material composition.

2.02 MATERIALS

- A. On-Site Fill and Backfill:
 - 1. On-site material may be used for fill and backfill subject to the approval of the *ENGINEER*, and only in accordance with the following:
 - a. On-site materials used for structural filling and backfilling shall be free from deleterious substances, stumps, brush, weeds, roots, sod, rubbish, garbage and matter that may decay, and shall conform to the requirements for Soil Aggregate I-13 of Subsection 901.11 of the Standard Specifications.
- B. Borrow material:
 - 1. All borrow material shall meet current NJDEP Residential Direct Contact Soil Remediation Standards and be certified by the Generator/Agent as clean fill consistent with NJDEP regulations at N.J.A.C. 7:26D-4.2 and N.J.A.C. 7:26E-2.
 - 2. General fill and Backfill (Non-Structural):

- a. Free from deleterious substances, stumps, brush, weeds, roots, sod, rubbish, garbage and matter that may decay, and conforming to the requirements for Soil Aggregate I-13, of Subsection 901.11 of the Standard Specifications, except as modified by the supplemental requirements below:
 - (1) Containing no rocks or lumps over four inches in greatest dimension.
 - (2) Composed of soil aggregate, or soil aggregate and rock. The portion passing the four-inch sieve shall contain not more than twelve percent (12%) by weight of material passing the number 200 sieve. When composed of soil aggregate and rock, the proportion of soil aggregate shall not be less than that required to fill all the rock voids.
 - b. General fill material may be used for:
 - (1) Backfill of demolition work that is not beneath or within ten feet (10') horizontally of any tank, structure, footing or foundation or behind retaining walls.
 - (2) General filling and backfilling that is not beneath or within ten feet (10') horizontally of any tank, structure, footing or foundation or behind retaining walls. General fill may be used under exterior paved areas and in trenches, however, that are not within ten feet (10') horizontally of foundations.
3. Trench Backfill, Structural Fill and Backfill Material:
- a. Shall conform to the requirements specified for on-site fill material except as modified by the supplemental requirements below:
 - b. Backfill material shall be Soil Aggregate designation I-13 unless otherwise designated on the Plans. Soil Aggregate backfill materials, when designated, shall conform to Subsection 901.11 of the Standard Specifications.
 - c. Backfill material shall be 15:1 or 20:1 sand/cement dry mix when designated on the Plans.
4. Broken stone material:

- a. Broken stone subbase material under slabs, foundations and structures shall conform to Subsection 901.03.01 of the Standard Specifications and meeting the gradations specified in Table 901.03-1. Size shall be #57 unless otherwise shown on the Plans.
- b. Trench stabilization material for bedding shall conform to the above requirements. Size shall be #57 unless otherwise shown on the Plans.

2.03 OTHER MATERIALS

- A. All other materials, not specifically described for a complete and proper installation, shall be as selected by the *CONTRACTOR* and approved by the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which excavating, filling and grading are to be performed and notify the *ENGINEER*, in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.02 PREPARATION

- A. Prior to commencement of work, establish location and extent of all utilities in the work areas. Maintain, protect as required existing utilities that pass through the work area.
- B. Prior to excavation in pavement areas, cut existing pavement vertically with sharp tool on a straight line to the limits of excavation shown on Plans or as directed by the *ENGINEER*. Maintain cut straight and neat, or recut and dress as directed by the *ENGINEER*.
- C. Protection of persons and property:
 - 1. Barricade open excavations occurring as part of this work and post with warning lights as required to protect persons on the site. Operate warning lights as recommended by authorities having jurisdiction.

2. Protect structures, utilities, sidewalks, pavements and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
3. Refer to paragraphs of General Conditions regarding protection of vegetation and structures.
4. In the event of damage, immediately make all repairs and replacements to the approval of the *ENGINEER* at no cost to the *OWNER*.

3.03 CONSTRUCTION

- A. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shut-off of services if lines are active.
- B. Use of explosives: The use of explosives is not permitted unless approved by the *ENGINEER*.
- C. Dust control:
 1. Use all means necessary to control dust on and near the work if such dust is caused by the *CONTRACTOR'S* operations during performance of the work or if resulting from the conditions in which the *CONTRACTOR* leaves the site.
 2. Thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors and concurrent performance of other work on the site.
- D. Excavation:
 1. Unauthorized excavation: Unauthorized excavation, including remedial work directed by the *ENGINEER*, shall be at the *CONTRACTOR'S* expense. Under footings, foundation bases, retaining walls, and other structures, fill unauthorized excavation by removing all loosened material and extending the indicated bottom elevation of the footing or base to the excavation bottom, without altering the required top elevation. Lean concrete fill may be used to bring subgrade elevations to proper positions when acceptable to the *ENGINEER*. Under pipes, fill unauthorized excavation by removing all loosened material and providing broken stone material as required to attain a firm and unyielding subgrade and/or foundation and to attain required grade elevations to the approval of the *ENGINEER*.

2. Additional excavation:
 - a. When excavation has reached required subgrade elevations, notify the *ENGINEER* who will make an inspection of conditions.
 - b. If unsuitable bearing materials are encountered at the required subgrade elevations, carry excavations deeper and replace the excavated material as directed by the *ENGINEER*.
3. Stability of excavations:
 - a. Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space.
 - b. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
4. Shoring and bracing:
 - a. Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross-braces, in good serviceable condition.
 - b. Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction.
 - c. Maintain shoring and bracing in excavations regardless of time period excavations will be open.
 - d. Brace, sheet, and support trench walls in such a manner that they will be safe and that the ground alongside the excavation will not slide or settle, and that all existing improvements of every kind, whether on public or private property, will be fully protected from damage.
 - e. In the event of damage to such improvements, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
 - f. Arrange bracing, sheeting and shoring so as to not place stress on any portion of the completed work until the general construction thereof has proceeded far enough to provide sufficient strength.

- g. Exercise care in the drawing and removal of sheeting, shoring, bracing and timbering to prevent collapse and caving of the excavation faces being supported.

5. Dewatering:

- a. Prevent surface water and subsurface or groundwater from flowing into excavations and from flooding project site and surrounding area.
- b. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
- c. Convey water removed from excavations and rainwater to collecting or run-off areas. Establish and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.

6. Material storage:

- a. Stockpile satisfactory excavated materials where directed until required for use as backfill or fill. Place, grade and shape stockpiles for proper drainage.
- b. Only environmentally suitable stockpile sites may be used for the purposes of staging or storing materials, equipment and suitable trench backfill material. Environmentally suitable sites must be level, and devoid of mature stands of natural vegetation. Drainage facilities and features, wetlands, vernal habitats and stream corridors are not environmentally suitable sites. [N.J.A.C. 7:22-10.11(l)1]
- c. The boundary of the stockpile area shall be clearly marked by hay bales, silt fencing or another appropriate method. Where fill is to be stored in excess of 10 days, a suitable means of protecting excavated material from wind and water erosion shall be employed. Erosion control methods may include one or more of the following: mulching, sprinkling, silt fencing, hay baling and stone covering. [N.J.A.C. 7:22-10.11(l)2]

- d. Locate and retain soil materials away from edge of excavations.
 - e. Dispose of excess soil material and waste materials as herein specified. Excavated material unsuitable for backfilling shall be kept separate from other materials excavated, and disposed of. Materials suitable for backfilling shall not be disposed of until completion of filling or backfilling operations.
7. Excavation for structures:
- a. Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 feet, and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction and for inspection.
 - b. In excavating for footings and foundations, take care not to disturb bottom excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive concrete.
8. Excavation for pavements: Cut surface under pavements to comply with cross-sections, elevations and grades as shown.
9. Excavation for trenches:
- a. Dig trenches to the uniform width required for the particular item to be installed, sufficiently wide to provide ample working room.
 - b. Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations. Beyond the building perimeter, keep bottoms of trenches for which elevations are not given sufficiently below finish grade to avoid freeze-ups.
 - c. Trenches for pipes shall not be opened more than the number of linear feet of pipe that can be placed and backfilled in one (1) day.
 - d. Grub roots and stumps within six inches (6") of outside surface of pipe bottom and sides to minimum depth of six inches (6") below grade. Backfill trenches with concrete where trench excavations pass within eighteen inches (18") of column or wall footings and which are carried below the bottom of such footings, or which pass under wall footings. Place concrete to the level of the bottom of adjacent footing.

- e. Pipe bedding shall be as shown on Plans.
- 10. Cold weather protection: Protect excavation bottoms against freezing when atmospheric temperature is less than thirty-five degrees (35°).
- E. Backfill, fill and compaction:
 - 1. General:
 - a. Place acceptable material in layers to required subgrade elevations.
 - b. Fills: Use material obtained from on-site excavation, except use borrow material when specified and/or shown on the Plans or as directed by the *ENGINEER*.
 - c. Backfilling: Use material obtained from on-site excavation, except use select backfill when specified and/or shown where indicated on Plans or as directed by the *ENGINEER*. Backfill above top of pipe, with material free from stones, rock fragments, dirt clogs or frozen material greater than two inches (2") in largest dimension.
 - d. Do not provide borrow material until all acceptable excavated materials on the site have been utilized in the work.
 - e. Place the various types of materials in the areas as designated on the Plans, or as directed by the *ENGINEER*.
 - 2. Backfill excavation as promptly as work permits, but not until completion of the following:
 - a. Acceptance by *ENGINEER* of construction below finish grade including, where applicable, damp proofing, waterproofing and perimeter insulation.
 - b. Inspection, testing, approval and recording locations of underground utilities.
 - c. Removal of concrete formwork.
 - d. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.
 - e. Removal of trash and debris.

- f. Permanent or temporary horizontal bracing is in place on horizontally supported walls.
- 3. Backfilling prior to approvals:
 - a. Should any of the work be so enclosed or covered up before it has been approved, uncover all such work at no additional cost to the *OWNER*.
 - b. After the work has been completely tested, inspected and approved, make all repairs and replacements necessary to restore the work to the condition in which it was found at the time of uncovering, all at no additional cost to the *OWNER*.
- 4. Ground surface preparation prior to filling:
 - a. Remove vegetation, debris, unsatisfactory soil materials, obstructions and deleterious materials from existing ground surface to a depth of not less than four inches (4") and not more than six inches (6") prior to placement of fills. Plow, strip or break-up sloped surfaces steeper than one (1) vertical to four (4) horizontal to a depth of not less than six inches (6") so that fill material will bond with existing surface.
 - b. When existing ground surface has a density less than that specified under "Compaction," for the particular area classification, break up the ground surface, pulverize, moisture-condition to the optimum moisture content, and compact to required depth and percentage of maximum density.
- 5. Placement and compaction:
 - a. Place backfill materials in layers not more than six inches (6") in loose depth.
 - b. Control soil compaction during construction providing minimum percentage of density specified for each area classification listed below.
 - c. Building and pavement areas are defined, for the purpose of this Paragraph, as extending a minimum of five feet (5') beyond the building and/or pavement.
 - d. Compact soil to not less than the following percentages of maximum dry density for soils which exhibit a well-defined

moisture density relationship determined in accordance with ASTM D-1557; and not less than the following percentages of relative density determined in accordance with ASTM D-4254, for soils which will not exhibit a well-defined moisture-density relationship.

- (1) Structures: Compact top twelve inches (12") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
- (2) Building Areas: Compact top twelve inches (12") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
- (3) Walkways: Compact top six inches (6") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
- (4) Pavement Areas: Compact top twelve inches (12") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density or 90 percent (90%) relative dry density.
- (5) Subbase Materials: Compact each layer of subbase material to 95 percent (95%) of maximum dry density.
- (6) Trench Stabilization Materials: Compact each layer of material to 95 percent (95%) of maximum dry density.

e. Moisture control:

- (1) Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations.
- (2) Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
- (3) Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing or pulverizing until moisture content is reduced to a satisfactory value.

f. Puddling or jetting will not be permitted.

- g. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice, or other unsuitable materials.
- h. Place backfill and fill materials evenly adjacent to structures, to required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.
- i. Compact backfill to height of two feet (2') above top of pipe using approved flat-faced mechanical tampers. Compact backfill more than two feet (2') above top of pipe using approved vibratory mechanical tampers.

F. Grading:

- 1. General: Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.
- 2. Grading outside building lines:

Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes.
- 3. Grading surface of materials under building slabs: Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of ½ inch when tested with a ten-foot (10') straightedge.
- 4. Compaction: After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.
- 5. Treatment after grading:
 - a. After grading is completed and the *ENGINEER* has finished his inspection, permit no further excavating, filling or grading except with the approval of and inspection of the *ENGINEER*.
 - b. Use all means necessary to prevent erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.

6. Subgrade preparation: All subgrade preparation shall be performed in accordance with the applicable Sections of the Standard Specifications except as may be modified by this Specification Section.
- G. Broken (crushed) stone subbase course:
1. General: Broken Stone Subbase Course consists of placing material in layers of specified thickness, over subgrade surface to support structures as shown on the Plans.
 2. Placing: Place Broken Stone Subbase Course as specified for Dense Graded Aggregate Subbase Course.

3.04 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Transport acceptable excess excavated material to designated soil storage areas on the Owner's property. Stockpile soil or spread as directed by *ENGINEER*.
- B. Remove waste materials, including unacceptable excavated material, trash and debris, and dispose of it off the Owner's property.
- C. Excavated material unsuitable for backfill as set forth in N.J.A.C. 7:14-2.13, considered to be solid waste pursuant to N.J.A.C. 7:26-1.6 and meeting the requirements for I.D.27 shall be removed from the construction site and disposed of at a sanitary landfill approved and licensed by NJDEP. [N.J.A.C. 7:22-10.11(e)1]

3.05 FIELD QUALITY CONTROL

- A. Quality control testing during construction: Allow testing service to inspect and approve subgrades and fill layers before further construction work is performed.
 1. Perform field density tests in accordance with ASTM D-1556 (Sand Cone Method), or ASTM D-2922 (Nuclear Method).
 2. Footing subgrades: For each strata of soil on which footings will be placed, conduct at least one (1) test to verify required design bearing capacities. Test shall be performed by a qualified soils Engineer licensed in the State of New Jersey. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata, when acceptable to *ENGINEER*.

3. Number of field density tests shall be provided in accordance with the following minimum test schedule:

a. Minimum Compaction Testing Frequency

Location	Frequency
Buildings and structures	1 test group ^a for every 5,000 square feet
Road	1 test group ^a for every 300 linear feet of road
Parking Lots	1 test group ^a for every 10,000 square feet
Unpaved areas	1 test group ^a for every 20,000 square feet
Pipe Trench	1 test group for every 300 linear feet

^a one test group consists of compaction tests on each layer of fill and backfill material.

- b. One test whenever there is a definite suspicion of a change in the quality of moisture control or effectiveness of compaction.

4. Take all tests at locations as directed by the *ENGINEER*.

- B. If in the opinion of *ENGINEER* based on testing service reports, subgrade or fills that have been placed are below specified density, provide additional compaction and testing as directed by the *ENGINEER* at no expense to the *OWNER*. This shall include compaction and testing at areas initially tested and at other locations as directed.
- C. Additional requirements for testing are described in the Specification Section entitled, "Testing Laboratory Services."

3.06 PROTECTION

A. Protection of graded areas:

1. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
2. Repair and re-establish grades in settled, eroded and rutted areas to specified tolerances.

- B. Reconditioning compacted areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

PART 4 - PAYMENT

4.01 EXCAVATION, FILLING AND GRADING

- A. No separate measurement or payment shall be made for this item. All work including earthwork for piping and structures shall be paid for under the prices submitted for the various related items of work listed in the *PROPOSAL*. The costs for the work of this section shall include line-cutting existing pavements whenever encountered; stripping and storage of topsoil; excavation of all materials encountered of whatever nature; dewatering; shoring and bracing; stripping of surfaces; placing and compacting excess materials in fill areas; disposal of unsuitable or surplus materials; trench excavation; backfilling; site grading including shaping and dressing of slopes and other surfaces; compaction; subgrade and subbase preparation; testing; and all other incidental or necessary work.

****END OF SECTION****

SECTION 32 12 16
(02513B)
HOT-MIX ASPHALT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Construction of Hot Mix Asphalt Base course.
2. Construction of Hot Mix Asphalt Surface course.
3. Sawcutting.
4. Core samples for testing.
5. All paving work as further described in the Statement of Work.

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*

C. References:

1. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019, and all amendments thereto (Standard Specifications):
 - a. Section 401: Hot Mix Asphalt (HMA) Courses.
 - b. Subsection 302.03.01: Preparation of Subgrade or Base Course.

1.02 DEFINITIONS

- A. Subgrade: The surface of the roadbed upon which the first layer of the pavement structure and/or shoulder section is constructed (See figure 101-1 of the Standard Specifications).

- B. Pavement Structure: The combination of surface course and base course, and when specified, a subbase course, placed on a subgrade to support the traffic load and distribute it to the roadbed (See figure 101-1 of the Standard Specifications). These various courses are defined as follows:
1. Surface Course: One or more layers of specified material of designed thickness on a base course or a subbase.
 2. Base Course: One or more layers of specified material of designed thickness placed on the subgrade or subbase.
 3. Subbase: One or more layers of specified material of designed thickness placed on the subgrade.
- C. Pavement Base Repairs: Removal and replacement of existing *Pavement Structure* and designated portion of *Subgrade* in areas to be overlaid.

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
1. Complete materials list of all materials proposed to be furnished and installed under this section.
 2. *Specifications* and other data required that demonstrate compliance with the specified requirements.
- C. Job mix formula requirements:
1. Provide job mix formulas for each required Hot Mix Asphalt mixture as specified in Section 902.02.03 of the Standard Specifications.
 2. Submit for the *ENGINEER's* approval prior to beginning paving operations.
- D. Mix design and control requirements: The design and control requirements for all paving mixtures shall conform to Section 902, of the Standard Specifications.
- F. Submit results of producers sampling and tests on forms acceptable to the *ENGINEER*. Forms shall be signed by producer's quality control technician and forwarded to the *ENGINEER* as directed.

1.04 QUALITY ASSURANCE

A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
2. Qualifications of Hot Mix Asphalt producer: Use only materials which are furnished by a bulk Hot Mix Asphalt producer regularly engaged in the production of Hot Mix Asphalt.

B. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

C. Producer's sampling and testing for conformance to job mix formula and mix design requirements:

1. Methods and rates of sampling Hot Mix Asphalt mixtures shall conform to Subsection 902.02.04 of the Standard Specifications with the following exceptions:
 - a. Sampling shall be performed by the producer's quality control technician unless otherwise directed by the *ENGINEER*.
 - b. For small scale projects where it is not possible to attain the minimum lot size specified, a total of five (5) samples shall be taken at random for each type of mix specified.
2. Testing of Hot Mix Asphalt mixtures to determine the quantity of bitumen, gradation of the aggregate, and conformance to mix design requirements shall be performed by the producer's quality control technician as specified in Subsection 902.02.04 of the Standard Specifications.

- D. Preparation of mixtures: The preparation of all Hot Mix Asphalt mixtures shall conform to Section 902 of the Standard Specifications.
- E. Paving Plan:
1. At least twenty (20) days before placing the HMA surface course, submit a detailed plan of operation to the *ENGINEER* for approval that includes the following:
 - a. Asphalt paving construction technologist (APCT), certified by the Society of Asphalt Technologist of New Jersey, Inc. The Department will accept the equivalent certification by the Mid-Atlantic Regional Technician Certification Program.
 - b. Size and description of crew.
 - c. Number, type, and mode of equipment.
 - d. Lighting plan for nighttime operations as specified in Subsection 108.06 of the Standard Specifications.
 - e. Method of locating and maintaining joint locations if sawing and sealing.
 - f. Manufacturer's recommendations for heating and applying joint sealant.
 - g. Paving procedures for maintaining continuous operation as specified in Subsection 401.03.07.D of the Standard Specifications.
 - h. Manufacturer's recommended laydown temperature for modified binders.
 - i. Paving sequence. Ensure that the HMA surface course is constructed for the full width of the traveled way, shoulder, and auxiliary lanes as a single paving operation.
 - j. Schedule, hours of operation, and production rates for the Project.
 - k. Plant locations.
 - l. Method of maintaining HMA temperature during transportation.

- m. Method of constructing and compacting joints as specified in Subsection 401.03.07.E of the Standard Specifications.
 - n. Quality control plan outlining the use of the thin lift nuclear density gauge, quality control cores, and the control of the compaction process.
2. Do not begin paving until the *ENGINEER* approves this plan. Submit an adjusted pavement plan before making adjustments to the paving operation.

1.05 WEATHER LIMITATIONS

- A. HMA mixtures shall be placed when the combinations of lift thickness and base surface temperatures are within the limits shown in Table 401.03.07-1 of the Standard Specifications (shown below), when it is not raining, and when the base is in a satisfactory condition. For other than surface courses, in case of sudden rain, the placing of mixture then in transit from the plant may be permitted, if laid at proper temperature, and if the base is free of pools of water. Such permission shall in no way waive any of the requirements of the specification.
- B. Base temperature will be measured on the surface on which the lift will be placed. Lift thickness will mean the compacted lift thickness.

Table 401.03.07-1 Minimum Base Temperature

Lift Thickness, inches	Minimum Base Temperature, °F
≤1	50
1-2	41
≥2	32

- C. If the mix contains modified binder, the minimum base temperature shall be 50°F, regardless of lift thickness.

PART 2 - PRODUCTS

2.01 GENERAL

- A. The quality of materials and performance of work specified in this section shall be in accordance with the New Jersey Department of Transportation Standard

Specifications for Road and Bridge Construction, 2019, and all amendments thereto (Standard Specifications).

2.02 MATERIALS

- A. Hot Mix Asphalt Surface Course and leveling course:
 - 1. Materials: Section 401.
 - 2. Mixture: Mix Designation 9.5M64, Subsection 902.02.01.
- B. Hot Mix Asphalt Base Course:
 - 1. Material: Section 401.
 - 2. Mixture: Mix Designation 19M64, Subsection 902.02.01.
- C. Tack coat: Tack Coat 64-22 conforming to Subsection 902.01.01.
- D. Prime coat: Grade MC-30 or Grade MC-70 cutback asphalt: Subsection 902.01.02.
- E. Asphalt Binder: Performance Grade 64-22; Subsection 902.01.01.
- F. Joint Adhesive: Polymerized Joint Adhesive conforming to Subsection 914.03.

2.03 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Proof roll:

- 1. Proof roll subgrade surfaces using heavy, rubber-tired rollers, or loaded dump truck.
 - a. Check for unstable areas.
 - b. Check for areas requiring additional compaction.
- 2. Notify *ENGINEER* of unsatisfactory conditions.
- 3. Do not begin paving work until such conditions have been corrected and are ready to receive paving.

B. Surface preparation:

- 1. Earth and subbase surfaces:
 - a. Remove loose and foreign material from compacted subgrade surface immediately before application of paving.
 - b. Use power broom or blowers and hand brooming as required.
 - c. Do not displace subgrade material.

C. Sawcutting:

- 1. Before removal of asphalt materials, a full depth sawcut shall be performed where shown, to provide for the complete removal of said material without damage to the remaining adjacent material.
- 2. The saw shall be capable of providing a neat cut, the full depth in a single pass.

3.03 EXECUTION – HOT MIX ASPHALT PAVING

- A. The method of construction to include Hot Mix Asphalt plant and equipment, pavers, vehicles for transporting asphalt, rollers, and all construction methods shall conform to Section 401 of the Standard Specifications, except as modified by the Supplemental Requirements herein.
- B. Prime coat (subbase surfaces):
 - 1. Apply Prime Coat in accordance with Subsection 401.03.06 of the Standard Specifications.
 - 2. Uniformly apply at rate of 0.15 to 0.35 gallon per square yard over compacted and cleaned subbase surface.
 - 3. Apply enough material to penetrate and seal, but not flood the surface.
 - 4. Allow to cure and dry as long as required to attain penetration and evaporation of volatile components, and in no case less than twelve (12) hours unless otherwise acceptable to the *ENGINEER*.
- C. Tack Coat:
 - 1. When HMA is placed on existing Portland cement concrete, existing HMA, or newly constructed HMA on which traffic has been maintained, the paved surface shall be given an application of tack coat material, uniformly sprayed and conforming to Subsection 401.03.05. The application is not acceptable if the material is streaked or ribboned.
 - 2. Contact surfaces of pavement cold joints, curbing, gutters, manholes, and other similar structures shall be painted with a thin uniform coating of tack coat material just before the placing of the HMA mixture against them.
 - 3. Apply to edges of paving where pavement repairs are to be made.
 - 4. Apply tack coat material at a spraying temperature of 325°F as specified in Subsection 401.03.05 of the Standard Specifications.
 - 5. Apply at rate of 0.06 to 0.14 gallons per square yard immediately prior to placing pavement as specified in Subsection 401.03.05 of the Standard Specifications.
 - 6. All uncoated or lightly coated areas shall be corrected. All areas showing an excess of bituminous material shall be corrected by removing the excess material.

7. No more tack coat should be applied than can be covered in the same day.
 8. Traffic control shall be provided to prevent vehicles from riding on surfaces upon which tack coat has been applied.
 9. Take precautions to insure tack coat is not applied to exposed surfaces or curbs or other exposed surfaces. Tack coat so applied, shall be removed by *CONTRACTOR* at no additional cost to *OWNER*.
- D. All longitudinal cold joints in HMA paving shall be sealed with polymerized joint adhesive that is a hot-applied and conforming to Subsection 914.03 and Table 914.03-1.
- E. Perform work as additionally described in the Statement of Work.
- F. General surface requirements:
1. Test finished surface of each concrete course for smoothness using a ten (10) foot straightedge.
 2. The straightedges shall have projections on the bottom at each end, either built-in or firmly attached, so that it is supported six (6") inches above the pavement surface at the ends. It shall be free from warp and deflection, subject to approval by the *ENGINEER*, and furnished by the *CONTRACTOR* without additional compensation.
 3. Check surfaced areas at intervals and in directions specified by *ENGINEER*.
 4. Check surfaces for pavement smoothness immediately after initial compaction, and correct variations by removing or adding material as may be necessary. Then rolling shall be continued as specified.
 5. Immediately after final rolling and while the pavement is still hot, the smoothness of the course shall be checked again and all projections or depressions, exceeding the specified tolerances shall be corrected by removing defective work and replacing it with new surface course as specified. Portions of the surface otherwise unsatisfactory shall be replaced to the satisfaction of the *ENGINEER*.
 6. Finished surfaces shall be free of all roller marks, ridges and voids.

3.04 FIELD QUALITY CONTROL

- A. Taking of pavement cores and testing for the determination of conformance to control air voids will be performed by the *ENGINEER* at his discretion as specified herein.
- B. Air Voids Acceptance Plan:
1. Pavement lots are defined as approximately 15,000 square yards of pavement in Surface area. If pavement lot area is less than 5000 square yards, the *ENGINEER* may waive the air voids requirements.
 2. The *ENGINEER* will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program. The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209.
 3. The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 2.
 4. The Laboratory will determine air voids from 5 (Five) 6 inch diameter cores taken from each lot in random locations within the traveled way and at least one core in each travel lane. The HMA Core Sampling Plan form provided on the Local Aid Website must be utilized by the Laboratory to determine the random locations of the cores. The Laboratory may rerun the random location functions on the HMA Core Sampling Plan form to resolve any conflicts generated by the defined herein. The coring locations must be designed by a station and offset, and offsets are taken from the left edge of the pavement in the direction of travel within the lane lines. The Laboratory must disclose the contents of the HMA Core Sampling Plan with the Contractor to assist in the schedule of construction.
 5. The Laboratory will determine air voids of cores from the values for the maximum specific gravity of the mix and the bulk specific gravity of the core. The Laboratory will determine the maximum specific gravity of the mix according to NJDOT B-3 and AASHTO T 209, except that minimum sample size may be waived in order to use a 6-inch diameter core sample. The Laboratory will determine the bulk specific gravity of the compacted mixture by testing each core according to AASHTO T 166.

6. The Laboratory will calculate the percent defective (PD) as the percentage of lot outside the acceptable range of 2 percent air voids to 8 percent air voids.
7. The acceptable quality limits is 15 percent defective. For lots in which PD>15, the Engineer will assess a negative pay adjustment.
8. The Laboratory will use and submit to the Engineer form DS8S-PD provided from the Local Aid District Office and verify manually the PD calculation.
9. The Laboratory will calculate pay adjustments based on the following:
 - a. Sample Mean (X) and Standard Deviation (S) of the N Test Results (X1, X2,, XN).

$$\bar{X} = \frac{(X_1 + X_2 + \dots + X_N)}{N}$$

$$S = \sqrt{\frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_N - \bar{X})^2}{N - 1}}$$

- b. Quality Index (Q):

$$Q_L = \frac{(\bar{X} - 2.0)}{S}$$

$$Q_U = \frac{(8.0 - \bar{X})}{S}$$

- c. Percent Defective (PD). Using NJDOT ST for the appropriate sample size, the Laboratory will determine PDL and PDU associated with QL and QU, respectively. PD = PDL + PDU.
 - d. Reduction Per Lot. Calculate the reduction per lot as specified in Table 401.03.07-3:

Table 401.03.07-3
Reduction in Payment for Nonconformance to Air Void Requirements

Percent Defective (PD) Per Lot	Reduction Per Lot (%)
$0 < PD \leq 15$	0
$15 < PD \leq 30$	0.5
$30 < PD \leq 35$	2
$35 < PD \leq 40$	10
$40 < PD \leq 45$	15
$45 < PD \leq 50$	20
$50 < PD \leq 60$	30
$60 < PD \leq 75$	45
$PD > 75$	Remove & Replace

e. Outlier Detection. If $PD < 10$, the Laboratory will not screen for outliers. If $PD \geq 10$, the Laboratory will screen acceptance cores for outliers using a statistically valid procedure. The following procedure applies only for a sample size of 5 or 10.

(1) The Laboratory will arrange the core results in ascending order, in which X_1 represents the smallest value and X_N represents the largest value.

(2) If X_N is suspected of being an outlier, the Laboratory will calculate:

$$R = \frac{X_N - X_{(N-1)}}{X_N - X_1}$$

(3) If X_1 is suspected of being an outlier, the Laboratory will calculate:

$$R = \frac{X_2 - X_1}{X_N - X_1}$$

(4) For $N = 5$ if $R > 0.642$, the value is judged to be statistically significant and the core is excluded.
For $N = 10$ if $R > 0.412$, the value is judged to be statically significant and the core is excluded.

If an outlier is detected for $N = 5$ and no retest is warranted, the Contractor may replace that core by taking an additional core at the same offset and within 5 feet of the original station. If an outlier is detected and a retest is justified, take a replacement core for the outlier at the same time as the five (5) additional retest cores are taken. If the outlier replacement core is not taken within 15 days, the Laboratory will use the initial core results to determine reduction per lot.

If an outlier is detected for $N = 10$, the Contractor may replace that core by taking an additional core at the same offset and within 5 feet of the original station. If the outlier replacement core is not taken within 15 days, the Laboratory will use the initial core results to determine the reduction per lot.

10. Retest. If the initial series of five (5) cores produces a percent defective value of $PD > 30$ for mainline or ramp lots, or $PD > 50$ for other pavement lots, the Contractor may elect to take an additional set of five (5) cores at random locations chosen by the HMA Core Sampling Plan form. Take the additional cores within 15 days of receipt of the initial core results. If the additional are not taken within the 15 days, the Laboratory will use the initial core results to determine the PPA. If the additional cores are taken, the Laboratory will recalculate the reduction per lot using the combined results from the 10 cores.
11. Removal and Replacement. If the final lot $PD \geq 75$ (based on the combined set of ten (10) cores or five (5) cores if the Contractor does not take additional cores), remove and replace the lot and all overlying work. The replacement work is subject to the same requirements as the initial work.

For shoulder lots, the Engineer will assess the calculated reduction per lot instead of removal and replacement. Fog seal the lot as specified in 422.03.01 of the Standard Specifications.

C. Thickness Requirements:

1. Taking of pavement cores and testing for the determination of conformance to pavement thickness will be performed by the *ENGINEER* at his discretion in accordance with Subsection 403.03.07.I of the Standard Specifications and as modified herein.
2. The minimum acceptable thickness on resurfacing projects for all pavement courses will be the specified thickness. Results of this check on pavement course minimum thickness will be used to determine payment reduction as follows:

$$1 - \frac{\text{Average lot thickness}}{\text{Specified lot thickness}} \times 100 = \text{Percent Reduction}$$

3. The minimum acceptable thickness on new construction or complete reconstruction projects shall be in accordance with the NJDOT Special Provisions for State Aid Projects, 2019 Edition.

D. Surface Course Rideability Requirements:

1. Base courses will not be acceptable if exceeding ¼ inch in ten feet (10') when tested in any direction.
2. Surface courses will not be acceptable if exceeding ⅛-inch in ten feet (10') for roadway paving when tested in any direction.
3. The paving operation is acceptable if the surface course is in substantial conformity with the ⅛-inch in 10 feet surface tolerance. Should the surface be found not in conformity, the *ENGINEER* may direct that paving operations be discontinued until mutually acceptable paving methods or equipment is utilized.
4. Additional compensation or an extension of contract time will not be permitted because of revised methods or equipment necessary to produce a HMA surface in substantial conformity with a ⅛-inch in 10 feet surface tolerance.

E. *CONTRACTOR* shall employ and pay for the services of an Independent Testing Laboratory acceptable to the *ENGINEER* to perform additional field quality control sampling and testing when initial tests performed by the *ENGINEER* indicate work does not comply with the *Contract Documents*. All sampling and testing shall be performed as specified herein.

F. Areas of pavement removed for field quality control testing shall be replaced by the *CONTRACTOR* as follows:

1. Clean debris from core area. Cut all exposed pavement edges vertical.
2. Apply tack coat to exposed surfaces before installing replacement pavement.
3. Fill core area with surface course mixture for the full depth of the core.
4. Compact and grade mixture; seal repaired area with tack coat; and apply thin layer of sand over tack coat in a manner satisfactory to the *ENGINEER*.

3.07 CLEANING

- A. Clean exposed surface of all grease, dirt and other foreign materials.
- B. Touch up all marred or abraded surfaces in accordance with manufacturer's directions.

PART 4 - PAYMENT

- 4.01 HMA BASE COURSE and HMA SURFACE COURSE: No separate measurement and no separate payment shall be made for HMA Base Course and HMA Surface Course furnished and installed as specified. Include all costs in the prices bid for the various related items of work as designated in the *PROPOSAL*.
- 4.02 TACK COAT No separate payment will be made for providing *TACK COAT* as specified. Include all costs in the prices bid for the various related items of work as designated in the *PROPOSAL*.
- 4.03 PRIME COAT for Dense Graded Aggregate stone paving: No separate payment will be made for providing *PRIME COAT* as specified. Include all costs in the prices bid for the various related items of work as designated in the *PROPOSAL*.
- 4.04 PATCHING of CORE AREAS taken for field quality control purposes: No separate payment will be made for patching of core areas as specified. Include all costs in the prices bid for the various related items of work as designated in the *PROPOSAL*.
- 4.05 POLYMERIZED JOINT ADHESIVE: No separate payment will be made for providing *POLYMERIZED JOINT ADHESIVE* as specified. Include all costs in the prices bid for the various related items of work as designated in the *PROPOSAL*.

****END OF SECTION****

SECTION 32 31 50
(02849)
BOLLARDS

PART 1 – GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Removable pipe bollards.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 03 30 00: Concrete*

1.02 REFERENCES

A. New Jersey State Department of Transportation Standard Specifications for Road and Bridge Construction (2019):

1. Concrete: Subsection 903.3.

1.03 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Manufacturer's product data:

1. Complete materials list of all materials proposed to be furnished and installed under this section.
2. *Specifications* and other data required that demonstrate compliance with the specified requirements.

C. Manufacturer's recommended installation procedures.

1.04 QUALITY ASSURANCE

A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

1.05 WARRANTY AND WARRANTY REPAIRS

- A. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.
- B. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including removal, shipping, reinstallation and re-start-up during the maintenance period.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.

- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 MATERIALS

A. Removable Pipe Bollards:

1. Pipe shall be 8" O.D. Schedule 40, galvanized steel pipe.

B. Concrete shall be minimum 3,000 PSI at 28 days and completely fill pipe.

C. Coatings:

1. Removable pipe bollards:

- a. Surface preparation: SSPC-SP3, Power-Tool Cleaning.
- b. Sherwin-Williams:
 - 1 coat "Kem Bond HS Universal Primer" (2-5 mils DFT)
 - 2 coats "ProMar 200 Exterior Latex Semi-Gloss Enamel" (1.5-1.8 mils DFT/ coat)
- c. M.A.B.:
 - 1 coat "Rust O-Lastic Anti-Corrosive Primer" (1.8-2.2 mils DFT)
 - 2 coats "Rich Lux Semi-Gloss Latex Enamel" (1.2-1.6 mils DFT/coat)
- d. Carboline
 - 1 coat "Carbocoat 8239" Primer (1-2 mils DFT)
 - 1 coat "Carbocrylic 3359 DTMC" Acrylic Coating (2-3 mils DFT)
- e. Or equivalent.

D. Concrete for foundations shall be Class B conforming to the requirements for footings for Guide Rail in Subsection 903.03, Table 903.03.06 of the Standard Specifications.

2.03 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the design.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION - PIPE BOLLARDS

- A. Pipe bollards shall be cut so that the minimum length shall be equal to specified height above ground plus the burial depth. The burial depth shall be three (3') feet unless detailed otherwise on the plans.
- B. Pipe bollards shall be installed as shown on the Plans.
- C. Pipe bollards to receive sleeves shall be prime painted before installation. Pipe bollards not receiving sleeves shall be given a prime coat and two (2) finish coats exterior oil - alkyd paint in accordance with *Section 09 90 00, Painting*; color as selected by the *ENGINEER*.

3.03 CLEANING

- A. Clean exposed surface of all grease, dirt and other foreign materials.
- B. Touch up all marred or abraded surfaces in accordance with manufacturer's directions.

PART 4 – PAYMENT

4.01 REMOVABLE PIPE BOLLARDS

- A. Quantity: The quantity for which payment will be made will be for the number of bollards actually constructed, measured in the field, in locations as shown or as directed by the *ENGINEER*.
- B. Payment: Payment will be made for the quantity as above determined, measured in units, at the unit price bid in the *PROPOSAL* for the various items of *REMOVABLE PIPE BOLLARDS*, which price shall include cost of saw cutting existing pavement; excavation and grading; providing bollard; reflectors; concrete backfill; painting; restorations; and all else necessary or required, complete as specified and shown on the Plans.

****END OF SECTION****

SECTION 33 01 32
(02733)

TESTING SANITARY SEWER SYSTEMS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Testing gravity sanitary sewer for exfiltration and infiltration.
2. Pressure testing force mains.
3. Lamping of all gravity sanitary sewer lines.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 01 45 29: Testing Laboratory Services*

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Furnish pumps, valves, plugs, taps, pressure gauges, air compressor, and all other equipment required for testing of piping system.

2.02 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 METHOD OF TESTING - EXFILTRATION TEST FOR GRAVITY SANITARY SEWER LINES

- A. General Requirements:
 - 1. Perform all tests in presence of the *ENGINEER*.
 - 2. Conduct exfiltration test when all utilities (including gas, water, telephone, sewers), manholes, laterals have been installed.
 - 3. Establish test sections between consecutive manholes as directed by the *ENGINEER*.
 - 4. All requirements of this specification shall be met prior to acceptance of sewer facilities by the *ENGINEER*.
- B. Procedure for exfiltration test (low pressure air test, 3.5 lbs.):
 - 1. Plug test section of sewer line at each end. Tap one (1) plug and provide air inlet connection for filling pipe from air compressor.
 - 2. Cap or plug all service laterals, stubs and fittings connecting to sewer test section, brace same against internal pressure to prevent air leakage by slippage and blowouts.
 - 3. Connect air hose to tapped plug selected for air inlet. Connect other end of air hose to portable air control equipment used for controlling air entry rate to sewer test section and monitoring air pressure in pipeline.

4. Air control equipment shall include shut-off valve, pressure regulating valve, pressure reduction valve and monitoring pressure gauge having pressure range from 0 to 5 psi and an accuracy of +0.04 psi.
5. Connect another air hose between air compressor (or other source of compressed air) and air control equipment. This completes test equipment set up.
6. Supply air to test section slowly, filling pipeline until constant pressure of 3.5 psig is maintained. Air pressure must be regulated to prevent pressure inside the pipe from exceeding 5.0 psig.
7. When constant pressure of 3.5 psig is reached, throttle air supply to maintain internal pressure above 3.0 psig for at least five (5) minutes, permitting temperature of entering air to equalize with temperature of pipe wall. During this stabilization period, check all capped and plugged fittings with a soap solution to detect leakage at connections.
8. If leakage is detected, release pressure in line and tighten all leaky caps and plugs. Start test operation again by supplying air. When necessary to bleed off air to tighten or repair faulty connection, a new five-minute interval shall be allowed after pipeline has been refilled.
9. After stabilization period, adjust air pressure to 3.5 psig and shut off or disconnect air supply. Observe gauge until air pressure reaches 3.0 psig. At 3.0 psig commence timing with a stop watch which is allowed to run until the line pressure drops to 2.5 psig. The time required, as shown on the stop watch, for a pressure loss of 0.5 psig is used to compute air loss.
10. If the time, in minutes and seconds, for the air pressure to drop from 3.0 to 2.5 psig is GREATER than that shown in Table 1 for designated pipe size, the section undergoing test shall have passed.
11. If the time, in minutes and seconds, for 0.5 psig drop is LESS than shown in Table 1 for designated pipe size, the section of pipe shall have failed the test. Necessary repairs shall be made by the contractor and the line retested.

*TABLE 1

**TIME REQUIREMENTS FOR AIR TESTING
FOR SEWER LINE OF UNIFORM PIPE SIZE**

<u>Pipe Size</u> <u>(In Inches)</u>	<u>Minutes</u>	<u>Time</u> <u>Seconds</u>
MORRIS COUNTY MUA Bid No. 2025-SW06	A-1340-0024-000/S3081 October 2025	Testing Sanitary Sewer Systems 33 01 32-3

**4	2	32
**6	3	50
**8	5	6
10	6	22
12	7	39
14	8	56
15	9	35
16	10	12
18	11	34
20	12	45
21	13	0

* Multi Pipe Sizes: When sewer line undergoing test is 8 inch or larger diameter pipe and includes different sized laterals, the figure in Table 1 for uniform sewer main sizes WILL NOT give reliable or accurate criteria for the test. Where multiple pipe sizes are to undergo air testing, the *ENGINEER* will compute "average" size in inches which is multiplied by 38.2 seconds. The results give minimum time in seconds acceptable for pressure drop of 0.5 psig for "averaged" diameter pipe.

** For 8 inch and smaller pipe only, if during the five (5) minute stabilization period, pressure drops less than 0.5 psig after initial pressurization and air is NOT added, pipe section undergoing test shall have passed.

C. Procedure for air pressure correction due to groundwater:

1. Air pressure correction is required when prevailing groundwater is above sewer line being tested. Under this condition, air test pressure shall be increased 0.433 psi for each foot groundwater level is above invert of pipe.
2. Establish height of groundwater (in feet) above pipe invert:
 - a. DURING SEWER AND MANHOLE CONSTRUCTION, install one-half inch diameter pipe nipple (threaded one or both ends, approximately ten (10") inches long) through manhole wall directly on top of one of sewer pipes entering manhole, with threaded end of nipple extending inside the manhole.
 - b. Seal pipe nipple with a threaded one-half inch cap.
 - c. Immediately before air testing, determine groundwater level by removing the threaded cap from nipple, blowing air through the pipe nipple to remove any obstructions, and connecting clear plastic tube to pipe nipple.

- d. Hold plastic tube vertically permitting water to rise to groundwater level.
 - e. After water level has stabilized in plastic tube, measure vertical height of water, in feet, above invert of sewer pipe.
3. Determine air pressure correction, which is added to 3.0 psig normal starting pressure of test, by dividing the vertical height in feet by 2.31. The result gives air pressure correction in pounds per square inch to be added:

Example: If the vertical height of water from the sewer invert to the top of the water column measures 11.55 feet, the additional air pressure required would be

$$\frac{(11.55)}{2.31} = 5 \text{ psig}$$

Starting pressure of the test would be 3.0 plus 5 or 8.0 psig, and the one-half pound drop becomes 7.5 psig. There is no change in the allowable drop (0.5 psig) or in the time requirements established for the basic air test.

3.03 METHODS OF TESTING - INFILTRATION TEST FOR GRAVITY SANITARY SEWER LINES

A. General:

1. All work relating to infiltration testing shall be performed in the presence of the *ENGINEER*. The weir will be provided by the *ENGINEER*.
2. All requirements of this specification shall be met prior to acceptance of sewer facilities by the *ENGINEER*.

B. Procedure for infiltration test:

1. Examine the sanitary sewer system for infiltration at the downstream end of the system after construction has been completed.

2. In the event that there is infiltration and water is flowing at the downstream end of the system, then the source and volume of flow shall be determined by an infiltration test.
3. The test shall consist of isolating the source of infiltration by plugging the first upstream manhole and observing to see if the flow stops. This procedure is repeated one manhole at a time until each source has been isolated.
4. When the infiltration has been isolated to a section or area, the volume of flow shall be determined using a 90 degree V-notch weir inserted into the pipe.
5. The actual infiltration rate will be determined by the *ENGINEER* based on the weir measurements. This rate will be compared with the allowable infiltration rate of 50 gallons/inch diameter/mile of pipe/per day (24 hours).
6. If the allowable infiltration rate is greater than the actual infiltration rate, the infiltration test passes. If the actual infiltration is greater than the allowable infiltration, the infiltration test fails.
7. In the event the infiltration test fails, the section of the pipe involved shall be repaired as necessary and the test repeated.

3.04 METHOD OF TESTING - LAMPING OF GRAVITY SANITARY SEWER LINES

A. General:

1. Lamping shall be performed on all gravity sanitary sewer lines.
2. Lamping will be performed by the *ENGINEER*. The contractor shall provide all necessary labor to assist the *ENGINEER* during the lamping inspection.

B. Procedure for lamping:

1. Lamping consists of visually examining the inside of the pipe between two consecutive manholes using a light and mirror.
2. The light is shown from one manhole towards the other manhole.
3. A mirror is held at the invert of pipe and adjusted so that light and barrel of pipe can be seen.

4. The barrel of the pipe shall have no vertical deflection and at least seventy-five (75%) percent of the barrel shall be visible in the horizontal direction.
5. In the event that lamping shows the pipe not laid to line and grade within the acceptance limits specified above, then it shall be repaired and relamped as necessary until the lamping complies with the acceptance limits.

3.05 METHODS OF TESTING – PRESSURE TESTING OF FORCE MAINS

A. General requirements:

1. Perform all tests in presence of the *ENGINEER*.
2. Establish test sections between valves, or as directed by the *ENGINEER*.
3. All requirements of this specification shall be met prior to acceptance of force main by the *ENGINEER*.

B. Procedure for exfiltration test:

1. Expel air from pipe through blow-offs, or taps required for release of air from high points. Taps for release of air and blow-offs for filling pipe and releasing air shall be provided by the Contractor.
2. Fill each pipe section slowly with water, and subject pipe to hydrostatic pressure of 150 psi for one (1) hour.
3. When test pressure is reached, measure amount of make-up water required to maintain this pressure during the one (1) hour test period.
4. Allowable leakage:
 - a. No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{(S)(D)(P^{1/2})}{133,200}$$

where L = Allowable leakage, in gallons per hour.

S = Length of pipe tested, in feet

D = Nominal diameter of pipe, in inches

P = Average test pressure in P.S.I.G.

- b. This formula is based upon an allowable leakage of 11.65 gallons per day, per inch of diameter, per mile of pipe at a test pressure of 150 psi.
- c. Allowable leakage at various diameters is shown below:

Allowable Leakage Per 1000 ft. of Pipeline - gph

Avg. Test Pressure (psi)	Nominal Pipe Diameter - inches					
	2	3	4	6	8	10
150	0.19	0.28	0.37	0.55	0.74	0.92

Allowable Leakage Per 1000 ft. of Pipeline - gph

Avg. Test Pressure (psi)	Nominal Pipe Diameter - inches					
	12	14	16	18	20	24
150	1.10	1.29	1.47	1.66	1.84	2.21

Allowable Leakage Per 1000 ft. of Pipeline - gph

Avg. Test Pressure (psi)	Nominal Pipe Diameter - inches					
	30	36	42	48	54	
150	2.76	3.31	3.86	4.41	4.97	

- d. If the pipeline under test contains sections of various diameters, the allowable leakage will be the sum of the computed leakage for each size.

C. Acceptance of installation:

1. Acceptance shall be determined on the basis of allowable leakage. If any test of pipe laid, discloses leakage greater than that specified above, the Contractor shall, at his own expense, locate and make repairs as necessary until the leakage is within the specified allowance.

2. All visible leaks are to be repaired regardless of the amount of leakage.

PART 4 - PAYMENT

4.01 TESTING SANITARY SEWER SYSTEMS

- A. Unless otherwise noted in the *PROPOSAL* Section, no separate payment shall be made for this item.
- B. Include all costs for the *TESTING SANITARY SEWER SYSTEMS* in the prices bid for the various related items of work as designated in the *PROPOSAL*.

****END OF SECTION****

SECTION 33 05 13

MANHOLES

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included:

1. Pre-cast concrete manholes.
2. Repair or reconstruction of manholes, manhole cone sections, and top slab.
3. Replacement of existing manhole castings.
4. Infiltration prevention inserts for manholes.

B. Related Work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 10 00: Clearing Site*
3. *Section 31 23 00: Excavating, Filling and Grading*
4. *Section 03 30 00: Concrete*

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM C-443: Joints for Circular Concrete Sewer and Culvert Pipe Using Rubber Gaskets.
2. ASTM C-478: Pre-cast Reinforced Concrete Manhole Sections.
3. ASTM C-923: Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals.
4. ASTM C913: Precast Concrete Water and Wastewater Structures.

1.03 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
 - 1. Complete materials list of all materials proposed to be furnished and installed under this section.
 - 2. *Specifications* and other data required that demonstrate compliance with the specified requirements.
 - 3. Submit manufacturer's product data for
 - a. Pre-cast manholes and Top slabs.
 - b. Gaskets and adaptors for pipe to structure connections.
 - c. Waterproofing
 - d. Non-shrink mortar.
 - e. Manhole steps.
 - f. Castings.
- C. Manufacturer's recommended installation procedures.
- D. Concrete delivery slips:
 - 1. Submit two (2) legible copies of the delivery slip for each load of concrete to the *ENGINEER* or his representative.
 - 2. All deliveries of concrete shall be accompanied by delivery slips conforming to ASTM C-94 and shall show:
 - a. Name of ready-mix batch plant,
 - b. Serial number of ticket,
 - c. Date,
 - d. Truck number,

- e. Name of purchaser,
- f. Specific designation of job (name and location),
- g. Specific class or designation of the concrete in conformance with that employed in job,
- h. Amount of concrete in cubic yards,
- i. Time loaded or of first mixing of cement and aggregates,
- j. Water added by receiver of concrete and his initials,
- k. Type and brand, and amount of cement,
- l. Type and brand, and amount of admixtures,
- m. Information necessary to calculate the total mixing water added by the producer. Total mixing water includes free water on the aggregates, water, and ice batched at the plant, and water added by the truck operator from the mixer tank,
- n. Maximum size of aggregate,
- o. Weights of fine and coarse aggregate,
- p. Ingredients certified as being previously approved,
- q. Signature or initials of ready-mix representative.
- r. The batch plant shall indicate the amount of water that may be added at the jobsite without altering the water/cement ratio by adding the following statement to each batch ticket and filling in the blanks:

*"No more than ____ . ____ Gals/CY
of water may be added at the site."*

- 3. Record on each delivery slip the location where placed in the work and the time of placement.

1.04 QUALITY ASSURANCE

A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

C. Basis of acceptance:

1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.05 PRODUCT DELIVERY STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

PART 2 - PRODUCTS

2.01 MANHOLES

- A. Pre-cast concrete manholes shall conform to ASTM C478.
 - 1. Rubber gaskets for manhole joints conforming to ASTM C443 shall be provided for manholes 48" and 60" in diameter.
 - 2. Butyl-Rubber gaskets for manhole joints conforming to ASTM C990 shall be provided for manholes larger than 60" in diameter.
 - 3. Rubber gaskets for pipe to structure connections shall be provided for all circular pipe connections of 7° or less off of perpendicular.
- B. Ladder rungs:
 - 1. Conforming to ASTM C478.
 - 2. Steps shall be twelve inches (12") wide with a non-slip surface, with the ends turned up a minimum of two inches (2"). Rungs shall be set into the wall a minimum of three inches (3") and extend seven inches (7") from the manhole wall.
- C. Coatings and Linings:
 - 1. Manhole exteriors shall be coated with two (2) coats of Sherwin-Williams "Targuard Epoxy" or equivalent at 8-16 mils DFT per coat.
 - 2. Manhole interior surfaces shall be coated with two (2) coats Sherwin Williams "Macropoxy 646" or equivalent at 5-10 mils DFT per coat.
- D. Pipe to Structure Connections:
 - 1. Resilient connectors for pipe to structure seal for pre-cast manholes shall conform to ASTM C923.
 - 2. Pipe adaptors shall be provided for 8" to 24" corrugated polyethylene pipe as manufactured by NPC, Inc. or equivalent.
 - 3. Acceptable Manufacturers:
 - a. A•LOK PRODUCTS INCORPORATED
P.O. Box 1647, 697 Main Street
Tullytown, Pa.19007
Phone: 800-822-2565

215-547-3366
Fax: 215-547-5260

b. NPC, Inc.
250 Elm Street
P.O. Box 301
Milford, NH 03055
Phone: 800-626-2180
Fax: 603-673-7271

c. Or equivalent.

E. Non-shrink mortar shall be approved by, the *ENGINEER* prior to construction.

F. Castings:

1. Castings shall be as shown and conform to Section 603 of the Standard Specifications.

2. Acceptable manufacturers:

a. Campbell Foundry Company

b. Bridgestate Foundry Corporation

c. Or equivalent.

G. Concrete: Conforming to Section 03 30 00, Concrete.

2.02 INFILTRATION PREVENTION INSERTS

A. Inserts shall be manufactured from a high-density polyethylene copolymer material that meets ASTM D-1248, Class A, Category 5, Type III.

B. Inserts shall have a minimum impact brittleness temperature of -105°F in accordance with ASTM D746.

C. Insert material shall have a minimum softening temperature of 254°F meeting all requirements of ASTM D 1525.

D. Insert material shall have a minimum tensile strength of 3700 psi and an elongation factor of 800% meeting all requirements of ASTM D 638.

E. The insert thickness shall be a uniform 1/8" (minimum).

- F. The insert shall be provided with a polypropylene ethylene valve designed to release gas pressure at approximately 1 psi, and vacuum pressure at approximately 2 psi. The valve shall be unaffected by temperatures within a range of -70°F to 350°F. Valve body shall be corrosion and wear resistant.
- G. Insert shall have a corrosion resistant nylon strap installed for easy removal and reinstallation into the manhole frame.
- H. After installation, the insert shall not allow more than 5 gallons of inflow per 24 hours at four feet of water head above the frame.
- I. The insert diameter shall be based on dimensions provided to the manufacturer by the Contractor.
- J. Manhole inserts shall be provided as manufactured by Parson Environmental Products, Inc. (800-356-9023), L. F. Manufacturing, Inc., (800-237-3791) or equivalent.

2.03 OTHER MATERIALS

- A. Concrete for manhole foundations shall be Class B conforming to Subsection 903.03 of the NJDOT Standard Specifications for Road and bridge Construction, 2019.
- B. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that the work of this section may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.
- C. In the event of discrepancy, immediately notify the *ENGINEER*.

- D. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.02 INSTALLATION

A. General:

1. Install the work of this section in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.
2. The general method of construction shall conform to Section 603 of the Standard Specifications. The manholes shall be constructed as shown on the Plans.

B. Manholes:

1. Manhole walls shall be constructed of precast concrete rings. Joints shall be made to produce a smooth and uniform surface. Manhole walls may be constructed of poured concrete subject to approval by the *ENGINEER*. Installation of rubber gaskets for precast manholes shall be in accordance with the manufacturer's recommendations.
2. The invert channels shall be smooth and semicircular in shape conforming to the inside of the adjacent sewer section. Changes in direction of flow shall be made with a smooth curve of as large a radius as the size of the manhole will permit. Changes in size and grade of the channels shall be made gradually and evenly. The invert channels shall be formed in the concrete fill above the manhole base, or shall be half tile laid in concrete, or shall be constructed by laying full section sewer pipe through the manhole and cutting out the top half after the surrounding concrete has hardened. The floor of the manhole outside the channels shall be smooth and shall slope toward the channels not less than one inch (1") per foot nor more than two inches (2") per foot.
3. Construct manholes to the lines and grades shown on the Plans.

C. Setting castings:

1. Frames shall be well set in mortar, making a watertight joint, and shall be adjusted so that the rim is approximately 1/4 inch above finished grade. Cover and frame shall have a shop coat of asphaltic pitch and shall have a field coat of similar paint after the frame is set in final position. Steps shall be provided in the manhole as shown on the Plans.

2. If castings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The casting shall not be disturbed until the mortar or concrete has set.
3. When castings are to be placed upon previously constructed masonry, the bearing surface of masonry shall be brought to line and grade and present an even bearing surface in order that the entire face or back of the casting will come in contact with the masonry. Castings shall be set in mortar beds or anchored to the masonry as indicated.

3.03 REPAIR OF MANHOLES

- A. The work shall consist of cleaning the existing structure including the removal and disposal of any debris, replacement of any damaged or missing block and/or brick, replacement of any loose or missing mortar, replacement of any loose or missing ladder rungs, reparging of walls, patching of channels, replacing any missing bolts in the casting, and any work necessary to repair the existing inlets and manholes.
- B. All work and materials shall conform to the Standard Specifications and be approved by the *ENGINEER*.

3.04 RECONSTRUCTION OF MANHOLES

- A. This work shall consist of the removal and disposal of any debris, removing the existing castings, removal of walls and ladder rungs to the necessary depth, disposal of the masonry, reconstruction of the walls, providing new ladder rungs, backfilling with Soil Aggregate I-13, compaction, and resetting existing castings at the specified grade.
- B. All work and materials shall comply with the Standard Specifications and be approved by the *ENGINEER*.

3.05 REPLACEMENT OF EXISTING CASTINGS

- A. This work shall consist of the removal and disposal of the existing manhole frame and lid; any debris, removing the existing mortar; setting new frame in fresh mortar at the specified grade and providing new manhole lid.
- B. All work and materials shall comply with the Standard Specifications and be approved by the *ENGINEER*.

3.06 RESETTING UTILITY CASTINGS AND GRATES

- A. Reset existing manhole castings in strict conformance with utility company or municipal regulations and as directed in the field by the *ENGINEER* or the utility owner.
- B. The masonry or concrete of existing structures shall be added to or removed as necessary to conform to new surface grades and elevations.
 - 1. All work shall conform to Section 602 of the Standard Specifications.
 - 2. The reset castings shall be well bedded in mortar, making a watertight joint.
- C. Use of Extension Rings and Frames:
 - 1. Maximum rise of extension rings shall not exceed 4-inches.
 - 2. Minimum rise shall be such that new lids or grates are not required.
 - 3. Extension rings shall be installed in accordance with Section 602 of the Standard Specifications.
- D. Replace in kind, castings and grates damaged due to *CONTRACTOR'S* work operations or due to vehicular traffic at no additional cost to the *OWNER*.

3.07 INFILTRATION PREVENTION INSERTS

- A. Install inserts in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.
- B. Thoroughly clean the seating surfaces of the frames and covers with a wire brush before installing the inserts.

PART 4 - PAYMENT

4.01 MANHOLES

- A. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.

- B. Include all costs for *MANHOLES* in the prices bid for the various related items of work as designated in the Proposal.

****END OF SECTION****

SECTION 33 11 18

WATER DISTRIBUTION VALVES AND APPURTENANCES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Pipe and fittings for potable water line
2. Valve boxes
3. Yard Hydrants

B. Related work:

1. Other sections of the *Specifications*, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Manufacturer's product data:

1. Complete materials list of all materials proposed to be furnished and installed under this section.
2. Specifications and other data required that demonstrate compliance with the specified requirements.

C. Manufacturer's recommended installation procedures.

1.03 QUALITY ASSURANCE

A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Delivery and storage:
 1. During loading, transporting, and unloading, exercise care to prevent damage to materials.
 2. Do not drop pipe or fittings.
 3. Assure that materials are kept clean.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 WATER SERVICES

- A. Curb valve: 2" compression ball curb valve, Mueller Catalog No. B-25209.
- B. Curb box: Cast iron, improved extension type, arch pattern; Mueller Catalog No. H-1038640. 4' M ORISEAL.
 - 1. Furnish each Mueller curb box with foot piece
 - a. Catalog No. H-10394 for 1½ inch size valve or stop
 - b. Catalog No. H-10395 for 2-inch size valve or stop
 - 2. Box length: Order to meet project conditions.
- C. Shut-off rods: Steel; Mueller catalog No. H-10321.
 - 1. Furnish a total of two rods.
 - 2. Length: Order to meet project conditions. Minimum length shall be 6 feet.
- D. Pentagon keys: Steel; Mueller catalog No. 10325.
- E. Service Clamps:
 - 1. Service clamps shall be extra wide strap or double strap type with stainless steel straps.

2. Approved manufacturers:
 - a. Dresser Style 194
 - b. McDonald Model 3801
 - c. Rockwell #313, 342, 352
 - d. JCM #403, #405, #404, #406
 - e. Or equivalent.

2.03 YARD HYDRANTS

- A. Acceptable manufacturers:
 1. Kupferle
 2. Or equivalent.
- B. Yard hydrant shall have the following properties:
 1. Non-freezing
 2. Self draining
 3. Compression type with 2-3/16" main valve opening
 4. 2" IP inlet connection
 5. 2" hose outlet with handwheel
 6. 62" center of inlet to top of operating nut with shoe inlet and nozzle oriented opposite of each other
 7. 3'6" extension kit for Eclipse #2 Post Hydrant
- C. Yard Hydrant shall be model #2 Eclipse Post Hydrant by Kupferle or equivalent.

2.04 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Workmanship:
 - 1. Examine pipe, fittings, curb boxes and valves before installation to assure no defective materials are incorporated.
 - 2. Keep inside of pipe, fittings, boxes and valves free of dirt and debris.
- B. Placement:
 - 1. Lay piping on firm bed for entire length of trench except where supports are otherwise provided.
 - 2. Employ partial backfilling and cradling to hold pipe in secure position during backfilling operations.
 - 3. Backfill evenly on both sides of pipe to maintain alignment.
 - 4. Anchor piping laid on grade prior to embedment in concrete.
- C. Bending pipe:
 - 1. Bend pipe by any method and to any radius within manufacturer's recommendation.
 - 2. Bend surface free of cracks and buckles.

D. Flared joints:

1. Ream or file pipe to remove burrs.
2. Slip fitting over tube end to be flared.
3. Expand end of tube using flaring tool.
4. Tighten joint fitting.

E. Curb valves and boxes:

1. Install curb valves and boxes in accordance with the manufacturer's printed instructions and in a manner to allow proper operation of the valve. Assure that valves are installed in the proper direction and that boxes are installed plumb.
2. Install valves and boxes in the locations shown in the Plans.

F. Yard hydrants:

1. Install yard hydrants where shown and in accordance with plan details.
2. Provide each yard hydrant with hose, hose rack and accessories.
3. Paint hydrant casing and hose rack in accordance with *Section 09 90 00* as follows:
 1. Potable water: Light Blue.
 2. Utility water: Dark Blue with Yellow Stripe.
 3. Fire water: Red.

3.03 TESTING

- A. Disconnect all equipment and devices that may be damaged by test pressures.
- B. Plug or cap lines.
- C. Test and disinfect each piping system.
- D. Repair all leaks.

3.04 DISINFECTION AND FLUSHING OF DOMESTIC WATER PIPING SYSTEM

- A. Prior to starting work, verify system is complete, flushed and clean.
- B. Disinfect water service and distribution piping in accordance with the National Standard Plumbing Code.
- C. Provide certification of performance and laboratory test report as required by the National Standard Plumbing Code.

PART 4 - PAYMENT

4.01 WATER DISTRIBUTION

- A. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
- B. Include all costs for *WATER DISTRIBUTION* in the prices bid for the various related items of work as designated in the Proposal.

****END OF SECTION****

SECTION 33 31 12
(02730)

GRAVITY SANITARY SEWER PIPING SYSTEMS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. Gravity sanitary sewer pipe and fittings.
2. Underground pipe markers.
3. Connection to existing manholes.
4. Wye branches and tees.
5. Bedding and cover materials.

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 31 23 00: Excavating, Filling and Grading*
3. *Section 33 01 32: Testing Sanitary Sewer Systems*
6. *Section 40 05 23: Valves & Piping Appurtenances*

C. References:

1. American Society for Testing and Materials (ASTM):
 - a. ASTM C-478: Precast Reinforced Concrete Manhole Sections
 - b. ASTM C-913: Precast Concrete Water and Wastewater Structures.
 - c. ASTM C-923: Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals

- d. ASTM D-3034: Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings.
 - e. ASTM D-3212: Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
 - f. ASTM F-679: PVC Large Diameter Plastic Gravity Sewer Pipe and Fittings.
- 2. American Association of State Highway and Transportation Officials:
 - a. M-45: Aggregate for Masonry Mortar.
- 3. New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 and all amendments thereto (Standard Specifications).

1.02 SUBMITTALS

- A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.
- B. Manufacturer's product data:
 - 1. Complete materials list of all materials proposed to be furnished and installed under this section.
 - 2. Specifications and other data required that demonstrate compliance with the specified requirements.
- C. Shop drawings for manholes showing precise dimensions of the work of this section, and all other data needed to ensure proper and adequate provisions in construction to accommodate the work of this section.
- D. Submit NJDOT *Certificate of Compliance* conforming to Subsection 106.07 of the Standard Specifications for all materials and assemblies specified herein.
- E. Manufacturer's recommended installation procedures.

1.03 QUALITY ASSURANCE

- A. Qualifications of manufacturer:

1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.

B. Qualifications of workmen:

1. Provide at least one person who shall be present at all times during execution of the work of this section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this section.
2. Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the method and materials to be used.
3. In acceptance or rejection of the work of this section, the *ENGINEER* will make no allowance for lack of skill on the part of workmen.

C. Basis of acceptance:

1. The manufacturer's installation instructions will provide the basis for acceptance or rejection of the work performed under this section.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the *ENGINEER* and at no additional cost to the *OWNER*.
- D. Storage of materials:
 1. Store materials to prevent physical damage.
 2. Store pipe and fittings off ground to prevent dirt and debris from entering.

3. Store flexible gasket materials and joint primer or adhesive compounds, in cool dry place. Keep rubber gaskets clean, away from oil, grease, excessive heat, and out of direct rays of sun.

E. Handling of materials:

1. Protect materials during transportation and installation to avoid physical damage.
2. Use extra care in cold weather when flexibility and impact resistance of PVC pipe is reduced.
3. Do not install out-of-round pipe.
4. Unload pipe to prevent abrasion.
5. Do not drag or push pipe when handling or distributing on project site.

1.05 WARRANTY AND WARRANTY REPAIRS

- A. Warranties shall be provided as specified in *Section 01 78 36, Guarantees*. A copy of the manufacturer's warranty shall accompany the shop drawing submittal.
- B. The *CONTRACTOR* and/or equipment manufacturer shall be responsible for all costs of warranty repair work including removal, shipping, reinstallation and re-start-up during the maintenance period.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.

2.02 P.V.C. GRAVITY SEWER PIPE AND FITTINGS:

- A. ASTM D-3034; SDR 35; Sizes 4" through 15".
- B. ASTM F-679; Sizes 18" through 48".
- C. ASTM F-794; Sizes 4" through 48".
- D. P. V. C. Sewer Fittings:
 - 1. ASTM F-1336; SDR 26; Sizes 4" through 15".
 - 2. Provide saddle adaptor for pipe conforming to ASTM F-679 and ASTM F-794.
- E. Pipe joints:
 - 1. Joint design: ASTM D-3212, Push-On Type Joint using an elastomeric ring gasket. Infiltration shall not exceed 50 gallons/inch diameter/mile/day.
 - 2. Joint material: Elastomeric ring rubber gasket, ASTM D-3212.
 - 3. Joint material Primer/Adhesive: As provided or specified by pipe manufacturer.
- F. Pipe To Structure Connections:
 - 1. Resilient connectors for pipe to structure seal for pre-cast inlets or manholes shall conform to ASTM C923.
 - 2. Acceptable Manufacturers:
 - a. A•LOK PRODUCTS INCORPORATED
Tullytown, Pa.19007
Phone: 800-822-2565
215-547-3366
Fax: 215-547-5260
 - b. NPC, Inc.
Milford, NH 03055
Phone: 800-626-2180
Fax: 603-673-7271
 - c. Press-Seal Gasket Corp

Fort Wayne, IN
Tel: (260) 436-0521
(800) 348-7325
Fax: (260) 436-1908

- d. Or equivalent.

2.03 PIPE COUPLINGS

A. Acceptable manufacturers:

1. The Ford Meter Box Company, Inc.
2. Smith-Blair, Inc.
3. JCM Industries, Inc
4. Or equivalent.

B. Sleeve couplings:

1. Couplings for connecting pipe shall be full circle Type 304 stainless steel sleeve couplings with Nitrile gaskets and Type 304 stainless steel bolting. The nuts shall be fluoropolymer coated to prevent galling.

2.04 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of the work of this section, shall be new, first quality of their respective kinds, and as selected by the *CONTRACTOR* subject to the approval of the *ENGINEER*.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Inspection by Contractor:

1. Check pipe for following information which shall be clearly marked on each pipe section:
 - a. Pipe type and SDR number.
 - b. Nominal pipe size.
 - c. The PVC cell classification, for example 12454-B.
 - d. Name or trademark of manufacturer.
 - e. The ASTM Specification designation.
2. Check fittings for the following markings:
 - a. The ASTM Specification designation.
 - b. Manufacturer's name or trademark.
 - c. Nominal size.
 - d. The material designation PVC, PSM.
3. Inspect pipe for defects prior to placement in trench. The pipe and fittings shall be free from visible cracks, holes, foreign inclusions or other injurious defects.
4. Assure that all materials are to the type specified and are not defective. Unmarked pipe or pipe and materials not meeting Specification requirements shall be removed from the site as directed by the *ENGINEER*.

3.03 EXCAVATION FOR TRENCHES

- A. Comply with the requirements of *Section 31 23 00, Excavation, Grading and Filling*.
- B. Dig trenches to the uniform width required for the particular item to be installed, sufficiently wide to provide ample working room.
 - 1. Maximum trench width to a point one foot above the outside top of pipe shall be the pipe outer diameter plus sixteen inches.
 - 2. Maximum trench width at ground surface shall be as required for depth of pipe.
- C. Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations.
- D. Trenches for pipes shall not be opened more than the number of linear feet of pipe that can be placed and backfilled in one day.
- E. Grub roots and stumps within six inches of outside surface of pipe bottom and sides to minimum depth of six inches below bottom of trench.
- F. Install pipe bedding of material approved for initial backfill in accordance with the details shown on the Plans and as specified herein.

3.04 INSTALLATION - PIPE

- A. Lay pipe only in presence of *ENGINEER*. *ENGINEER* may order removal and relaying of pipe not so laid.
- B. Fine grade trench bottom so that pipe is supported for its full length.
- C. Lay pipe to lines and grades shown on Plans. Face socket end of pipe in direction of pipe laying.
- D. Do not lay pipe on unsuitable material, in wet trench, or in same trench with another pipe or utility.
- E. Lower pipe into trench with ropes, machinery, or other means approved by *ENGINEER*.
- F. General Procedure for Joining Pipe:

1. DO NOT USE EXCAVATING EQUIPMENT TO SHOVE PIPE SECTIONS TOGETHER.
2. Hold pipe securely and in proper alignment when joining.
3. Do not disturb previously made joints. Check completed piping to assure joints are intact. Insure placement of backfill over pipe is accomplished without disturbing pipe position.
4. Do not allow earth, stones, or other debris to enter pipe or fittings.
5. Method of installing joint materials and joining piping shall be in strict accordance with manufacturer's printed instructions as approved by the *ENGINEER*.

G. Backfill and compaction:

1. Initial backfill:
 - a. Initial backfill material shall be as shown on the drawings and as specified in *Section 31 23 00, Excavation, Grading and Filling*.
 - b. Install initial backfill material shall be as shown on the plan details for the type of pipe being used.
 - c. Material shall be placed under the pipe haunch to provide adequate side support. Material shall be installed entire trench width and shall be tamped and rodded to insure full contact with pipe at haunch up to the spring line.
 - d. Little or no tamping of the initial backfill directly over the pipe shall be done.
2. Final backfill: See *Section 31 23 00, Excavation, Grading and Filling*.

3.05 CLEANING

- A. Comply with requirements of *Section 01 74 00, Cleaning and Restorations*.
- B. Remove and dispose of all debris.

3.05 TESTING

A. Deflection testing:

1. For pipe conforming to the requirements of ASTM D3034 Maximum allowable pipe deflection (reduction in vertical inside diameter) shall be 7½%.
2. Deflection tests shall be successfully performed on the complete installation by means of one of the following methods prior to the acceptance of construction.
 - a. “Go-No-Go” mandrel properly sized.
 - b. Calibrated television.

B. Lamping:

1. *ENGINEER* will lamp all installed pipe between manholes. Sewer lines shall meet the following standards to pass the lamping inspection.
 - a. Barrel of pipe shall have no vertical deflection (not to be confused with the deflection test), and at least seventy-five percent of barrel shall be visible in the horizontal direction.
 - b. Pipe not meeting this Specification shall be relaid and relamped until compliance is achieved at no additional cost to *OWNER*.

C. Air testing:

1. Air testing shall conform to the requirements of *Section 33 01 32, Testing Sanitary Sewer Systems* except as herein modified.
2. The minimum time duration for a low pressure exfiltration pressure drop between two consecutive manholes shall not be less than shown in Table 1.
3. The prescribed drop shall not exceed .5 psi from 3.5 to 3.0 psi in excess of the groundwater pressure above the top of the sewer.

TABLE 1
MINIMUM DURATION FOR AIR TEST PRESSURE DROP

	Pipe Size	Time
MORRIS COUNTY MUA Bid No. 2025-SW06	A-1340-0024-000/S3081 October 2025	Gravity Sanitary Sewer Piping System 33 31 12-10

<u>Inches</u>	<u>mm.</u>	<u>Minutes</u>
4	100	2½
6	150	4
8	200	5
10	225	6½
12	305	7½
15	380	9½

PART 4 - PAYMENT

4.01 PVC GRAVITY SEWER PIPE

- A. Unless otherwise noted in the Proposal Section, no separate payment shall be made for this item.
- B. Include all costs for *PVC GRAVITY SEWER PIPE* in the prices bid for the various related items of work as designated in the Proposal.

****END OF SECTION****

SECTION 40 05 23

VALVES AND PIPING APPURTENANCES

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Gate valves
2. Miscellaneous valves

B. Related work:

1. Other sections of the specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
2. *Section 33 31 12: Gravity Sanitary Sewer Piping Systems*

C. Payment:

1. Quantity and payment: No separate payment shall be made for this item. Include all costs for *VALVES AND PIPING APPURTENANCES* in the prices bid for the various related items of work as designated in the Proposal.

1.02 SUBMITTALS

A. Comply with provisions of *Section 01 33 23, Shop Drawings, Product Data and Samples*.

B. Manufacturer's product data:

1. Complete materials list of all materials proposed to be furnished and installed under this section.
2. Specifications and other data required to demonstrate compliance with the specified requirements.

- C. Manufacturer's recommended installation procedures.
- D. Submit warranties as specified in *Section 01 78 36, Guarantees*.

1.03 QUALITY ASSURANCE

- A. Qualifications of manufacturer: Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the *ENGINEER*.
- B. Qualifications of installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- C. Basis of acceptance: The manufacturer's recommended installation procedures, when approved by the *ENGINEER*, will become the basis for inspecting and accepting or rejecting actual installation procedures used on this work.

1.04 DELIVERY STORAGE AND HANDLING

- A. Comply with provisions of *Section 01 66 00, Storage and Protection*.
- B. Prepare valves and accessories for shipment according to AWWA C500, Section 31 and:
 - 1. Seal valve ends to prevent entry of foreign matter into valve body.
 - 2. Box, crate, completely enclose, and protect valves and accessories from accumulations of foreign matter.
- C. Store valves and accessories in area protected from weather, moisture, or possible damage.
- D. Do not store materials directly on ground.
- E. Handle items to prevent damage to interior or exterior surfaces.

PART 2 - PRODUCTS

2.01 GENERAL

MORRIS COUNTY MUA
Bid No. 2025-SW06

A-1340-0024-000/S3081
October 2025

Valves and Piping Appurtenances
40 05 23-2

- A. Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Other materials may be considered by the *ENGINEER* in accordance with the provisions of *Section 01 25 13, Substitutions*.
- C. Acceptable Manufacturers:
1. Mueller Co.
Chattanooga, Tennessee
(423) 209-4800
 2. CLA - Val Co.
Newport Beach, CA
(714) 548-2201
 3. APCO-Willamette
Portland, Oregon
(503) 692-1252
 4. Clow Valve Corporation
Oskaloosa, Iowa
(515) 673-8611
 5. Milwaukee Valve Co.
Milwaukee, Wisconsin
(414) 744-5240
 6. Troy Valve
Troy, PA
(800) 232-4442
 7. G.A. Industries
Mars, PA
(412) 776-1020
 8. M & H Valve Co.
Anniston, Alabama
(205) 237-3521
 9. American-Darling Valve
Birmingham, Alabama

(205) 325-7856

10. Henry Pratt Co.
Frazer, PA
(215) 647-7488
11. Val-Matic Valve & Manufacturing Corp.
Elmhurst, Illinois
(312) 941-7600
12. Milliken Valve Company, Inc.
Bethlehem, PA
(215) 861-8803
13. Rovang, Inc.
Portland, OR
(503) 285-4527
14. Hayward Industrial Products, Inc.
Elizabeth, NJ
(908) 351-5400
15. L & M Valve
Salem, VA
(703) 389-2031
16. Red Valve Co. Inc.
Carnegie, PA
(412) 279-0044
17. Ronningen - Petter
Portage, MI
(616) 323-1313
18. Kennedy Valve Co.
Elmira, NY
(607) 734-2211
19. Watts Regulator Co.
N. Andover, MA
(508) 688-1811
20. Febco
Fresno, CA
(209) 252-0791

21. Hersey - Beeco
Redham, MA
(617) 326-9400
22. Waterous Co.
South St. Paul, MN
(612) 450-5000
23. U.S. Pipe & Foundry
Burlington, NJ
(609) 387-6147
24. Chemtrol
Indianapolis, Indiana
(800) 343-5455
25. Stockham Valves and Fittings
Birmingham, AL
(205) 592-6361
26. DeZurik
Sartell, MI
(612) 259-2000
27. Apco Valve & Primer Corporation
Schawmburg, IL
(708) 529-9000
28. Automatic Switch Company (ASCO)
Florham Park, NJ
(201) 966-2000
29. Or equivalent

2.02 GATE VALVES, 3" AND LARGER

- A. Iron body, resilient seated, NRS conforming to AWWA C509.
- B. "O"-ring stem seals field replaceable under full pressure.
- C. Mueller "AquaGrip" system is acceptable for use where mechanical joints are indicated or specified.

- D. All valves installed below ground shall have Type 304 Stainless Steel bolting.
- E. Valves installed below the ground shall have mechanical joint end connections and shall be furnished and installed with a suitable valve box and ground level position indicator.
- F. Valves installed above ground shall have flanged ends conforming to the 125-lb. American Standard unless otherwise indicated and have position indicators and actuators as shown or required.
- G. Contact-surface-to-contact-surface dimensions shall conform to the ANSI Standard Face-to-Face dimensions of Ferrous Flanged and Welding End Valves, ANSI B16.10.
- H. Valves shall have clear waterway equal to the full nominal diameter of the valve unless otherwise specified.
- I. Each valve shall have maker's name, pressure rating and year in which manufactured cast on body.
- J. Prior to shipment from the factory each valve shall be tested by hydrostatic pressure equal to 400 psi in sizes 12" and smaller and 300 psi in sizes 14" and larger.
- K. Coatings:
 - 1. All valves shall be coated on the interior and exterior in accordance with AWWA C550.
 - 2. Products containing coal tar shall not be used.
 - 3. Coatings used for potable water service shall be NSF approved.
- L. All valves shall open to the left or counterclockwise.
- M. Acceptable Manufacturers:
 - 1. Mueller
 - 2. Or equivalent

2.03 OTHER MATERIALS

- A. Valve boxes:

1. Buffalo type, cast iron, slip type, 2 piece with 5-1/4" shaft and cover marked to indicate pipeline contents.
2. Two (2) "T" handle socket wrenches of 5/8" round stock and long enough to extend two (2) feet above ground surface from the valve shall be provided for each size of valve furnished.
3. Valve boxes in unpaved areas shall be provided with 2'x2'x6" thick concrete pads.
4. Acceptable Manufacturers:
 - a. Trumbull Industries, Inc.
 - b. Tyler
 - c. Clow
 - d. Or equivalent

B. Floor boxes:

1. Manufactured of ASTM A126 cast iron with cover marked to indicate pipeline contents. Boxes shall be bronze bushed.
2. Acceptable Manufacturers:
 - a. Trumbull Industries, Inc.
 - b. M&H Valve
 - c. American-Darling Valve
 - d. Or equivalent

C. Floor stands:

1. Non-rising stem with valve position indicator.
2. Constructed of cast iron conforming to ASTM A126.
3. Floor stands for valves requiring gear operators shall be equipped with a crank in lieu of a handwheel.

4. Acceptable Manufacturers:
 - a. Trumbull Industries, Inc.
 - b. Clow Valve
 - c. American-Darling Valve
 - d. Mueller
 - e. Or equivalent

D. Stem guides:

1. Cast iron, conforming to ASTM A126, Class B; Bronze Bushed, fully adjustable.
2. Center of stem to face of wall shall be a minimum of 5".
3. Stem guides shall be spaced a maximum of 10'-0" apart.

E. Handwheels:

1. In general, handwheel operators shall be provided for all valves unless otherwise specified or shown on the Contract Drawings.
2. Handwheels shall be of ample size in accordance with the valve manufacturer's recommendations and shall have an arrow and the word "OPEN" cast thereon to indicate the direction of opening.

F. Extension stems:

1. Galvanized in accordance with ASTM A153 complete with coupling for attachment to valve stem.
2. Where extension stems will be used in conjunction with floor stands, stems will be provided with a coupling for connection to the floor stand.
3. Universal joints shall be provided for deflection.
4. Extension stems shall be sized so as to transmit full torque from the operating mechanism to the valve stem without binding, twisting, or bending.

5. Extension stems terminating with an operating nut or floor box shall measure: from centerline of valve to grade level for gate valves; from face of mounting flange to grade level for mud valves.
6. Extension stems terminating with a handwheel shall measure: from centerline of valve to top of handwheel for gate valves; from face of mounting flange to top of handwheel for mud valves.
7. Extension stems terminating at a floor stand shall be measured: from centerline of the valve to base of indicating floor stand for gate valves; from the face of flange to base of indicating floor stand for mud valves.
8. Stems will be supplied by the manufacturer to the nearest 1".

G. Gear operators:

1. All valves shall be provided with a gear operator.
2. Gear operators shall be provided in all instances where the operating torque is excessive.

H. Position indicators:

1. All valves shall be equipped with position indicators.
2. Buried valves shall be equipped with ground level position indicators.
3. Acceptable Manufacturers:
 - a. Henry Pratt
 - b. Val-Matic
 - c. Clow
 - d. M&H
 - e. Or equivalent

I. Hose clamps:

1. Worm drive type; 300 series stainless steel band, housing and hex-head safety collared screw; minimum band width of 1/2"; with manufacturers name stamped, etched or embossed on band.

PART 3 - EXECUTION

3.01 EXISTING CONDITIONS

A. Inspection:

1. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that the work of this section may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.

B. Discrepancies:

1. In the event of discrepancy, immediately notify the *ENGINEER*.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.02 INSTALLATION

A. Furnish, install and adjust all valves, extension stems and stem guides, handwheels, chainwheels, levers and all appurtenances, in strict accordance with the manufacturer's recommendations as approved by the *ENGINEER*.

B. Check and adjust valves and accessories for smooth operation.

C. Painting:

1. Marred or abraded surfaces shall be cleaned and refinished in accordance with the manufacturer's recommendations.
2. Finish paint in accordance with *Section 09 90 00*.

3.03 TESTS

A. Upon completion of this portion of the work, and prior to its acceptance by the OWNER, make all required tests and adjustments for free and smooth operation. Secure all approvals from agencies having jurisdiction.

3.04 INSTRUCTIONS

- A. When all required approvals of this portion of the work have been obtained, and at a time designated by the *OWNER*, thoroughly demonstrate to the *OWNER'S* operation and maintenance personnel the operation and maintenance of all items installed under the work of this section.

3.05 CLEANING

- A. Clean exposed surface of all grease, dirt and other foreign materials.
- B. Touch up all marred or abraded surfaces as specified herein.

****END OF SECTION****

