DOCUMENT 00000

ADDENDUM

Addendum No. 1 (April 26, 2017)
to
Contract Documents

TOWN OF DAVIE
System II/III Generator Replacement
Town Bid No. B-17-91
CGA Project No. 96-1630.95

To All Bidders:

Bidders for the above-referenced project shall take note of the following changes, additions, deletions, clarifications, etc. to the Plans and Specifications, which in accordance with the Contract Documents shall become a part of and have precedence over anything shown or described otherwise.

Changes:

In section 07535, paragraph 1.02, subparagraph A – remove "portion of the12 MG Reservoir" and replace with "Existing Generator Building".

On drawing E-6, note at bottom after the word Louvers add – "and doors and roofing".

On section 16610, paragraph 1.02, subparagraph A – remove "2" and replace with "1".

Add attached Section 09900 – Protective Coatings

A final site visit for bidders is scheduled for Friday, April 28, 2017 at 10 AM.

Contractor Questions:

1. Can an Electrical Contractor bid this as a Prime as long as the electrical contractor has a general contractor on board for general contractor work?
   Ans. – No, the prime contractor must have a general contractor's license.
2. TAW Power Systems would like to submit Kohler Generators as a pre-approved equal for the System II/III Generator Replacement project. Please see attached drawings and spec sheets for engineering review.
   Ans. – Kohler Generator is an approved equal manufacturer, as long as the unit being submitted meets all the required specifications of the basis of design.
3. Please confirm approved generator manufacturers for this job?
   Ans. - The Town of Davie has approved the following generator manufacturers: CAT, Cummins, and Kohler.

4. What is the reason for the new block wall portion of the existing drywall partition wall inside the building?
   Ans. – The existing drywall partition is being upgrade to a 1 hour fire-rated drywall and no new block is required.
5. Is this strictly for support of the battery charger?
   Ans. – No
6. I do not see note 18 on sheet E-3 which is referred to in the drawing. Please clarify.
   Ans. – Key note 18 refers to the drywall, doors, and window to be fire-rated to current Florida Building Code.
7. Does the ceiling on the interior of the building need to be painted as well?
   Ans. – Yes
8. Does the engineer or owner have a suggested sequence of work for this project?
   Ans. – No, contractor to coordinate with plant personnel for any shut downs that may be required.
9. Are all the existing shingles on the roof face to be replaced?
   Ans. – No, replace shingles as required for portion of mansard being removed and replaced.
10. Is there a schedule of louvres available for type, size, material, etc.?
    Ans. – Contractor's choice of louvers must meet current Florida Building Code and size shall be coordinated with Generator manufacturer. Also, please refer to specification section 10200 Louvers.
11. On drawing E-4 notes 1 & 2 – Could not find this report in bid documents, please advise.
    Ans. – See Appendix in back of Specification book.
12. There are 3 note 18's on Drawing E3 with no description in legend, please advise.
    Ans. – See question 6.
13. Is a Building Contractors license acceptable to bid this project vs. a General Contractor's license?
    Ans. – See question 1.
14. What is MCC5 currently fused at?
    Ans. – 1600 Amps.

All other documents, specifications, drawings, terms and conditions remain the same.

Contractor must acknowledge receipt of addendum in Bid Form on page 00300-8.

SECTION 09900

PROTECTIVE COATINGS

PART 1 - GENERAL

1.01 WORK INCLUDED

A. This Section covers the work required to provide all labor, materials, equipment and incidentals to perform all of the necessary surface preparation and painting required to complete this contract in its entirety.

B. It is the intent of these Specifications to paint all concrete, exposed miscellaneous metal, pipe, fittings, valves, equipment and all other work required to be painted unless otherwise specified. Minor items omitted in the schedule of work shall be included in the work of this Section where they come within the general intent of the specifications as stated herein.

C. The following surfaces or items are "NOT" required to be coated:

1. Aluminum: gratings, checkered plates, hatches, handrails, toe boards, stairways and walkways
2. Stainless steel, brass, bronze, and aluminum other than exposed tubing
3. Piping buried in the ground or embedded in concrete
4. Ducts, pipes and other miscellaneous items covered with insulation or plastic coated
5. Concealed surfaces of pipe or crawl spaces
6. Finish hardware
7. Nonferrous architectural metals, unless specifically noted otherwise
8. Packing glands and other adjustable parts and nameplates of mechanical equipment
9. Exterior concrete slabs and equipment

1.02 RELATED WORK

A. Individual specification sections.

ABBREVIATIONS

The abbreviations and definitions listed below, when used in this Section, shall have the following meanings:

ANSI	American National Standards Institute
ASTM	American Society of Testing Materials
AWWA	American Water Works Association
DFT	Dry Film Thickness
FPP	Fiberglass Reinforced Plastic
HCI	Hydrochloric Acid
MDFT	Minimum Dry Film Thickness
MDFTPC	Minimum Dry Film Thickness Per Coat

mil	Thousandths of an Inch
MIL-P	Military Specification - paint
NACE	National Association of Corrosion Engineers
NSF	National Sanitary Foundation
OSHA	Occupational Safety and Health Act
SFPG	Square Feet Per Gallon
SFPGPC	Square Feet Per Gallon Per Coat
SP	Surface Preparation
SSPC	Steel Structures Painting Council

1.03 SUBMITTALS

A. Submittals will be made with the coating system data sheet included at the end of this section.

B. The following shall be submitted for each proposed coating system: manufacturer's specifications, surface prepared details, application procedures, technical data sheets, and dry film thickness or coverage.

C. Unless otherwise specified, hereinafter and before any painting work is started prepare with type of paint and application specified, and on similar substrate, to which paint is to be finally applied, samples not less than 8” in size.

D. Furnish additional samples as required until colors, finishes and textures are acceptable. Retain accepted samples to be used as the quality standard for final finishes.

E. Before proceeding with the work under this Section, finish one complete space or item of each color scheme required showing selected colors, finishes and textures are acceptable. Retain accepted samples to be used as the quality standard for final finishes.

F. Schedule of Painting Operations: The Contractor shall submit for review a complete schedule of painting operations 30 days from the notice to proceed.

1.04 QUALITY ASSURANCE

A. The paint manufacturer shall provide a representative to visit the job site at intervals during surface preparation and painting as may be required for product application quality assurance and to determine compliance with manufacturer’s instructions and these Specifications, and as may be necessary to resolve field problems attributable to, or associated with, the manufacturer’s products furnished under this Contract.

B. A site visit report shall be prepared and submitted by paint manufacturer’s representative documenting compliance with the manufacturer’s recommended applications.

1.05 INSPECTION

A. The Contractor shall give the Engineer a minimum of three days advance notice of the completion of any surface preparation work or start of coating application work.

B. Before application of the prime coat and each succeeding coat, all surfaces to be painted shall be inspected by the Engineer. Any and all defects of deficiencies shall be corrected by the Contractor before application of any subsequent coating.

C. Coating applications shall be checked for required MDFT as per these specifications. All coated surfaces failing to meet the MDFT requirements shall be rejected.

D. For all coatings subject to immersion, full cure must be obtained for the completed system. Consult the coatings manufacturer's written instructions for these requirements. The coatings shall not be immersed for any purpose until completion of the curing cycle.

E. Inspection by the Engineer of the waiver of inspection of any particular portion of the work shall not be construed to relieve the Contractor of his responsibility to perform the work in accordance with these specifications.

1.06 PAINT DELIVERY AND STORAGE

All materials shall be new and shall be delivered to the project site in unopened containers that plainly show, at the time of use, the designated name, date of manufacturer, color, and name of manufacturer. Paints shall be stored in a suitable protected area that is heated or cooled as required to maintain temperatures within the range recommended by the paint manufacturer.

1.07 PROJECT SITE CONDITIONS

The location of this project is Broward County, Florida requires observance and conformance with EPA Volatile Organic Compound (VOC) restrictions. EPA limits the content of VOC's in painting materials to 2.5 lb/gallon. Information regarding the VOC content of proposed paints will be required during submittals.

1.08 WARRANTY

Contractor shall warrant to the Owner and guarantee the work under this Section against defective workmanship and materials for a period of two years commencing on the date of Final Acceptance of the Work. This warranty does no alleviate the Contractor or supplier of implied or other specified or written warranties for long term product quality.

PART 2 - PRODUCTS

2.01 GENERAL

Products containing lead will not be allowed. Oil shall be pure boiled linseed oil.

2.02 PAINT MATERIALS

A. Products shall be as manufactured by Tnemec Company, Inc., Kerneos Alumininate Technologies or approved equals.

B. The following paint products are by Tnemec Company, Inc. and Kerneous, as applicable, and are used for the basis of establishing the desired quality expected for the project.

Product Type	Company	Product Name
Coal Tar Epoxy	Tnemec	46H-413
Polyamine Epoxy (Non Potable)	Tnemec	Series 104 H.S. Epoxy
Vinyl Ester	Tnemec	Series 120 Vinester
Polyamide Epoxy	Tnemec	Series 66Hi-Build Epoxoline
Mortar	Kerneos	Supercoat PG

2.03 COLORS

A. Provide as selected by the Owner.

B. Formulate with colorants free of lead, lead compounds, or other materials which might be affected by presence of hydrogen sulfide or other gas likely to be present at the project.

C. Proprietary identification of colors if for identification only. Any authorized manufacturer may supply matches.

2.04 TESTING GAUGES

A. Furnish a magnetic type dry film thickness gauge, to test coating thickness specified in mils, as manufactured by:

1. Nordson Corp., Anaheim, CA, Mikrotest

2. Or equal

B. Furnish an electrical holiday detector, low voltage, wet sponge type to test finish coat, except zinc primer, high-build elastomeric coatings, and galvanizing, for holidays and discontinuities as manufactured by:

1. Tinker and Rasor, San Gabriel, CA, Model M-1

2. Or equal

C. Furnish a high voltage holiday detector for elastomeric coatings in excess of 25 mils dry film thickness. Unit to be as recommended by the coatings manufacturer.

PART 3 - EXECUTION

3.01 PROTECTION OF SURFACES NOT TO BE PAINTED

A. Mask or otherwise protect hardware, lighting fixtures, switch plates, aluminum surfaces, machined surfaces, couplings, shafts, bearings, nameplates and other surfaces not intended to painted which cannot be removed.

B. Provide drop cloths to prevent paint materials form falling on or marring adjacent surfaces.

C. Protect working parts of mechanical and electrical equipment from damage during surface preparation and painting processes. Openings in motors shall be masked to prevent paint and other materials from entering motors.

3.02 ENVIROMENTAL CONDITIONS

Coatings shall not be applied in temperature exceeding the manufacturer's recommended maximum and minimum allowable, nor under adverse conditions such as dust, smoke-laden atmosphere, damp or humid weather.

3.03 SAFETY

A. Coating shall be performed in strict accordance with the safety recommendations of the coating manufacturer; with the safety recommendations of the national Association of Corrosion Engineers contained in the publication, Manual for Painter Safety; Federal, state and local agencies having jurisdiction.

B. Ultimate responsibility for safety is Contractor's.

3.04 PREPARATION OF SURFACES

A. All surfaces to be coated shall be prepared as specified herein and shall be dry and clean before coating. Specific surface preparation shall be specified for the individual coating systems.

B. Steel shall be blasted unless otherwise specified. Blasting shall be done with a centrifugal wheel or compressed air blasting equipment, using proper abrasives to attain an average profile depth of 1.5 mils.

Do not re-use sand or flint abrasives. Short abrasives must be thoroughly clean of contamination before re-use. Blow dust and grit from surface with clean, dry air. Coat within 8 hours or before rust contamination occurs.

C. All concrete shall have cured for 28 days.

3.05 COATING SYSTEM INDEX

The following is a general index to the coating system description described herein:

System No.	Title
1	Exterior of New Concrete
2	Interior of New Valve Vaults, Air Release Structures
3	Exposed Metal Highly Corrosive
4	Submerged Metal - Domestic Sewage
5	Exposed Metal - Moderate Corrosive Conditions
6	Concrete Lining – Pump Station Wetwell, and Manhole
7	Existing Concrete Exposed

3.06 COATING SYSTEMS

A. System No. 1 Exterior of New Concrete Structures, Valve Vault, Wet Well

Surface Preparation:	All curing oils, form oils, laitance, soluble salts and loose concrete must be removed. Concrete must be dry and thoroughly clean before coatings.
Prime Coat:	None required.
Top Coat:	Coal tar epoxy at 8.0 mils DFT per coat.
MDFT:	16 mils DFT for two-coat system. Allow minimum of 24 hours drying time between coats.
Color:	First Coat – Red Second Coat – Black

B. System No. 2 – Interior of New Valve Vaults, Air Release Structures

Surface Preparation:	Concrete: All curing oils, form oils, laitance, soluble salts and loose concrete must be removed. Concrete must be dry and thoroughly clean before coatings. Concrete shall be cured 28 days, brush off blast.
Filler/Surfacer:	Concrete substrate surface with cracks and/or voids greater than ½ : in depth or width or areas where underlying aggregate has been exposed shall be patched with filler and surfacer. Material shall be applied in accordance with the manufacturer's application instructions.
Prime Coat:	Vinyl Ester 12.0 to 18.0 mils DFT or polyamide epoxy, Tnemec Series 66 or 69 Hi-Build, 4 mils DFT.
Top Coat:	Vinyl Ester 12.0 to 18.0 mils DFT or polyamide epoxy, Tnemec Series 66 or 69 Hi-Build, 8 mils DFT.
MDFT:	Minimum 30 mils of DFT for two-coat vinyl ester system or 12 mils MDFT polyamide epoxy system. Time between coats and method of application shall be as per manufacturer's written instructions.

	Color:	First Coat – Beige (5002) Second Coat – Gray (5001)

C. System No. 3 – Exposed Metal – Highly Corrosive

Surface Preparation:	Abrasive blast clean to an SSPC-SP10 (near white metal).
Prime Coat:	Polyamine epoxy at 6.0 to 8.0 mils DFT.
Top Coat:	High build acrylic polyurethane at 2.0 to 4.0 mils DFT.
MDFT:	9 mils DFT for two-coat system.
Color:	As selected by Owner from manufacturer's standard available colors.

D. System No. 4 – Submerged Metal – Domestic Sewage, Pump Station Wet Well Piping

Surface Preparation:	Abrasive blast or centrifugal wheel blast, SSPC-SP5.
Prime Coat:	Polyamide, anti-corrosive, epoxy primer, 1 coat, 2.5 MDFT.
Top Coat:	Coat-tar epoxy, 2 coats, 16 MDFT.
MDFT:	18.5 mils MDFT for system.

E. System No. 5 – Exposed Metal – Moderate Corrosive Conditions, Valve Pit Piping and Valves

Surface Preparation:	Abrasive blast or centrifugal wheel blast, SSPC-SP10.
Prime Coat:	Polyamide, anti-corrosive, epoxy primer, 1 coat, 2.5 MDFT.
Top Coat:	Polyamide epoxy, Tnemic Series 66 or 69, 2 coats, 8 MDFT
MDFT:	10.5 mils DFT for three coats.

F. System No. 6 –Concrete Lining – Pump Station Wet Well, and Manholes

Surface Preparation:	All curing oils, form oils, laitance, soluble salts and loose concrete must be removed. Concrete must be saturated with water prior to application of the lining materials.
Inflow Prevention:	Existing manholes may need rapid setting crystalline enhanced hydraulic cement product specifically formulated for infiltration control that shall be used to stop minor flows. The material shall have the following strength requirements: Compressive Strength (ASTM C597B) 600 psi (24 hours) 1,000 psi (7 days) and Bond Strength (ASTM C321) 30 psi (1 hour), 80 psi (1 day).
Lining:	See section 03769 Sewage Pump Station Structure and Manhole Rehabilitaton.

Curing: If environment is not moist enough for natural curing, the Contractor may be required to apply a curing compound per the requirements of ASTM C309.

G. System No. 7 – Existing Concrete Exposed

Surface Preparation: Abrasive blast, 4,000 psi

Coating: 3 coats, Polyamide epoxy, Tnemec Series 66 or 69 Hi-Build Epoxoline.

MDFT: 12 mils DFT for three-coat application.

3.07 UNIDENTIFIES SURFACES

Any surfaces not specifically named in the schedule and not specifically accepted shall be prepared, primed and coated in the manner and with material consistent with these Specifications. The Engineer shall select which of the manufacturer's products, whether the type is indicated herein or not, shall be used for such unnamed surfaces. The painting shall be done within the scope of the contract.

3.08 WORKMANSHIP

A. On metal surfaces apply each coat of paint at the rate specified by the manufacturer to achieve the minimum dry mil thickness required. If material has thickened or must be diluted for application by spray gun, the coating shall built up to the same film thickness achieved with undiluted material. One gallon of paint as originally furnished by the manufacturer shall not cover a greater area when applied by spray gun than when applied unthinned by the application of an additional coat(s). On masonry, application rates will vary according to surface texture; however, in no case shall the manufacturer's stated coverage rate be exceeded. On porous surfaces, it shall be the painters' responsibility to achieve a protective and decorative finish either by decreasing the coverage rate or applying additional coats of paint.

B. All safety equipment shall be painted in accordance with OSHA Standards as approved.

C. Materials shall be mixed in proper containers of adequate capacity. All materials shall be thoroughly stirred before use and shall be kept stirred while using. No unauthorized thinners or other materials shall be added to any paint.

D. Only skilled painters shall be used on the work and specialists shall be employed where required.

E. Steel members, metal castings, mechanical and electrical equipment and other metals which are shop primed before deliver at the site will not require a prime coat on the job. All piping and other bare metals to be painted shall receive one coat of primer before exposure to the weather, and this prime coat shall be the first coat as specified in the painting schedule.

F. Finish surfaces shall not show brush marks or other irregularities. Undercoats shall be thoroughly and uniformly sanded with No. 00 sandpaper or equal to remove defects and provide a smooth, even surface.

G. Before final acceptance of the work, all damaged surfaces of coating shall be cleaned and repainted as directed by the Engineer.

3.09 APPLICATION SCHEDULE

A. System No. 1 – Exterior of New Concrete – This system shall be used on the exterior of all new pre-cast concrete valve vaults, manholes, and constructed wetwell.

B. System No. 2 – Interior of New Valve Vaults and Air Release Structures – This system shall be used in the interior of all new concrete valve vaults. Pre-cast concrete shall be coated prior to installation. Coating shall extend through the pre-cast joints.

C. System No 3 – Exposed Metal – Highly Corrosive – This system shall be used on all metal surfaces exposed to weather including equipment, conduits, piping, exposed metal frames and elsewhere as scheduled. Galvanized piping and aluminum hatches do not require painting.

D. System No. 4 – Submerged Metal – Domestic Sewage, Pump Station Wet Well Piping – This system shall be used for wet well piping, wet well ferrous metals.

E. System No. 5 – Exposed Metal – Moderate Corrosive Conditions, Valve Pit Piping and Valves – This system shall be used for interior piping, structural steel and interior dry pit metals.

F. System No. 6 –Concrete Lining – Pump Station Wet Well, and Manholes – This system shall be used in wet well and manholes. Existing manholes to be rehabilitated as specified.

G. System No. 7 – Existing Concrete Exposed – This system shall be used on the headworks structure area as specified in the contract drawings.

3.10 CLEANUP

A. It shall be the responsibility of the Contractor to collect and dispose of property, all waste materials from the site in accordance with all requirements of the Federal, state, and local environment protection agencies.

B. At completion of the work, remove all paint where it has been spilled, splashed, splattered, sprayed, or smeared on all surfaces, including glass, light fixtures, hardware, equipments, painted and unpainted surfaces.

C. After completion of all paintings, the Contractor shall remove from the job site all painting equipment, surplus materials and debris resulting from this work.

3.11 MANUFACTURER'S SERVICE

Furnish paint manufacturer representative to visit job site at intervals during surface preparation and painting as may be required for product application quality assurance, and to determine compliance with manufacturer's instructions and these specifications, and as may be necessary to resolve field problems attributable to, or associated with, manufacturer's products furnished under this Contract.

3.12 COATING SYSTEM DATA SHEET

To be included with submittal. See form on next page.

COATING SYSTEM DATA SHEET
(to be included with submittal)

Coating System Number (From Spec): _____

Coating System Title (From Spec): _____

Coating Supplier Name & Address: _____

_____

_____

Local Representative Name & Address: _____

_____

Manufacturer Representative Authorized to
Certify Proper Installation Name & Address: _____

_____

Surface Preparation: _____

_____

Coating Material (Generic)	Product Number/Name (Proprietary)	Coats/Minimum Coverage	Color

Notes:

_____

_____

_____

_____

_____

END OF SECTION