City of Turlock
Well 38 Arsenic Mitigation
And ICF Treatment

ADDENDUM NO. 1

TO CONTRACT DOCUMENTS

FOR: CITY OF TURLOCK
WELL 38 ARSENIC MITIGATION
AND ICF TREATMENT

June 17, 2020

NOTICE TO BIDDERS

This Addendum is attached to and made a part of the above entitled Contract Documents for the City of Turlock.

This Addendum No. 1 consists of 14 pages.

Response to Bidder's Questions

Question No. 1: Flow control valves – Sizing inconsistency and discrepancies

a. *SHT G-5 shows a 12" by-pass and a 8" supply (backwash influent)*
b. *SHT G-6 shows a 12" supply (backwash influent) and NO by-pass at all*
c. *SHT P30.01 shows an 8" by-pass and a 12" supply (backwash influent)*
d. *SHT P30.02 shows both as 8"*
e. *SHT I0.03 shows both as 12" – and it suggested by the dashed line, that (1) is to be supplied by the filter manufacturer.*
f. *Spec 40 05 70 indicates that BOTH are 8" and does not indicate that either are supplied by the filter manufacturer.*
    i. *Please provide required valve size*

Answer No. 1:

a. Correct but both reduce to 8" at the Flow Control Valves and the pipe diameter is not the same for the entire manifold

b. G-6 is titled "Filter Vessel Process Flow" and shows pipe/valving for the filters and does not included all site piping and manifold valves

c. Correct but both reduce to 8" at the Flow Control Valves and the pipe diameter is not the same for the entire manifold and not completely visible from this view.

d. Correct but both reduce to 8" at the Flow Control Valves and the pipe diameter is not the same for the entire manifold

e. The Process and Instrumentation sheets do not call out the valving and sizes to construct the manifold and only calls out the primary diameters. both the bypass and supply manifolds reduce to 8" at the Flow Control Valves and the pipe diameter is not the same for the entire manifold, The dashed line do not state nor

imply filter supplier responsibilities and is there show the process related to the P&ID sheet

f. Correct.

i. As shown on the Plans and as Stated in the Specification the Flow Control Valves are 8"

Question No. 2: Manufacturer scope – Flow diagrams and P&ID drawings

I want to clarify the scope/materials provided by the manufacturer – Process 40 (Backwash equalization tank).

a. SHTs G-5 & I0.04 would suggest that the manufacturer will provide all that is within the dashed box.

b. SHT P40.01 mentions only that most of the connections and the overflow is to be "determined by the manufacturer". This does not clearly indicate "provided by". (And as there is no spec for plug valves, I can assume that the plug valve FCV-001 on this sht, is provided by manufacturer?).

c. Spec 43 41 11 says only that the "nozzles" shall be provided on the tank. They will provide weir and overflow pipe. Seems to me that we provide the "Flexible rubber couplings" and the piping.

1. Please clarify the equipment scopes

Answer No. 2:

a. Sheets G-5 and Io.05 do not imply nor state what is required by the manufacturer to supply. The sheets designate equipment related to a Process Number. Please refer to the notes on G-1 that describe what a Process Identification Number is.

b. Refer to Specification 43 41 11 2.2 A through L

i. Regarding Plug Valve Spec See Addition To Plans Item 1 below

c. Refer to Specification 43 41 11 2.2 A through L. 43 41 11 2.2 M is a specification that all connections require flexible connection not necessarily requiring the tank manufacturer to supply

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Question No. 3: Who are the approved system integrators per the submitted qualifications package requirements per 40 05 00?

Answer No. 3: TESCO CONTROLS, Inc

Question No. 4: I am trying to reconcile SHTs G-6, P30.01 & .02 w/I0.03

a. Sht G-6 shows (5) air valves on the 16" lines; (2) on the influent Raw water and (3) on the filtered water to distribution

b. Sht I0.03 shows (3) air valves on the 16" lines; (1) on the influent Raw water and (2) on the filtered water to distribution

c. Shts P30.01 & .02 depicts only (1) on the influent raw water line.

i. By my count (if I am correct) there should (2) on the influent Raw water (1 at well pump and 1 just before filters) and (1) on the filtered water to distribution (near to the well pump)
1. Please confirm qty

Answer No. 4:

a. G-6 is the process flow diagram for only the filter vessels and does not callout any of the manifold air valves. Refer to the individual process sheets.
b. IO-03 is P&ID sheet for the filter vessels and does not callout any air valves. Refer to the individual process sheets.
c. Correct.

Question No. 5: On Sheet P50-02, Note 3 refers to chemically resistant floor drains but the call-out on the drawing is a pre-cast box with steel grating (see Detail 10 on Sheet D-8). Please clarify what type of drain is to be provided.

Answer No. 5: The chemically resistant floor drains per Sheet P50-02, Note 3 Shall be Provided. See Revisions to Plans Item 2 Below.

Question No. 6: Note 1b on Sheet G-3 states that all above grade piping 4" and larger shall be FBELC welded steel. This conflicts with Note 2 on Sheet C-7, which allows for either DI or steel pipe. Please clarify which note is correct.

Answer No. 6: The General Note 1b states Unless Noted Otherwise. All Manifold Piping Shown on C-7 shall comply with Note 2 on Sheet C-7.

Question No. 7: Spec Section 40 05 00 requires video inspection of gravity sewer mains. Is video inspection required on any of the sewer lines on this project?

Answer No. 7: Yes video inspection is required per the Specifications

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Question No. 8: Spec Section 22 40 10 requires certified testing of the Reduced Pressure Backflow Preventors. Generally, Owner staff will perform this testing. Please confirm.

Answer No. 8: City will pay for and perform the initial testing. If the initial testing fails, contractor shall provide an approved 3rd party to test backflow preventors.

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Question No. 9: Will the Owner furnish the chemicals (sulfuric acid, ferric chloride, sodium hydroxide, and sodium hypochlorite) necessary for start-up? If the Contractor is responsible, are the chemical storage tanks to be topped-off at the conclusion of start-up activities?

Answer No. 9: ***Yes the Owner will supply the chemicals.***

Question No. 10: Special Provision 5.21 states that the Owner will perform laboratory testing for disinfection verification. This conflicts with Spec Section 33 13 00, which states that the Contractor is responsible. Please confirm.

Answer No. 10: ***Special Provision states "Unless Otherwise Noted", and per Specification 33 13 00 the Contractor is responsible for the disinfection tests.***

Question No. 11: Would the Val-Matic Surgebuster Check Valve be approved to be used on this project?

Answer No. 11: ***Yes the Surgebuster Check Valve would be an approved check valve.***

Question No. 12: 466121 2.3 D 1 - Is threading the 316SS wedge wire lower laterals into a SCH80 PVC header acceptable? Metal to plastic threaded connections are failure points.

Answer No. 12: ***Yes***

Question No. 13: 466121 2.7 A - Specs indicate electric valves, while drawings depict pneumatic valves. Which is correct?

Answer No. 13: ***As detailed on the plans and required by the Specifications the Pressure Filter Valves shall have electric motor operators.***

Question No. 14: P30-02 shows filter isolation valves on the filter inlet lines and the filter backwash supply lines not on the tank nozzles as spec in 466121 2.6 D. Which is correct?

Answer No. 14: ***As detailed on the Plans and as required by the Specifications all vessels shall be equipped with a valve capable of isolating the vessel from the common PFS manifold.***

Question No. 15: P30-01 shows flow meters on the filter inlet lines, while G-6 shows flow meters on the filter outlet lines. Which is correct?

Answer No. 15: ***P30-01 does not callout the Pressure Filter flow meters. The flow meters shall be provided as shown on Sheet G-6.***

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Question No. 16: G-6 shows filter purge valves at 8", P30-02 scales to a 4" purge valve. Which is correct?

Answer No. 16: P30-01 does not callout the purge valves. The purge valves shall be provided as shown on Sheet G-6

Question No. 17: G-6 shows filter inlet lines are 10", P30-02 scales to an 8" line. Which is correct?

Answer No. 17: P30-02 does not callout pressure filter line sizes. The filter inlet shall be provided as shown on Sheet G-6.

Question No. 18: E4.2 shows a single filter DP (30-DPIT-001), 466121 2.10 B1 specifies 4 PT's which are used to calculate DP. Which is correct?

Answer No. 18: E4.2 does not show any information related to the Pressure Filters. For clarification though, the filter system will utilize four pressure transducers (1 common inlet and 3 filter effluent) to monitor the differential pressure across the vessels.

Question No. 19: 10-400500 2.3 A specifies steel pipe 12" and smaller shall be standard weight, 466121 2.08 E calls for piping to be SCH 40. Which is correct?

Answer No. 19: STD weight piping is acceptable for pipe sizes 12" and smaller.

Question No. 20: 400500 2.04 - Are spare parts required for vender supplied panels (FVCP) as well?

Answer No. 20: 40 05 00 2.04 relates to PVC water pipe and does not discuss any vendor supplied equipment.

Question No. 21: Need more information on Expanded Metal Cages, what is required? materials, access doors types, and how many, is there a roof cage required?

Answer No. 21: The Owner will provide the expanded metal cages. See Plan Revision Item 3.

Question No. 22: in the Maintenance Building bid item description, it calls for Contractor to acquire and pay for building permit from City of Turlock, is there a set fee for this, or do we have to submit plans pre bid to get pricing from the City?

Answer No. 22: The building permit fee will be paid by the City as an internal transfer between departments.

Question No. 23: this spec calls for Biologist review of the job for nesting birds, up to 1/2 mile vicinity, who pays for this?

Answer No. 23: If the construction occurs during the time frame specified in 01 57 19 the Contractor shall implement and pay for this.

Question No. 24: Spec calls for Aluminum slats in a mill finish clear anodized, which are two different finishes, which slats are supposed to be mill finished? and which are clear anodized?

Answer No. 24: Specification 08 22 23 – 2.2 Materials Shall Be Clear Anodized where noted for Slats, Endlocks, Guides, and Hood

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Question No. 25: The drawing shows a thread-o-let for sulfuric acid at the static mixer inlet and the sodium hypo and ferric inlets at the outlet of the mixer. Can we confirm that this is the engineer's intent? This would be a very strange configuration. Typically, we would have three (3) inlets at the front of the mixer, or if the requirement is for the sulfuric to be blended for pH adjustment prior to coagulant addition and disinfection addition, we would add the ferric chloride and sodium hypochlorite in the middle of the mixer, not towards the end. Are these two taps on the static mixer provided to minimize field tap installation by the contractor?

Answer No. 25: The intent is to add the sulfuric acid prior to the ferric chloride and sodium hypochlorite. The sulfuric acid injection port shall be near the front of the mixer and the ferric chloride and sodium hypochlorite injection ports shall be near the middle of the mixer.

Question No. 26: Is the engineer comfortable with a more corrosion-resistant alloy for the mixer piping? Generally, ferric chloride is extremely corrosive, especially to 316SS, which could be why the injection port was on the downstream side of the injection quill. We would expect corrosion in a stainless mixer in most circumstances when adding Ferric. We can offer duplex stainless or alloy 20 for better corrosion resistance. Please advise.

Answer No. 26: Per the 44 32 48 3.2 the Materials of construction shall be as recommended by manufacturer for the project service conditions. Stainless steel would not be an acceptable material for the chemicals being utilized.

Question No. 27: Site Legend No. 34 on Sheet C-4 references Standard Detail C-9 for the driveway approach, while Detail 1 on C-5 references Standard Detail C-8. Please clarify.

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Answer No. 27: ***The Driveway must meet the minimum requirements as referenced in the City Standard C-9. Detail 1 on C-5 provides actual grades for construction.***

Question No. 28: There are issues with the louvers and fans shown on Sheet S10-01. First, the Ruskin model number called-out is not an acoustic louver. Second, the Greenheck fan model number that is called-out does not match the fan description. Finally, instead of field painting the louvers we recommend the Engineer consider a factory finish, such as anodizing. Could you please work with the manufacturer's rep and provide the correct make/model numbers and finish requirements?

Answer No. 28: ***Disregard all references to an acoustic louver. The factory anodized finish is an acceptable alternative to field painting. Please be more specific regarding the possible discrepancy in the fan model number.***

Question No. 29: Sheet C-4 does not clearly show the number of walls required at the new mulch storage pad. Please clarify.

Answer No. 29: ***It must replace the existing mulch storage pad in-kind with three walls.***

Question No. 30: Has a contact been established at TID with whom we can discuss this project?

Answer No. 30: ***Yes Todd Troglin.***

Question No. 31: Section C on Sheet P30-02 shows victaulic couplings installed on the 16"/12" filter influent line. These couplings are not shown on P30-01. Please clarify.

Answer No. 31: ***Rigid Grooved End Couplings Shall Be Provided as Shown in P30-02. See Revised Item No 6 Provided in this Addendum***

Question No. 32: There does not appear to be a specification for the vapor barrier shown in multiple details on Sheet SD-1. Please provide.

Answer No. 32: ***Provided in this Addendum. See Item No. 4***

Question No. 33: There do not appear to be any specifications for the "Cable/Hose Protection" shown on Sheet P50-01.

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Answer No. 33: ***The Hose Protectors shall be pedestrian-duty with a single channel with a hinged lid and constructed from industrial grade rubber base and polyurethane lid. Checkers, Power First, Yellow Jacket, or equal.***

Question No. 34: Both Details A and D on Sheet SD-1 show the continuous footing/perimeter curb at the Chem Storage Bldg extending above the face of finish floor. This doesn't agree with Notes 6 and 10 on Sheet S50-01, which state that the top of the continuous footing is at elevation 0'-0", which matches the top of the finished floor. The foundation schedule also calls-out EF-1 to be only 1'-0" deep, which will not project above the finished floor.

Answer No. 34: ***Details A and D on sheet SD-1 have a plan dimension arrow indicating what the plan (and plan notes) represent. The curb (which is integral) extends above this designated plan dimension.***

Question No. 35: Based on Section E on SD-1, it appears that the Maintenance Bldg Floor Slab is to be placed monolithically with the continuous footing. Please confirm.

Answer No. 35: ***Yes.***

Question No. 36: Call-out No. 20, Bollard, quantity two, on Sheet C-4 does not match the quantity of bollards shown on Sheet E2.1.

Answer No. 36: ***See Plan Revision Item 5 in this Addendum.***

Question No. 37: At the Maintenance Shed, please provide additional design details for the expanded metal cages (EM1 and EM2) called-out on Sheet P60-01.

Answer No. 37: ***The Expandable Metal Cages shall be provided by others and are Not Included in the Contract. See Plan Revision Item 3***

Question No. 38: At the Maintenance Shed, please specify all of the bathroom accessories required. The notes on Sheet P60-01 only refer to the toilet and sink and more items are shown.

Answer No. 38: ***Toilet, sink, paper towel dispenser, and handrails required per ADA compliance.***

Question No. 39: On Sheet C-10, an Industrial Manhole is to be installed per Detail S-15/Sheet D-14. This standard detail includes both a Parshall flume and level transducer. Are these required? Note that no electrical conduits are shown running to the manhole for the transducer.

Answer No. 39: ***The Parshall flume and level transducer are not required.***

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Revisions to Plans and Specifications

The following additions, deletions or modifications shall become part of the Contract Documents:

Strikethrough text (~~text~~) indicates deletions.

Bold Italicized text (***text***) indicates additions.

ITEM NO. 1:

Section 40 05 23 Valves and Appurtenances

Add the following immediately after Part 2.13 E

Plug Valves:

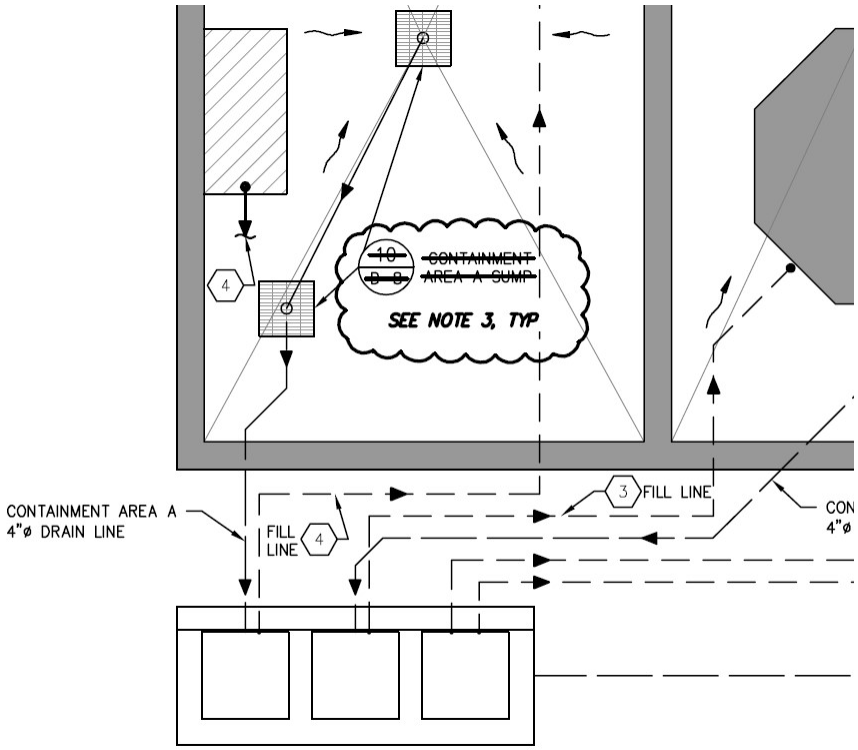
Type 1 – Eccentric Plug Valves 2-1/2 through 20 inches:

Eccentric plug valves shall be of the non-lubricated eccentric type with cast iron bodies, resilient faced plugs, or shall include replaceable, resilient seat in the body. Except as otherwise indicated, all valves for sizes 4-inch and larger shall have worm gear operators, nickel or stainless steel seats, and ANSI 125 psi flanged or grooved ends. Valves 2-1/2 inches and smaller shall have operating levers, nickel or stainless steel seats, and threaded ends with resilient facing suitable for the intended service. Submerged and buried valves shall be equipped with worm-gear operators, lubricated and sealed to prevent entry of dirt and water into the operator. Shaft bearings shall be stainless steel furnished with permanently-lubricated bearing surfaces. Operators shall clearly indicate valve position. Valves up to and including 20 inches in size shall have an unobstructed port area of not less than 80 percent of full pipe area, and not less than 70 percent for larger valves. Eccentric plug valves shall have a pressure rating of not less than 150 psi water, oil, or gas (WOG) service and bubble-tight shut-off. Valves shall be coated per Section 09 90 00 System 7 or with fusion bonded epoxy.

ITEM NO. 2

Sheet P50-02

Revise Sheet as follows Regarding Floor Drain Call Outs:



ITEM NO. 3

Sheet P60-01

Add the following Note 3 to the sheet:

NOTES

1. MAINTENANCE SHED SHALL BE A PREFABRICATED METAL BUILDING PER SPECIFICATION 13 34 19

2. MAINTENANCE SHED SUPPLIER SHALL DESIGN AND COORDINATE UTILITY STUBS FOR CONCRETE PAD

3. EXPLANDED METAL CAGES SHALL BE PROVIDED BY OTHERS, NIC

ITEM NO. 4:

Section 03 30 10 – Concrete Site Work

Add the following immediately after Part 2.5

2.6 VAPOR BARRIER

A. Vapor Barrier at interior slabs: ASTM E 1745, Class A, 15 mils thick, Permeance as tested before and after mandatory conditioning (ASTM E 1745 Section 7.1 and sub-paragraphs 7.1.1 - 7.1.5): less than 0.01grains/(ft² · hr · inHg). WVTR less than or equal to 0.012 perms as tested by ASTM E: 96

1. Acceptable Products

a. 15 mil Stegowrap Vapor Barrier, Stego Industries LLC
b. Reef Industries, VaporGuard
c. W.R. Meadows Premoulded membrane with plasmatic core.
d. Or equal, as approved in accordance with Division 01 requirements for substitutions.

Add the following immediately after Part 3.4F

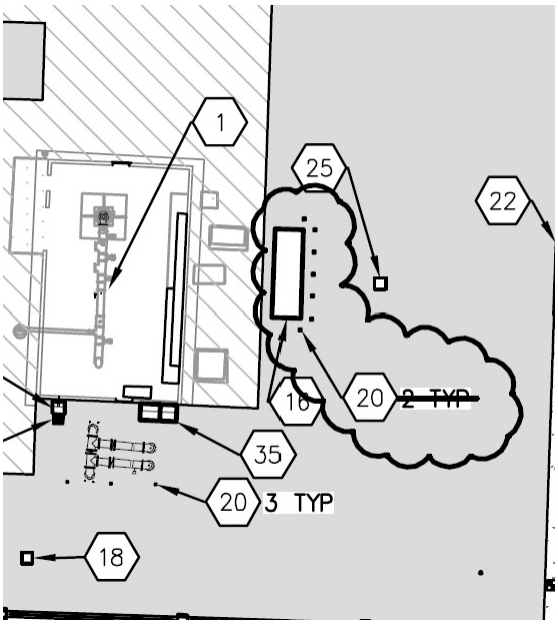
G. Under Interior Slabs on Grade: Install 4 inches thick crushed aggregate base per Section 200-2.2, SSPWC or Class 2 CCS as capillary break. Over aggregate base place 15-mil vapor barrier in largest practical sections. Seal all 6-inch lapped seams, penetrations and foundation perimeters using manufacturer-approved tape only and install per manufacturer instructions. Install pipe boots at pipe penetrations. Install reinforcement and concrete as scheduled. Install 1 1/2" of coarse, washed sand over Vapor Barrier.

1. Installation of vapor barrier shall be in accordance with ASTM E 1643 and manufacturer's instructions.
2. Tapes, mastics, sealants, and other products used with vapor barrier shall be from same manufacturer as, and certified compatible with, vapor barrier.

ITEM NO. 5

Sheet C-4

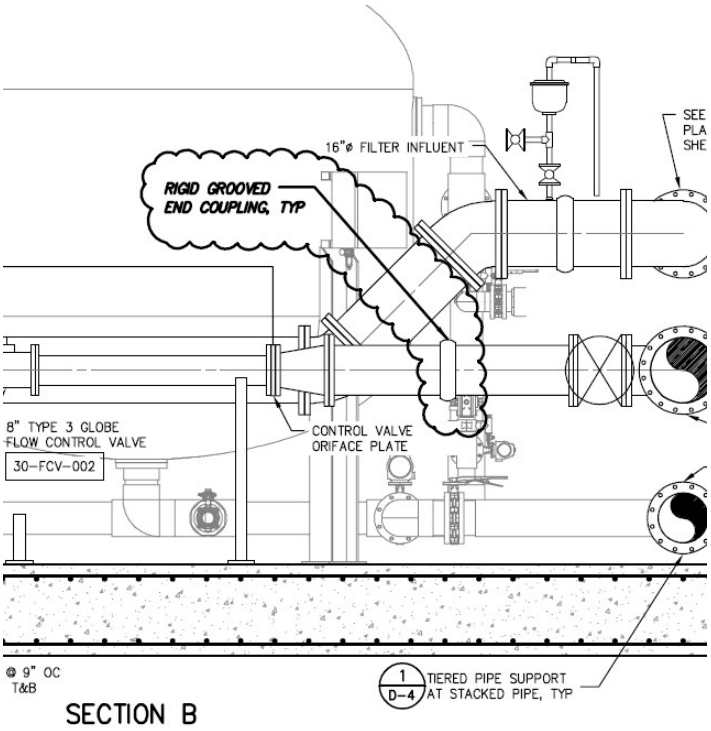
Add additional bollards to the sheet as follows



ITEM NO. 6

Sheet P30-02

Add callout for Rigid Grooved Coupling as follows:



SECTION B

ITEM NO. 7

Section 01 50 00 Temporary Facilities

Add the following immediately after 1.2 B 2

C. Field Office

1. ***Contractor shall make available field office space for the Construction Manager and shall include (1) "single-wide" mobile unit, sanitary facilities, electric power, lighting, electrical outlets, heating and ventilating equipment, hereinafter called "field office". The field office shall have approximately 200 square feet of usable floor area and in the event the Contractor does not have a conference or meeting room in its facilities or field office; an additional meeting room will be required to be furnished by the contractor. The additional room shall be approximately 220 square feet of usable floor area and be furnished with a table and six folding chairs for the purpose of holding project meetings. The additional room can be attached or adjacent to the field office. The field office shall have stairs and a deadbolt lock. The field office shall be ready for occupancy by the Construction Manager within 10 calendar days after Notice to Proceed. The field office shall be furnished with one desk, one desk chair, two meeting chairs, one file cabinet, and one 6' long folding table.***