ADDENDUM NO. 1 - Issued 08-27-2018
to the Project Manual and Drawings for

TROOP B HEADQUARTERS
ARKANSAS STATE POLICE
NEWPORT, ARKANSAS
WD&D JOB NO. 16-036
DBA JOB NO. 9601803

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This addendum forms a part of the contract documents and modifies or interprets the Project Manual and/or Drawings as noted herein.

REFER TO THE PROJECT MANUAL:

Section 32 31 13.53:

1. Change heading to "High Security Gates". Provide Decorative Metal Fence specified per Section 32 31 19 in lieu of chain link. Gates 1 and 2 are to have decorative fence.

REFER TO THE DRAWINGS:

Sheet A0.01:

1. Where cable back-up called out at chain link fence, provide CASS-TL-3 cable barrier safety system by Trinity Highway Products, or approved equal.

Sheet A0.02:

1. Signage on this sheet is by general contractor.

Sheet A1.03:

1. There are no snow and ice guards in this project. Disregard any notes to this effect.

Sheet E1.02:

1. Radio RM 146 - The TV and receptacles noted with keyed note #9 shall match the installation of the TV's noted with keyed note #3. See the detail for more information; Provide and install a lower plug, match the installation with keyed note number 3.

2. Tele/IT RM 121, Keyed note #4, The Contractor shall install the receptacle at 18in to the center of the box. The receptacle shall be a L5-30R, and it shall be connected with a 1 pole 30A breaker with #10's.

Sheet E1.03:

1. Radio RM 146 - The TV and receptacles noted with keyed note #9 shall match the installation of the TV's noted with keyed note #3. See the detail for more information; Provide and install a lower plug, match the installation with keyed note number 3.

2. In RM's 105, 107, 110, 118, 125, 129 and 136, Omit the data outlet next to the TVS.

ADDENDUM SPECIFICATION SECTIONS:

Section 32 31 13 - Chain Link Fences and Gates, and Section 32 31 19 - Decorative Metal Fences and Gates dated 08-27-2018 are attached to this addendum and are made a part of the Bid Documents.

REVISED DRAWINGS:

Sheets C3.0, C5.0, C6.1, and A2.03 of original issue date 08-10-2017 and revised 08-27-2018 are attached to this addendum and are made a part of the Bid Documents.

END OF ADDENDUM NO. 1

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Fence framework, fabric, and accessories.

B. Gates and gate hardware.

C. Clearing.

1.02 REFERENCES

A. Specification of Metallic-Coated Steel Chain Link Fence Fabric, published by Chain Link Fence Manufacturers Institute, Washington, DC 20036.

B. American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
   1. ASTM A239 - Test Method for Locating the Thinnest Spot in a Zinc (Galvanized) Coating on Iron or Steel Articles by the Preece Test (Copper Sulfate Dip).
   2. ASTM F567 - Practice for Installation for Chain-Link Fence.

PART 2 - MATERIALS

2.01 FABRIC

A. Height: 6 feet, or as noted on plans.

B. Composed of individual wire pickets helically wound and interwoven from No. 9 gage steel wire (coated in black colored vinyl) to form a continuous chain link fabric having a 2-inch diamond mesh pattern.

C. Salvages twisted and barbed.

D. Hot-dip galvanized after weaving.

E. Black vinyl coating of not less than 1.2 ounces per square foot of bare wire surface.

2.02 LINE POSTS

A. Use 4-inch outside diameter SS-40 steel pipe weighing 9.11 pounds per linear foot or approved equal.

2.03 END, CORNER, ANGLE, AND PULL POSTS

A. Use 4-inch outside diameter SS-40 steel pipe weighing 9.11 pounds per linear foot or approved equal.

2.04 GATE POSTS

A. Double drive gates up to 12 feet wide: 2-7/8 inch outside diameter SS-40 steel pipe weighing 5.79 pounds per foot or approved equal.

B. Double drive gates from 12 feet to 16 feet wide: 4-inch outside diameter SS-40 steel pipe weighing 9.11 pounds per foot or approved equal.

C. Double drive gates from 16 feet to 24 feet: 6-5/8-inch outside diameter iron pipe weighing 18.97 pounds per foot or approved equal.

2.05 POST TOPS

A. Pressed steel or malleable iron designed as a weather tight closure cap for tubular posts.

B. Provide one cap for each post, unless equal protection is afforded by combination post top cap and barbed wire supporting arm where barbed wire is required.

C. Where top rail is used, provide tops to permit passage of top rail.

2.06 FABRIC TIES

A. No. 9 aluminum wire of approved design for use on line posts every 14 inches and on top rails every 24 inches.

2.07 BRACE AND TENSION BANDS

A. Unclimbable type with 5/16 inch diameter square-shouldered steel carriage bolts, non-removable from outside fence.

2.08 TENSION BARS

A. For attaching fabric to terminal posts: 3/16 inch by 3/4 inch high carbon steel attached to terminal post by means of beveled edge bands.

2.09 TOP RAIL

A. 1.66 inch outside diameter seamless steel pipe weighing 2.27 pounds per lineal foot or approved equal.

B. Galvanized by hot-dip process after fabrication.

C. To pass through bases of extension arms and form a continuous brace from end to end of each section of fence.

D. Provide with expansion rail couplings and suitable hot-dip galvanized connections.

2.10 BRACE PIPE

A. Same material as the top rail.

2.11 TENSION WIRE

A. Hot-dip galvanized No. 7 gage steel. Class III

2.12 MISCELLANEOUS FITTINGS

A. Ferrous fittings required to make a complete installation to the malleable iron, pressed steel, aluminum, or forgings shall be hot-dip galvanized.

2.13 CONCRETE

A. Materials as specified in Section 03 30 00 - Cast-In-Place Concrete.

B. Proportions: 1:2:4.

C. Compressive strength: Not be less than 3,000 psi at 28 days.

PART 3 - EXECUTION

3.01 PREPARATION

A. Where fence traverses areas not cleared, clear a strip 10 feet wide with 2 feet outside of fence line and 8 feet on the inside of fence line.

3.02 FENCE

A. Erect fencing in straight lines between angle points by skilled personnel experienced in this type of construction.

B. Erect in accordance with the manufacturer's recommendations as approved and with these Specifications.

C. The top rail of the fence shall be at the top of the fabric.

D. Fasten chain link fabric to end posts with stretcher bars and clamps at approximately 14 inch centers and to line posts and top rail with wire or bands at approximately 24 inch centers.

3.03 POST SPACING AND SETTING

A. Post Holes:
1. Minimum depth of post holes: 42” below finished grade.

2. Holes for line posts: 18 inches in diameter.
3. Holes for gate, corner, and pull posts: 18 inches in diameter.

B. Space posts not more than 10 feet on centers and in true lines.

C. Set posts plumb and to a depth not less than 3 feet 4 inches.

D. Fill remainder of hole with concrete.

E. The top surface of the foundation shall extend above finished grade not less than 1 inch and shall have a crown watershed finish

F. After concrete has set, install accessories.

3.04 BRACING

A. Install brace pipe midway between the top rail and extend from the terminal post to the first adjacent line post.

B. Fasten securely to the posts by heavy-pressed steel and malleable fittings.

C. Truss securely from line post to base of terminal post with a 3/8-inch truss rod and tightener.

3.05 CLEANUP

A. Upon completion of the fence installation, clean up waste material resulting from the operation.

END OF SECTION 32 31 13

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. The contractor shall provide all labor, materials and appurtenances necessary for installation of the welded ornamental steel fence system defined herein.

1.02 RELATED DOCUMENTS

A. Applicable portions of the Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, and Addenda issued prior to the execution of the Contract, other documents listed in the Agreement and Modifications issued after the execution of the Contract shall apply to this Section. The general requirements for this work are located in Division 1 of the Specifications.

1.03 SUBMITTALS AND SUBSTITUTIONS

A. In accordance with Section 01 33 00.

B. Substitutions will not be considered prior to the award of the General Contract.

1.04 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM B117 - Practice for Operating Salt-Spray (Fog) Apparatus.
3. ASTM D523 - Test Method for Specular Gloss
4. ASTM D714 - Test Method for Evaluating Degree of Blistering in Paint.
5. ASTM D822 - Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus.
6. ASTM D1654 - Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.
7. ASTM D2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
8. ASTM D2794 - Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
9. ASTM D3359 - Test Method for Measuring Adhesion by Tape Test.
10. ASTM F2408 - Ornamental Fences Employing Galvanized Steel Tubular Pickets.

1.05 QUALITY ASSURANCE

A. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

1.06 WARRANTY

A. All structural fence components (i.e. rails, pickets, and posts) shall be warranted within specified limitations, by the manufacturer for a period of 20 years from date of original purchase. Warranty shall cover any defects in material finish, including cracking, peeling, chipping, blistering or corroding.

B. Reimbursement for labor necessary to restore or replace components that have been found to be defective under the terms of manufactures warranty shall be guaranteed for five (5) years from date of original purchase.

PART 2 - MATERIALS

2.01 MANUFACTURER

A. (Basis-of-Design): Fence system to be Montage Plus standard 4" picket space Welded and Rackable Ornamental Steel, Classic (spear head caps); flush bottom rail treatment, 3-Rail style manufactured by Ameristar Fence Products, Inc., or approved equal.
   1. Fortess Fence Products, Garland, TX; 844-909-1999.

2.02 MATERIAL

A. Steel material for fence panels and posts shall conform to the requirements of ASTM A653/A653M, with a minimum yield strength of 45,000 psi and a minimum zinc (hot-dip galvanized) coating weight of 0.60 oz/ft2, Coating Designation G-60.

B. Material for pickets shall be 3/4" square x 18 Ga. tubing. The rails shall be steel channel, 1.5" x 1.4375" x 14 Ga. Picket holes in the rail shall be spaced 4.675" o.c.. Fence posts and gate posts shall meet the minimum size requirements of Table 1.

2.03 FABRICATION

A. Pickets, rails and posts shall be pre-cut to specified lengths. Rails shall be pre-punched to accept pickets.

B. Pickets shall be inserted into the pre-punched holes in the rails and shall be aligned to standard spacing using a specially calibrated alignment fixture.

C. The manufactured panels and posts shall be minimum cumulative coating thickness of epoxy and acrylic shall be 2 mils. Color shall be Black.

D. The manufactured fence system shall be capable of meeting the vertical load, horizontal load, and infill performance requirements for Commercial weight fences under ASTM F2408.

E. Gates with an out-to-out leaf dimension less than and including 72 inches shall be fabricated using manufacturer's ornamental panel material and 1-3/4" sq. x 14ga. gate ends. Gate leafs greater than 72 inches shall be fabricated using designed rails, 17 gauge pickets, intermediate uprights, gussets and 1-3/4" sq. x 14ga. gate ends. All rail and upright intersections shall be joined by welding. All picket and rail intersections shall also be joined by welding.

2.04 CONCRETE MIX

A. Mix concrete in accordance with ASTM C94. Provide Type 1A-Air entraining portland cement with 28 day compressive strength of 3000 psi. Limit slump to 3" maximum and aggregate size to 2" maximum.

PART 3 - EXECUTION

3.01 PREPARATION

A. All new installation shall be laid out by the contractor in accordance with the construction plans.

3.02 INSTALLATION

A. Fence post shall be spaced according to Table 3, plus or minus 1/4". For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Fence panels shall be attached to posts with brackets supplied by the manufacturer. Posts shall be set in concrete footers having a minimum depth of 36". The "Earthwork" and "Concrete" sections of this specification shall govern material requirements for the concrete footer. Posts setting by other methods such as plated posts or grouted core-drilled footers are permissible only if shown by engineering analysis to be sufficient in strength for the intended application.

3.03 FENCE INSTALLATION MAINTENANCE

A. When cutting/drilling rails or posts adhere to the following steps to seal the exposed steel surfaces; 1) Remove all metal shavings from cut area. 2) Apply zinc-rich primer to thoroughly cover cut edge and/or drilled hole; let dry. 3) Apply 2 coats of finish paint matching fence color. Approved spray cans or paint pens shall be used to prime and finish exposed surfaces.

3.04 GATE INSTALLATION

A. Gate posts shall be spaced according to the manufacturers' gate drawings, dependent on standard out-to-out gate leaf dimensions and gate hardware selected. Type and quantity of gate hinges shall be based on the application; weight, height, and number of gate cycles. The manufacturers' gate drawings shall identify the necessary gate hardware required for the application. Gate hardware shall be provided by the manufacture of the gate and shall be installed per manufacturer's recommendations.

3.05 CLEANING

A. The contractor shall clean the job site of excess materials; post-hole excavations shall be scattered uniformly away from posts.

Table 1 - Minimum Sizes for Commercial Posts

Fence Posts	Panel Height
2-1/2" x 14 Ga.	7' & 8' Heights

Gate Leaf	Gate Height 7' & 8' Heights
Up to 4'	3" x 12 Ga.
4'1" to 6'	4" x 12 Ga.
6'1" to 16'	6" x 12 Ga.

Table 2 - Coating Performance Requirements

Quality Characteristics	ASTM Test Method	Performance Requirements
Adhesion	D3359 - Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117, D714 & D1654	Corrosion Resistance over 1,500 hours
Impact Resistance	D2794	Impact Resistance over 60 inch lb
Weathering Resistance	D822 D2244, D523	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).

Table 3 - Commercial - Post Spacing By Bracket Type

8' Nominal (91.95" Rail)

Post Size	2-1/2" 3"	2-1/2" 3"	2-1/2"	3"
Post Settings	95"	95"	95"	95-1/2" ± 1/4" O.C.

END OF SECTION 32 31 19