DOG PARK FENCE SPECIFICATIONS
PROJECT #1218
CITY OF GEORGETOWN

DIVISION 32 EXTERIOR IMPROVEMENTS

CHAIN LINK FENCE & GATES

1. WORK INCLUDES FENCE FRAMEWORK, FABRIC, ACCESSORIES, EXCAVATION FOR POST BASES, CONCRETE FOUNDATION FOR POSTS, MANUAL GATES AND RELATED HARDWARE, VINYL FENCE COATING.

A. DELEGATED DESIGN: DESIGN CHAIN-LINK FENCES AND GATES, INCLUDINGCOMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER, USINGPERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED.

B. STRUCTURAL PERFORMANCE: CHAIN-LINK FENCE AND GATE FRAMEWORK SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS & UNDER CONDITIONS INDICATED ACCORDING TO ASCE/SEI 7:

1. MINIMUM POST SIZE: DETERMINE ACCORDING TO ASTM F 1043 FOR FRAMEWORK UP TO 5 FEET HIGH, AND POST SPACING NOT TO EXCEED 10 FEET FOR HEAVY INDUSTRIAL FENCE. DETERMINE ACCORDING TO CLFMI WLG 2445, BASED ON MESH SIZE AND PATTERN SPECIFIED AND ON THE FOLLOWING:

a. WIND LOADS AND EXPOSURE: PER INTERNATIONAL BUILDING CODE.

b. MATERIAL GROUP: SCHEDULE 40 STEEL PIPE, ELECTRIC-RESISTANCE-WELDED ROUND STEEL PIPE.

1.1 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED. INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND COLOR FINISHES FOR CHAIN-LINK FENCES AND GATES.

1. FENCE AND GATE POSTS, RAILS, AND FITTINGS.

2. CHAIN-LINK FABRIC, REINFORCEMENTS, AND ATTACHMENTS.

3. GATES AND HARDWARE.

B. SHOP DRAWINGS: INDICATE PLAN LAYOUT, SPACING AND DIMENSIONS OF COMPONENTS, POST FOUNDATION DETAILS, HARDWARE ANCHORAGE, GATES, CHAIN LINK FENCE GAUGE, AND POST STEEL SCHEDULE

C.SAMPLES FOR VERIFICATION: PREPARED ON SAMPLES OF SIZE INDICATED BELOW:

1. POLYMER-COATED COMPONENTS: IN 6-INCH LENGTHS FOR COMPONENTS AND ON FULL-SIZED UNITS FOR ACCESSORIES.

1.2 QUALITY ASSURANCE

A. FENCING CONTRACTOR: BEEN IN THE BUSINESS OF FENCING FOR MINIMUM OF FIVE (5) YEARS PRODUCING PRODUCTS AS SPECIFIED.

1. FENCING TO BE PROVIDED AS A COMPLETE SYSTEM PRODUCED BY THE MANUFACTURER, INCLUDING NECESSARY ERECTION ACCESSORIES, FITTINGS AND FASTENERS.

2. CONTRACTOR MUST MAINTAIN AN OFFICE WITHIN 45 MILES OF THE PROJECT SITE.

3. CONTRACTOR TO UTILIZE INSTALLER CERTIFIED BY THE FENCING MANUFACTURER AND HAVE A MINIMUM OF THREE YEARS EXPERIENCE INSTALLING SPECIFIED PRODUCTS.

B. MOCKUPS: BUILD MOCKUPS TO SET QUALITY STANDARDS FOR FABRICATION AND INSTALLATION.

1. INCLUDE 10-FOOT LENGTH OF FENCE AND GATE.

1.3 PROJECT CONDITIONS

A. FIELD MEASUREMENTS: VERIFY LAYOUT INFORMATION FOR CHAIN-LINK FENCES AND GATES SHOWN ON DRAWINGS IN RELATION TO PROPERTY SURVEY AND EXISTING STRUCTURES. VERIFY DIMENSIONS BY FIELD MEASUREMENTS.

1.4 WARRANTY

A. MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AND INSTALLER AGREE TO REPAIR OR REPLACE COMPONENTS OF CHAIN-LINK FENCES AND GATES THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

a. DETERIORATION OF METALS, METAL FINISHES, AND OTHER MATERIALS BEYOND NORMAL WEATHERING, DELAMINATION OF VINYL COATINGS.

2. WARRANTY PERIOD: FIVE YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC (MESH)

A. GENERAL: PROVIDE POLYMER-COATED FABRIC UNLESS NOTED OTHERWISE ON THE DRAWINGS

a. MESH SIZE: 1-3/4 INCHES. STEEL WIRE FABRIC: WIRE WITH A DIAMETER OF 9 GAUGE - 0.148 INCH.

b. POLYMER-COATED FABRIC: ASTM F 668, CLASS 1CLASS 2A OVER ZINC-COATED STEEL WIRE.

1) COLOR: AS SELECTED BY OWNER FROM MANUFACTURER'S FULL RANGE, COMPLYING WITH ASTM F 934.

CHAIN LINK FENCE & GATES

2.2 FENCE FRAMING

A. POSTS AND RAILS: COMPLY WITH ASTM F 1043 FOR FRAMING, INCLUDING RAILS, BRACES, AND LINE; TERMINAL; AND CORNER POSTS. PROVIDE MEMBERS WITH MINIMUM DIMENSIONS AND WALL THICKNESS ACCORDING TO ASTM F 1043 OR ASTM F 1083 BASED ON THE FOLLOWING:

1. FENCE HEIGHT: 6' (SIX FEET)

2. PROVIDE POLYMER-COATED COMPONENTS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

3. HEAVY INDUSTRIAL STRENGTH: MATERIAL SCHEDULE 40 GROUP IC, ROUND STEEL PIPE, ELECTRIC RESISTANCE-WELDED PIPE.

4. FENCE COMPONENTS:

a. LINE POST: 2.875 INCHES.

b. END, CORNER AND PULL POST: 3.5 INCHES.

7. HORIZONTAL FRAMEWORK MEMBERS: TOP AND BOTTOM RAILS COMPLYING WITH ASTM F 1043.

8. BRACE RAILS: COMPLY WITH ASTM F 1043.

9. POLYMER COATING OVER METALLIC COATING.

a. COLOR: MATCH CHAIN-LINK FABRIC TO MATCH ROOF FROM MANUFACTURER'S FULL RANGE, COMPLYING WITH ASTM F 934.

10. METALLIC COATING FOR STEEL FRAMING:

a. TYPE A, CONSISTING OF NOT LESS THAN MINIMUM 2.0-OZ./SQ. FT. AVERAGE ZINC COATING PER ASTM A 123/A 123M OR 4.0-OZ./SQ. FT. ZINC COATING PER ASTM A 653/A 653M.

2.3 SWING GATES

A. GENERAL: COMPLY WITH ASTM F 900 FOR GATE POSTS AND SINGLE AND / OR DOUBLE SWING GATE TYPES.

1. GATE LEAF WIDTH: AS INDICATED AS INDICATED ON DRAWINGS

B. PIPE AND TUBING:

1. ZINC-COATED STEEL: COMPLY WITH ASTM F 1043 AND ASTM F 1083; PROTECTIVE COATING AND FINISH TO MATCH FENCE FRAMING.

C. FRAME CORNER CONSTRUCTION: WELDED.

D. HARDWARE:

1. HINGES: 360-DEGREE INWARD AND OUTWARD SWING.

2. LATCHES PERMITTING OPERATION FROM BOTH SIDES OF GATE WITH PROVISION FOR PADLOCKING ACCESSIBLE FROM BOTH SIDES OF GATE.

2.4 FITTINGS

A. GENERAL: COMPLY WITH ASTM F 626.

B. TENSION AND BRACE BANDS: PRESSED STEEL.

C. TENSION BARS: STEEL, LENGTH NOT LESS THAN 2 INCHES SHORTER THAN FULL HEIGHT OF CHAIN-LINK FABRIC. PROVIDE ONE BAR FOR EACH GATE AND END POST, AND TWO FOR EACH CORNER AND PULL POST.

D. TRUSS ROD ASSEMBLIES: STEEL, HOT-DIP GALVANIZED AFTER THREADING ROD AND TURNBUCKLE OR OTHER MEANS OF ADJUSTMENT.

E. TIE WIRES, CLIPS, AND FASTENERS: ACCORDING TO ASTM F 626.

1. STANDARD ROUND WIRE TIES: FOR ATTACHING CHAIN-LINK FABRIC TO POSTS, RAILS, AND FRAMES, COMPLYING WITH THE FOLLOWING:

a. HOT-DIP GALVANIZED STEEL: 0.106-INCH- DIAMETER WIRE; GALVANIZED COATING THICKNESS MATCHING COATING THICKNESS OF CHAIN-LINK FENCE FABRIC.

F. FINISH:

1. METALLIC COATING FOR PRESSED STEEL OR CAST IRON: NOT LESS THAN 1.2 OZ. /SQ. FT. ZINC.

a. POLYMER COATING OVER METALLIC COATING.

2.5 GROUT AND ANCHORING CEMENT

A. NONSHRINK, NONMETALLIC GROUT: PREMIXED, FACTORY-PACKAGED, NONSTAINING, NONCORROSIVE, NONGASEOUS GROUT COMPLYING WITH ASTM C 1107. PROVIDE GROUT, RECOMMENDED IN WRITING BY MANUFACTURER, FOR EXTERIOR APPLICATIONS.

B. EROSION-RESISTANT ANCHORING CEMENT: FACTORY-PACKAGED, NONSHRINK, NONSTAINING, HYDRAULICCONTROLLED EXPANSION CEMENT FORMULATION FOR MIXING WITH POTABLE WATER AT PROJECT SITE TO CREATE POURABLE ANCHORING, PATCHING, AND GROUTING COMPOUND. PROVIDE FORMULATION THAT IS RESISTANT TO EROSION FROM WATER EXPOSURE WITHOUT NEEDING PROTECTION BY A SEALER OR WATERPROOF COATING AND THAT IS RECOMMENDED IN WRITING BY MANUFACTURER, FOR EXTERIOR APPLICATIONS.

PART 3 - EXECUTION

3.1 EXAMINATION

A. EXAMINE AREAS AND CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR A VERIFIED SURVEY OF PROPERTY LINES AND LEGAL BOUNDARIES, SITE CLEARING, EARTHWORK, PAVEMENT WORK, ELECTRIC COMPANY EASEMENTS AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.

1. DO NOT BEGIN INSTALLATION BEFORE FINAL GRADING IS COMPLETED UNLESS OTHERWISE PERMITTED BY ARCHITECT.

B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 PREPARATION

A. STAKE LOCATIONS OF FENCE LINES, GATES, AND TERMINAL POSTS. DO NOT EXCEED INTERVALS OF 250 FEET OR LINE OF SIGHT BETWEEN STAKES. INDICATE LOCATIONS OF UTILITIES, LAWN SPRINKLER SYSTEM, UNDERGROUND STRUCTURES, BENCHMARKS, AND PROPERTY MONUMENTS.

3.3 INSTALLATION, GENERAL

A. INSTALL CHAIN-LINK FENCING TO COMPLY WITH ASTM F 567 AND MORE STRINGENT REQUIREMENTS INDICATED.

1. INSTALL FENCING INSIDE PROPERTY LINE.

3.4 CHAIN-LINK FENCE INSTALLATION

A. POST EXCAVATION: DRILL OR HAND-EXCAVATE HOLES FOR POSTS TO DIAMETERS INDICATED IN SHOP DRAWINGS AND 10' SPACINGS IN FIRM, UNDISTURBED SOIL.

B. POST SETTING: SET POSTS IN CONCRETE AT INDICATED SPACING INTO FIRM, UNDISTURBED SOIL.

1. VERIFY THAT POSTS ARE SET PLUMB, ALIGNED, AND AT CORRECT HEIGHT AND SPACING, AND HOLD IN POSITION DURING SETTING WITH CONCRETE OR MECHANICAL DEVICES.

2. CONCRETE FILL: PLACE CONCRETE AROUND POSTS TO DIMENSIONS INDICATED AND VIBRATE OR TAMP FOR CONSOLIDATION. PROTECT ABOVEGROUND PORTION OF POSTS FROM CONCRETE SPLATTER.

a. CONCEALED CONCRETE: TOP 2 INCHES BELOW GRADE TO ALLOW COVERING WITH SURFACE MATERIAL.

C. TERMINAL POSTS: LOCATE TERMINAL END, CORNER, AND GATE POSTS PER ASTM F 567 AND TERMINAL PULL POSTS AT CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENT OF 10 DEGREES OR MORE.

D. LINE POSTS: SPACE LINE POSTS UNIFORMLY AT 10 FEET O.C.

E. POST BRACING AND INTERMEDIATE RAILS: INSTALL ACCORDING TO ASTM F 567, MAINTAINING PLUMB POSITION AND ALIGNMENT OF FENCING. DIAGONALLY BRACE TERMINAL POSTS TO ADJACENT LINE POSTS WITH TRUSS RODS AND TURNBUCKLES. INSTALL BRACES AT END AND GATE POSTS AND AT BOTH SIDES OF CORNER AND PULL POSTS.

F. TENSION WIRE: INSTALL ACCORDING TO ASTM F 567, MAINTAINING PLUMB POSITION AND ALIGNMENT OF FENCING. PULL WIRE TAUT, WITHOUT SAGS. FASTEN FABRIC TO TENSION WIRE WITH 0.120-INCHDIAMETER HOG RINGS OF SAME MATERIAL AND FINISH AS FABRIC WIRE, SPACED A MAXIMUM OF 24 INCHES O.C. INSTALL TENSION WIRE IN LOCATIONS INDICATED BEFORE STRETCHING FABRIC. PROVIDE HORIZONTAL TENSION WIRE AT THE FOLLOWING LOCATIONS:

1. EXTENDED ALONG BOTTOM OF FENCE FABRIC. INSTALL TOP TENSION WIRE THROUGH POST CAP LOOPS. INSTALL BOTTOM TENSION WIRE WITHIN 6 INCHES OF BOTTOM OF FABRIC AND TIE TO EACH POST WITH NOT LESS THAN SAME DIAMETER AND TYPE OF WIRE.

H. BOTTOM RAILS: INSTALL AND SECURE TO POSTS WITH FITTINGS.

J. TENSION OR STRETCHER BARS: THREAD THROUGH FABRIC AND SECURE TO END, CORNER, PULL, AND GATE POSTS WITH TENSION BANDS SPACED NOT MORE THAN 15 INCHES O.C.

K. TIE WIRES: USE WIRE OF PROPER LENGTH TO FIRMLY SECURE FABRIC TO LINE POSTS AND RAILS. ATTACH WIRE AT ONE END TO CHAIN-LINK FABRIC, WRAP WIRE AROUND POST A MINIMUM OF 180 DEGREES, AND ATTACH OTHER END TO CHAIN-LINK FABRIC PER ASTM F 626. BEND ENDS OF WIRE TO MINIMIZE HAZARD TO INDIVIDUALS AND CLOTHING.

1. MAXIMUM SPACING: TIE FABRIC TO LINE POSTS AT 12 INCHES O.C. AND TO BRACES AT 24 INCHES O.C.

3.5 GATE INSTALLATION

A. INSTALL GATES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, LEVEL, PLUMB, AND SECURE FOR FULL OPENING WITHOUT INTERFERENCE. ATTACH HARDWARE USING TAMPER-RESISTANT OR CONCEALED MEANS. INSTALL GROUND-SET ITEMS IN CONCRETE FOR ANCHORAGE. ADJUST HARDWARE FOR SMOOTH OPERATION AND LUBRICATE WHERE NECESSARY.

3.6 ADJUSTING

A. GATES: ADJUST GATES TO OPERATE SMOOTHLY, EASILY, AND QUIETLY, FREE OF BINDING, WARP, EXCESSIVE DEFLECTION, DISTORTION, NONALIGNMENT, MISPLACEMENT, DISRUPTION, OR MALFUNCTION, THROUGHOUT ENTIRE OPERATIONAL RANGE. CONFIRM THAT LATCHES AND LOCKS ENGAGE ACCURATELY AND SECURELY WITHOUT FORCING OR BINDING.

B. LUBRICATE HARDWARE AND OTHER MOVING PARTS.

END OF SECTION