



Campco Engineering, Inc.
Consulting Engineers since 1974

ADDENDUM NO. 5

DATE: April 26, 2021
PROJECT: Catawba Park – Phase 1
OWNER: City of Tega Cay
ENGINEER: Campco Engineering, Inc.
CE#: 9664-1
TO: All Plan Holders of Record

This Addendum becomes a part of the Contract Documents and modifies the original Contract Documents dated January 29, 2021. Addendum shall be provided to all plan holders of record in the manner that original Contract Documents were received. All bidders shall acknowledge receipt of this Addendum in the Bid Proposal Form.

CLARIFICATIONS

1. Attention is being drawn to clarification item #6 in Addendum No. 3 that states that Owner will supply and install scoreboards. Contractor shall install electrical service to each scoreboard.

This Clarification is being expanded to note that the electrical service is to be single phase/120V and run from the panel within the Restroom/Concessions Building to each scoreboard within the corridors between the ballfields. No portion of the electrical service is to be installed within the fencing for each ballfield. Payment for installation of these lines shall be included within the design/build bid price for the Baseball/Softball Complex Restroom/Concessions Building line item.

2. Site lighting for driveways and parking lots will be designed, provided, and installed by York Electric Cooperative.
3. Owner will provide and install any determined wayfinding signs not specified on sheets C3.4-C3.6.
4. Owner will evaluate possible material substitutions with the selected Contractor following the execution of the Contract Agreement.

PROJECT MANUAL REVISIONS

BID PROPOSAL FORM, SECTION 3A – The following line item titles have been revised:

- No.'s 35 a) and 36 a) – Noted as not applicable (N/A).

BID PROPOSAL FORM, SECTION 3A – The bid items and/or quantities for the following project line items have been revised and/or added:

- No. 20 – Silt Fence, Installed (- 200 LF)
- No. 21 – Silt Fence Rock Outlet, Installed (+ 1 EA)
- No. 22 – Tree Protection Fencing, Installed (+ 85 LF)
- No. 23 – Diversion Swales, Installed (- 40 LF)
- No. 24 – Slope Protection Matting, Installed (+55 SY)
- No. 29 – Rock Ditch Checks, Installed (- 1 EA)
- No. 33 – Pipe Slope Drains, Installed (- 1 EA)
- No. 35 a) – 2'-0" Concrete Curb and Gutter, Installed (- 86 LF)
- No. 35 b) – 1'-6" Concrete Curb and Gutter, Installed (- 300 LF)
- No. 35 c) – 1'-6" Mountable Curb and Gutter, Installed (+ 90 LF)
- No. 36 a) – 2'-0" Curb and Gutter End Taper, Installed (- 1 EA)
- No. 36 b) – 1'-6" Curb and Gutter End Taper, Installed (+ 1 EA)
- No. 37 – Curb and Gutter Transitions, Installed – Divided into the following types:
 - a) 1'-6" Mountable to 1'-6" Vertical (2 EA)
 - b) At Type 1 Catch Basins (+ 26 EA)
- No. 39 – Concrete Wheel Stops, Installed (+ 5 EA)
- No. 45 – Graded Aggregate Base (GAB) Course, 8-inches Uniform, Installed (- 150 SY)
- No. 46 – Asphalt Concrete Surface Course (Type C), 2-inches Uniform, Installed (- 150 SY)
- No. 55 a) – 4' Black Vinyl coated Chain Link Fence, Installed (+ 35 LF)
- No. 55 f) – 4' Moveable Softball Outfield Fence, Installed (+ 380 LF)
- No. 59 – Sod, Installed (+ 85 SY)
- No. 69 – 12" HDPE, Installed (- 72 LF)
- No. 71 – 18" R.C.P., Type III w/ "O"-Rings, Installed (+ 6 LF)
- No. 72 – 18" HDPE, Installed (+ 67 LF)
- No. 120 – 1-1/2 " PVC Waterline, Installed (-20 LF)
- No. 126 – 3/4" PVC Waterline, Installed (-15 LF)
- No. 130 – Understory Tress, Installed (+ 12 EA)

BID ITEM DESCRIPTIONS, SECTION 3C – Bid item descriptions have been revised for the following line items:

- No. 34 – Design-Build Segmental Block Retaining Wall – Payment for this item has been revised to include the installation of the concrete flume at the top of wall #1 but not the chain link fence.
- No. 137 – Field Sports Lighting (1,500 HID Metal Halide) – Payment for this item has been revised to include installation of electrical panel box and electrical services to all sports lighting fixtures.
- No. 139 – Design/Build Baseball/Softball Restroom/Concession Building – Payment for this item has been revised to include installation of electrical services from transformer to building and from building to scoreboards.
- No. 142 – Design/Build Soccer Complex Restroom Building – Payment for this item has been revised to include installation of electrical services from transformer to building.
- No. 147 & 147A – Sports Lighting (LED) - Payment for this item has been revised to include installation of electrical panel box and electrical services to all sports lighting fixtures.

DESIGN/BUILD PERFORMANCE SPECIFICATIONS – SECTION 2 – Performance specifications have been amended to provide the following information:

- Change of material to be placed on all plumbing walls behind fixture units to fiberglass reinforced panels.
- Clarification of extent of use of moisture/impact resistant drywall in buildings.
- Clarification of electronic message board at park entrance monument sign to display on only one side.
- Clarification of number of park ID columns.
- Clarification of construction of Open Play Meadow Stage.
- Removal of all stone work at Open Play Meadow Stage and addition of concrete detail reference stair and handrail detail.
- Clarification of electrical panel at Open Play Meadow Stage.

PLAN REVISIONS/ADDITIONS

- Sheets C3.1, C3.4, C4.1, C4.4, and C4.7 are being reissued to document change in type of entrance curb and gutter and pavement markings within the New Gray Rock Road right-of-way.
- Sheets C3.1, C3.4, C4.1, C4.4, C4.8, C5.1, C5.5, C5.9, C5.14, C5.15, C6.1, and C7.1 are being reissued to document plan changes associated with the required relocation of sediment basin/detention/water quality basin #1 and its impact on the maintenance yard.
- Sheet C6.3 is being reissued to document pipe size changes for the two pipes from FES-P1 to MH-P1 and MH-P1 to RS-P1.
- Sheet C3.11 is being reissued to provide detail for concrete stairs with handrail for Open Play Meadow Stage.
- Sheets L1.0, L1.2, and L1.4 are being reissued to document planting revisions at the maintenance area and at the outfield fence lines of the baseball field and T-ball field.
- Sheets C1.0, C3.0, C4.0, C5.0, C5.4, C5.8, C6.0, C7.0, C8.0, C8.1, and L1.0 are being reissued to document that design information has been updated within the clouded limits.

END OF ADDENDUM NUMBER 5

Submitted by,
Campco Engineering, Inc.



Alan C. Walters, PLA

Attachments: Bid Proposal Form, Dated: Revised April 26, 2021
Bid Item Descriptions, Dated: Revised April 26, 2021
Design/Build Performance Specifications, Dated April 26, 2021
Plan Sheets, Dated: Revised April 26, 2021

cc: Charlie Funderburk, City of Tega Cay (w/attachments)

BID PROPOSAL FORM

Proposal of _____ (hereinafter called "**BIDDER**"), organized and existing under the laws of the State of South Carolina doing business as _____.

To: City of Tega Cay (hereinafter called "OWNER"). In compliance with your invitation for Bids, BIDDER hereby proposes to perform all **WORK** for the construction of the Catawba Park – Phase 1 in strict accordance with the **CONTRACT DOCUMENTS** within the time set forth therein, and at the prices stated below.

By submission of the **BID**, each **BIDDER** certifies, and in the case of a joint **BID** each party thereto certifies as to his own organization, that this **BID** has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this **BID** with any other **BIDDER** or with any competitor.

BIDDER hereby agrees to commence **WORK** under this contract on or before a date to be specified in the **NOTICE TO PROCEED** and to fully complete the **PROJECT** based on the required schedule defined in the Special Conditions, Section 4C. **BIDDER** further agrees to pay as liquidated damages, the sum of Five Hundred (\$500.00) for each consecutive calendar day thereafter as provided in the General Conditions.

BIDDER acknowledges receipt of the following **ADDENDUM(S)**:

All work performed by the Contractor as essential to the completion of the intent of the Contract Documents shall be paid for in accordance with the Bid is not shown as a separate Bid Item. All costs shall be included in the various pay items in the Bid Schedule or an amount shown as Total Bid Amount for the work shown on the proposed project plans.

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
BASE BID					
1	CLEARING & GRUBBING, COMPLETE	1	LS		
2	REMOVE AND DISPOSE OF ASPHALT/GRAVEL DRIVEWAYS, COMPLETE	1	LS		
3	REMOVE AND DISPOSE OF 15" STORM DRAIN PIPE, COMPLETE	1	LS		
4	REMOVE AND DISPOSE OF ELECTRICAL SERVICE LINE, POLE, AND GUY WIRE, COMPLETE	1	LS		
5	REMOVE AND DISPOSE OF SEPTIC TANK AND DRAINFIELD, COMPLETE	1	LS		
6	REMOVE AND DISPOSE OF EXISTING WATER SERVICE, CAP/PLUG AND BLOCK EXISTING SERVICE, COMPLETE	1	LS		
7	REMOVE DOG PARK FENCING AND AMENITIES, COMPLETE (PROVIDE TO OWNER)	1	LS		
8	SITE GRADING, COMPLETE	1	LS		
8A	BORROW FILL MATERIAL, IMPORTED FROM OFF-SITE, COMPLETE	12,000	CY		
9	DEWATERING CHANNELS, INSTALLED	8,000	LF		
10	UNSUITABLE SOIL MATERIAL, REMOVED FROM SITE AND REPLACED W/ MATERIAL OFF-SITE, COMPLETE	10,000	CY		
11	MASS ROCK, REMOVED FROM SITE AND REPLACED W/ MATERIAL OFF-SITE, COMPLETE	700	CY		
12	UNSUITABLE SOIL TRENCH MATERIAL, REMOVED FROM SITE AND REPLACED W/ MATERIAL OFF-SITE, COMPLETE	550	CY		
13	TRENCH ROCK REMOVED FROM SITE AND REPLACED W/ MATERIAL OFF-SITE, COMPLETE	60	CY		
14	TOPSOIL, IMPORTED FROM OFF-SITE, COMPLETE	6,000	CY		
15	STABILIZED CONSTRUCTION ENTRANCE, INSTALLED	1	EA		
16	TYPE A - FILTER FABRIC INLET PROTECTION, INSTALLED	26	EA		
17	TYPE B - WIRE MESH AND STONE INLET PROTECTION, INSTALLED	20	EA		
18	TYPE F - INLET TUBES, INSTALLED	23	EA		

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
19	SEDIMENT TUBES, INSTALLED	87	EA		
20	SILT FENCE, INSTALLED	9,000	LF		
21	SILT FENCE ROCK OUTLET, INSTALLED	13	EA		
22	TREE PROTECTION FENCING, INSTALLED	3,685	LF		
23	DIVERSION SWALES, INSTALLED	4,260	LF		
24	SLOPE PROTECTION MATTING, INSTALLED	19,255	SY		
25	GRASS LINED CHANNEL W/SC150 MATTING, INSTALLED	4,240	LF		
26	GRASS LINED CHANNEL W/SC250 MATTING, INSTALLED	270	LF		
27	RIP-RAP LINED CHANNEL, INSTALLED	193	TONS		
28	CONCRETE WASH-OUT, COMPLETE	1	EA		
29	ROCK DITCH CHECKS, INSTALLED	2	EA		
30	SKIMMER W/RISER SEDIMENT BASIN W/POROUS BAFFLES, COMPLETE	4	EA		
31	SKIMMER TYPE SEDIMENT BASIN W/ BAFFLES, COMPLETE	1	EA		
32	CONVERT SKIMMER W/RISER SEDIMENT BASIN TO RISER TYPE DETENTION BASIN, COMPLETE	4	EA		
33	PIPE SLOPE DRAINS, INSTALLED	5	EA		
34	DESIGN BUILD SEGMENTAL BLOCK RETAINING WALL, INSTALLED	2,440	FF		
35	CONCRETE CURB, INSTALLED				
	a) 2' - 0" CURB AND GUTTER	N/A	N/A	N/A	N/A
	b) 1' - 6" CURB AND GUTTER	10,615	LF		
	c) 1' - 6" MOUNTABLE CURB AND GUTTER	540	LF		
	d) 6" X 15" PLAYGROUND VERTICAL CURB	420	LF		
	e) 15" X 10" TURF FIELD EDGING	3,750	LF		
36	CURB AND GUTTER END TAPER, INSTALLED				
	a) 2' - 0" CURB AND GUTTER	N/A	N/A	N/A	N/A
	b) 1' - 6" CURB AND GUTTER	3	EA		
37	CURB AND GUTTER TRANSITIONS, INSTALLED				
	a) 1' - 6" MOUNTABLE TO 1' - 6" VERTICAL	2	EA		
	b) AT TYPE 1 CATCH BASINS	26	EA		

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
38	12' CONCRETE DROP CURB, INSTALLED	3	EA		
39	CONCRETE WHEEL STOPS, INSTALLED	10	EA		
40	5' CONCRETE FLUME, INSTALLED	20	LF		
41	ROADWAY FLUME W/CONCRETE SPLASH PAD, INSTALLED	14	EA		
42	CONCRETE SIDEWALK, INSTALLED	6,815	SY		
43	ASPHALT PEDESTRIAN TRAIL (GAB AND SURFACE), INSTALLED	3,800	SY		
44	BRICK PAVERS, INSTALLED				
	a) INSTALLED W/CONCRETE BASE & SAND BED, COMPLETE	108	SY		
	b) EXTRA CUBE OF PAVERS TO OWNER	1	EA		
45	GRADED AGGREGATE BASE (GAB) COURSE 8 IN. UNIFORM, INSTALLED	33,625	SY		
46	ASPHALT CONCRETE SURFACE COURSE (TYPE C), 2 - INCHES UNIFORM, INSTALLED	33,625	SY		
47	10" FULL DEPTH ASPHALT PAVEMENT, INSTALLED	156	SY		
48	5" CONCRETE PAVING, INSTALLED	1,282	SY		
49	CONCRETE DUMPSTER PAD, INSTALLED	1	EA		
50	PAVEMENT MARKING LINES, INSTALLED				
	a) PAINTED	1	LS		
	b) THERMOPLASTIC	1	LS		
51	ADA RAMP INSTALLED, COMPLETE				
	a) TYPE 1	12	EA		
	b) TYPES 2 - 5	6	EA		
52	ADA PARKING SIGNS, INSTALLED	17	EA		
53	STREET AND STOP SIGNS, INSTALLED	9	EA		
54	DOUBLE LOCKABLE PIPE RAIL GATES, INSTALLED				
	a) 12' WIDTH/GATE	3	EA		
	b) 14' WIDTH/GATE	1	EA		
55	BLACK VINYL COATED CHAIN LINK FENCE, INSTALLED				
	a) 4' HEIGHT	3,075	LF		
	b) 6' HEIGHT W/YELLOW POLY SAFETY CAP	1,800	LF		

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
	c) 8' HEIGHT	638	LF		
	d) 8' HEIGHT W/BARBED WIRE	77	LF		
	e) 20' HEIGHT BACKSTOP W/ 6' WINDSCREEN	5	EA		
	f) 4' MOVEABLE SOFTBALL OUTFIELD FENCE	380	LF		
56	BLACK VINYL COATED CHAIN LINK LOCKABLE GATES, INSTALLED				
	a) 3.5' W X 4' HT SINGLE	18	EA		
	b) 6' W X 4' HT SINGLE	2	EA		
	c) 4' W X 4' HT DOUBLE	8	EA		
	d) 5' W X 4" HT DOUBLE	2	EA		
	e) 6' W X 4' HT DOUBLE	2	EA		
	f) 12' W X 8' HT DOUBLE	1	EA		
	g) 7' W X 8' HT DOUBLE W/BARBED WIRE	1	EA		
57	FOUL POLES, INSTALLED	10	EA		
58	SEEDING AND MULCHING OF DISTURBED AREAS, COMPLETE				
	a) TEMPORARY	38.5	AC		
	b) PERMANENT	15	AC		
59	SOD, INSTALLED	10,215	SY		
60	ATHLETIC FIELD SPRIGGING, COMPLETE	17,845	SY		
61	BASEBALL/SOFTBALL INFIELD MATERIAL, INSTALLED	975	CY		
62	FINE CRUSHED BRICK WARNING TRACK, INSTALLED	2,500	SY		
63	TYPE 1 CATCH BASIN, INSTALLED	14	EA		
64	TYPE 9 CATCH BASIN, INSTALLED	10	EA		
65	DROP INLET W/ FRAME & COVER, INSTALLED	4	EA		
66	STORM DRAIN MANHOLE W/ FRAME & COVER, INSTALLED	18	EA		
67	HEAVY DUTY PVC DRAIN BASINS, INSTALLED	8	EA		
68	CHANNEL DRAIN, INSTALLED	640	LF		
69	12" HDPE, INSTALLED	854	LF		
70	12" HDPE F.E.S., INSTALLED	3	EA		

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
71	18" R.C.P., TYPE III W/"O" - RINGS, INSTALLED	468	LF		
72	18" HDPE, INSTALLED	3,430	LF		
73	18" CONCRETE F.E.S., INSTALLED	6	EA		
74	18" HDPE F.E.S., INSTALLED	15	EA		
75	24" R.C.P., TYPE III W/"O" - RINGS, INSTALLED	667	LF		
76	24" HDPE, INSTALLED	N/A	LF	N/A	N/A
77	24" CONCRETE F.E.S., INSTALLED	10	EA		
78	24" HDPE F.E.S., INSTALLED	N/A	EA	N/A	N/A
79	30" R.C.P., TYPE III, INSTALLED	65	LF		
80	30" CONCRETE F.E.S., INSTALLED	1	EA		
81	6" HDPE, INSTALLED	64	LF		
82	6" PERFORATED PVC SUBDRAIN, INSTALLED, COMPLETE	1,210	LF		
83	HAND-PLACED RIP RAP, INSTALLED	311	TONS		
84	6" PVC UTILITY CONDUIT, INSTALLED	2,886	LF		
85	STANDARD 4' DIA. SANITARY SEWER CONCRETE MANHOLES, INSTALLED	6	EA		
86	4' DIA. SHALLOW DEPTH SANITARY SEWER CONCRETE MANHOLE, INSTALLED	1	EA		
87	SERVICE LINE TAP TO EXISTING SANITARY SEWER MANHOLE, COMPLETE	1	EA		
88	8" PVC (SDR-35) SANITARY SEWER PIPE, INSTALLED				
	a) 0'-6' DEEP	338	LF		
	b) 6'-8' DEEP	215	LF		
89	8" D.I. SANITARY SEWER PIPE (C150), 0'-6' DEEP, INSTALLED	582	LF		
90	PVC SANITARY SEWER SERVICE, INSTALLED				
	a) 6" PVC	38	LF		
	b) 4" PVC	49	LF		
91	SANITARY SEWER CLEAN-OUTS, INSTALLED				
	a) 6" PVC	1	LF		
	b) 4" PVC	2	LF		

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
92	PVC SANITARY SEWER FORCE MAIN, INSTALLED				
	a) 4" PVC	370	LF		
	b) 1-1/4" PVC	1,417	LF		
93	5" HDPE (DR9) SAN. SEWER FORCE MAIN ROADWAY CROSSING BY DIRECTIONAL DRILLING, COMPLETE	40	LF		
94	SAN. SEWER FM BEND W/ BLOCKING, INSTALLED				
	a) 4"	7	EA		
	b) 1-1/4"	6	EA		
95	AIR/VACUUM VALVE AND MANHOLE, INSTALLED				
	a) 2" INSTALLED	1	EA		
	b) 1-1/4" INSTALLED	2	EA		
96	SANITARY SEWER DUPLEX SUBMERSIBLE PUMP STATION, 5' DIA. WETWELL AND 5 HP PUMPS, VALVE BOX, AND ELECTRICAL PANEL COMPLETE	1	EA		
96A	PACKAGE GRINDER PUMP STATION, INSTALLED COMPLETE	1	EA		
97	JUMPER CONNECTION, INSTALLED	1	EA		
98	8" D.I. WATER MAIN, INSTALLED	815	LF		
99	BORE & JACK 8" WATER MAIN, W/ 16" STEEL CASING, COMPLETE	40	LF		
100	8" D.I. STUB-OUT, COMPLETE	2	EA		
101	8" GATE VALVE W/ VALVE BOX, INSTALLED	3	EA		
102	8" x 8" x 8" TEE W/ BLOCKING, INSTALLED	1	EA		
103	8" x 2-1/2" TAPPED M.J. PLUG, INSTALLED	1	EA		
104	FIRE HYDRANT ASSEMBLY, INSTALLED	4	EA		
105	8" x 8" x 6" TEE W/ BLOCKING, INSTALLED	1	EA		
106	6" PVC (C900) WATER MAIN, INSTALLED	1,773	LF		
107	6" GATE VALVE W/ VALVE BOX, INSTALLED	4	EA		
108	6" X 6" X 6" TEE W/BLOCKING, INSTALLED	1	EA		
109	6" - 45 DEGREE WATERLINE BEND W/BLOCKING, INSTALLED	1	EA		
110	6" - 22.5 DEGREE WATERLINE BEND W/BLOCKING, INSTALLED	2	EA		

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
111	6" D.I. (C151) STUBOUT, COMPLETE	1	EA		
112	2-1/2" GALVANIZED STEEL WATERLINE, INSTALLED	20	LF		
113	2-1/2" BLOW-OFF ASSEMBLY, COMPLETE, INSTALLED	1	EA		
114	2-1/2" - 90 DEGREE BEND W/BLOCKING, INSTALLED	1	EA		
115	2" PVC WATERLINE, INSTALLED	656	LF		
116	2" WATER SERVICE CONNECTION, INSTALLED	3	EA		
117	2" - 45 DEGREE BEND W/ BLOCKING, INSTALLED	3	EA		
118	2" PLUG W/ BLOCKING, INSTALLED	2	EA		
119	1-1/2" WATER SERVICE CONNECTION, INSTALLED	1	EA		
120	1-1/2" PVC WATERLINE, INSTALLED	210	LF		
121	1-1/2" X 1-1/2" X 1-1/2" TEE W/BLOCKING, INSTALLED	1	EA		
122	1-1/2" GATE VALVE W/VALVE BOX, INSTALLED	2	EA		
123	1-1/2" 45 DEGREE BEND W/BLOCKING, INSTALLED	2	EA		
124	1-1/2" PLUG W/BLOCKING, INSTALLED	1	EA		
125	1-1/2" x 3/4" REDUCER, INSTALLED	1	EA		
126	3/4" PVC WATERLINE, INSTALLED	135	LF		
127	3/4" - 45 DEGREE BEND W/ BLOCKING, INSTALLED	2	EA		
128	3/4" PUMP STATION YARD HYDRANT, INSTALLED	1	EA		
129	CANOPY TREE, INSTALLED	66	EA		
130	UNDERSTORY TREE, INSTALLED	140	EA		
131	SHRUBS, INSTALLED	1,098	EA		
132	GROUND COVER, INSTALLED	551	EA		
133	ORNAMENTAL GRASS, INSTALLED	2,413	EA		
134	CONSTRUCTION SURVEYING AND AS-BUILTS, COMPLETE	1	LS		
135	MOBILIZATION, COMPLETE	1	LS		
136	TRAFFIC CONTROL, COMPLETE	1	LS		
137	FIELD SPORTS LIGHTING (1,500 HID METAL HALIDE), COMPLETE, INSTALLED				

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
	a) BASEBALL/SOFTBALL COMPLEX	1	LS		
	b) SOCCER COMPLEX	1	LS		
138	IRRIGATION, COMPLETE, INSTALLED				
	a) OPEN PLAY MEADOW AND PARK ENTRANCE SYSTEM	1	LS		
	b) BASEBALL/SOFTBALL COMPLEX SYSTEM	1	LS		
	c) SOCCER COMPLEX SYSTEM	1	LS		
139	DESIGN/BUILD BASEBALL/SOFTBALL COMPLEX RESTROOM/CONCESSIONS BUILDING, COMPLETE, INSTALLED	1	LS		
140	DESIGN/BUILD MAINTENANCE BUILDING, COMPLETE, INSTALLED	1	LS		
141	DESIGN/BUILD RESTROOM BUILDING, COMPLETE, INSTALLED	1	LS		
142	DESIGN/BUILD SOCCER COMPLEX RESTROOM BUILDING, COMPLETE, INSTALLED	1	LS		
143	DESIGN/BUILD DUGOUTS, COMPLETE, INSTALLED	8	EA		
144	DESIGN/BUILD MONUMENT SIGN AND PARK ID COLUMNS, COMPLETE, INSTALLED	1	LS		
145	DESIGN/BUILD SOCCER COMPLEX SYNTHETIC TURF FIELDS AND APRONS, COMPLETE, INSTALLED	30,460	SY		
146	DESIGN/BUILD OPEN PLAY MEADOW STAGE, COMPLETE, INSTALLED	1	LS		
TOTAL BASE BID					
ADDITION/DEDUCTION ALTERNATE BID ITEMS					
ALTERNATE BID ITEM #1A					
147	BASEBALL/SOFTBALL COMPLEX FIELD SPORTS LIGHTING (LED), COMPLETE, INSTALLED	1	LS		
ALTERNATE BID ITEM #1B					
147A	SOCCER COMPLEX FIELD SPORTS LIGHTING (LED), COMPLETE, INSTALLED	1	LS		
ALTERNATE BID ITEM #2					
148	DESIGN/BUILD BASEBALL/SOFTBALL COMPLEX SYNTHETIC TURF SURFACE, ON INFIELDS INCLUDING SURROUNDING TURF AREAS, COMPLETE, INSTALLED	6,950	SY		

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (\$)	TOTAL AMOUNT (\$)
ALTERNATE BID ITEM #3					
149	ADDITION OR DEDUCTION TO BID ITEM #14 TO USE GRADED AND SCREENED EXISTING ON-SITE TOPSOIL IN LIEU OF IMPORTED TOPSOIL	6,000	CY		
ALTERNATE BID ITEM #4					
150	ADDITION OR DEDUCTION TO BID ITEM #1 TO GRIND CLEARING DEBRIS AND STOCKPILE IN LIEU OF DISPOSAL OF MATERIAL OFF-SITE	1	LS		
UNIT PRICES					
151	BRIDGE OVER UNSUITABLE SOIL MATERIAL W/SCDOT TYPE B4 BIAXIAL GEOGRID MATERIAL AND GRADED AGGREGATE BASE COURSE (GAB) 12 IN. UNIFORM, INSTALLED, COMPLETE	----	SY		
152	UNSUITABLE SOIL STABILIZATION W/40 LBS/SY OF LIME OR SOIL CEMENT MIXED TO DEPTH OF 12 INCHES, COMPLETE	----	SY		

Submitted by:

Contractor

Mailing Address

Signature of Authorized Representative

City, State and Zip Code

Title

Telephone Number

Contractors License Number

Email Address

BID ITEM DESCRIPTIONS

The unit price is an amount proposed by bidders and stated on the bid form as a price per unit of measurement for materials or services that will be added to or deducted from the contract sum. A change order will be used in the event the estimated quantities of work are increased or decreased in order to comply with contract documents or the owner's discretion. These unit prices shall include all necessary materials, overhead, profit, and applicable taxes.

The owner reserves the right to reject the contractor's measurement of work in place that involves use of established unit prices and has the right to have the work measured by a surveyor acceptable to the contractor at the owner's expense.

The items listed in the "bid schedule" are specifically described in this section. Estimated quantities may vary. Materials and methods for other unit prices are described elsewhere in these specifications.

Item No. 1 – Clearing and Grubbing

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all costs associated with clearing and grubbing the limits of disturbance. The cost shall include removal of the clearing debris and disposal at an approved site.

Item No. 2, 3, 4, 5, and 6 – Remove and Dispose of Existing Site Features

These items will be measured for payment on a lump sum (LS) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to remove and dispose off-site asphalt and gravel driveways, utility and storm drainage lines and structures, etc. as shown in the plans.

Item No. 7 – Remove and Provide Existing Site Features to Owner

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to remove and provide the items listed to the Owner for re-use.

Item No. 8 – Site Grading

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to grade the site. This is to include stripping, stockpiling, and re-spreading of topsoil; and provision of required structural fill from off-site, if required.

Item No. 8A – Borrow Fill Material

This item will be measured for payment on the basis of cubic yards (CY) for suitable borrow fill as defined in the specifications and identified in the plans.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to import suitable borrow fill material to the site from off-site. Do not perform any work until material to be provided has been classified and approved by the Owner's Geotechnical Representative.

Item No. 9 – Dewatering Channels

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 10 – Unsuitable Soil Material Removed from Site

This item will be measured for payment on the basis of cubic yards (CY) of unsuitable material.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to remove unsuitable material as defined in the specifications from site and replacement with suitable backfill material from off-site. Do not perform work until material to be removed and off-site replacement material has been classified and measured by the Owner's Geotechnical Representative.

Item No. 11 – Mass Rock Removed from Site

This item will be measured for payment on the basis of cubic yards (CY) of mass rock excavated.

Rock excavation includes removal and disposal of materials and obstructions encountered that cannot be excavated with a late-model track-mounted loader with hydraulically operated power ripper, equivalent to Caterpillar Model D-8N, Heavy Duty.

Typical of materials classified as rock are boulders 1 cu. yd. or more in volume, solid rock beds, rock ledges, and conglomerate deposits.

Payment for rock excavation, as defined in the specifications, will be made on the basis of rock cross-sections compiled by the Owner's Geotechnical Representative. Do not perform rock excavation work until material to be excavated has been classified and cross-sectioned and off-site replacement material has been classified by the Owner's Geotechnical Representative. Rock excavation and removal shall include removal and disposal of rock off-site and replacement with suitable backfill material from off-site.

Item No. 12 – Unsuitable Soil Trench Material Excavation and Removal

This item will be measured for payment on the basis of cubic yards (CY) of unsuitable trench material.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to remove and replace unsuitable trench material as defined in the specifications with suitable backfill material from off-site. Do not perform work until material to be excavated and off-site replacement material has been classified and measured by the Owner's Geotechnical Representative.

Item No. 13 – Trench Rock Excavation and Removal

This item will be measured for payment on the basis of cubic yards (CY) of rock excavated.

Rock excavation includes removal and disposal of materials and obstructions encountered that cannot be excavated with a late-model track-mounted hydraulic excavator, equivalent to Caterpillar Model N, 235D LC.

Typical of materials classified as rock are boulders 3/4 cu. yd. or more in volume, solid rock beds, rock ledges, and conglomerate deposits.

Payment for rock excavation, as defined in the specification, will be made on the basis of rock cross-sections compiled by the Owner's Geotechnical Representative. Do not perform rock excavation work until material to be excavated has been classified and cross-sectioned and off-site replacement material has been classified by the Owner's Geotechnical Representative. Rock excavation and removal shall include removal and disposal of rock off-site and replacement with suitable backfill material.

Rock Payment lines are limited to the following:

In pipe trenches, 6 inches below invert elevation of pipe and 2 feet wider than inside diameter of pipe, but not less than 3 feet minimum trench width.

Item No. 14 – Topsoil

This item will be measured for payment on the basis of cubic yards (CY) for suitable topsoil as defined in the specifications and identified in the plans.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to import suitable topsoil material to the site from off-site for use in ballfield sprigged areas, plant beds around baseball/softball and soccer complexes, and parking lot islands. Do not perform any work until material to be provided has been classified and approved by the Owner's Geotechnical Representative.

Item No. 15 – Stabilized Construction Entrance

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in the location shown in the plans and in accordance with SCDHEC standards.

Item No. 16 and 17 – Type A and Type B Inlet Protection

These items will be measured for payment on an each (EA) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install these items in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 18 – Type F Inlet Tubes

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install these items in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 19 – Sediment Tubes

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 20 – Silt Fence

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 21 – Silt Fence Rock Outlet

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 22 – Tree Protection Fencing

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install fencing in locations shown in the plans or as directed by the engineer.

Item No. 23 – Diversion Swales

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans and in accordance with SCDHEC standards.

Item No. 24 – Slope Protection Matting

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to complete the installation as shown in the plans or as directed by the engineer.

Item No. 25 and 26 – Grass Lined Channel

These items will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install these items in locations shown in the plans and in accordance with SCDHEC standards.

Item No. 27 – Rip-Rap Lined Channel

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans and in accordance with SCDHEC standards.

Item No. 28 – Temporary Concrete Washout

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 29 – Rock Ditch Checks

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 30 – Skimmer with Riser Sediment Basin

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in the locations shown in the plans and in the plans and in accordance with SCDHEC standards.

Payment for this item shall also include grading of basin, and installation of riser, skimmer, porous baffles and forebay filter berm.

Item No. 31 – Skimmer Type Sediment Basin w/Baffles

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in the locations shown in the plans and in the plans and in accordance with SCDHEC standards.

Payment for this item shall also include grading of basin, and installation of skimmer and porous baffles.

Item No. 32 – Convert Skimmer with Riser Sediment Basin to Riser Type Detention Basin

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to remove skimmer, install the permanent dewatering structure and concrete slab, and remove gravel and rip rap filter berm and porous baffles.

Payment for this item shall also include the re-grading of the detention basin.

Item No. 33 – Pipe Slope Drains

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans or as directed by the engineer in accordance with SCDHEC standards.

Item No. 34 – Design-Build Segmental Block Retaining Wall

This item will be measured for payment on a face footage (FF) basis.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to install segmental block MSE retaining wall with select backfill material from off-site in accordance with the plans. Payment for this item shall also include the concrete flume at the top of retaining wall #1 and testing for the placement of the select backfill at both walls.

Payment for fencing at the top of wall #1 is covered in Bid Item No. 55.

Item No. 35 – Concrete Curb

These items will be measured for payment on the basis of horizontal lineal foot (LF) installed.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install concrete curb in accordance with the plans and details.

Item No. 36 – Curb and Gutter End Tapers

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Item No. 37 – Curb and Gutter Transitions

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Item No. 38 – Drop Curb

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install concrete drop curb in accordance with the plans and details.

Item No. 39 – Concrete Wheel Stops

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Item No. 40 – 5' – 0" Concrete Flume

This item will be measured for payment on the basis of horizontal lineal foot (LF) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Item No. 41 – Roadway Flume with Concrete Splash Pad

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the roadway flume and splash pad in locations shown in the plans and in accordance with the details and specifications.

Item No. 42 – Concrete Sidewalk

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Item No. 43 – Asphalt Pedestrian Trail

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install hot mix asphalt surface course and graded aggregate base course in accordance with the plans, details, and SCDOT Standard Specifications.

Item No. 44 – Brick Pavers

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Payment for this item shall also include concrete base, sand bed, setting brick pavers, and providing owner with extra cube of brick pavers.

Item No. 45 – Graded Aggregate Base Course

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans, details, and SCDOT Standard Specifications.

Item No. 46 and 47 – Hot Mix Asphalt Surface Course

These items will be measured for payment on the basis of square yards (SY) installed.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install these items in accordance with the plans, details, and SCDOT Standard Specifications.

Item No. 48 – Concrete Pavement

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Item No. 49 – Dumpster Pad

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Item No. 50 – Painted and Thermoplastic Pavement Markings

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install all painted pavement markings including site parking space lines, accessible parking space symbol and access lane, crosswalks, and any other site pavement markings and all thermoplastic pavement markings including stop bars, crosswalks, lane lines, and any other pavement markings as identified in the plans in accordance with the plans and details.

Item No. 51 – ADA Ramp with Detectable Warning Surface

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in accordance with the plans and details.

Payment for this item shall also include concrete ramp, wings, and detectable warning surface.

Item No. 52 and 53 – Signs and Posts

These items will be measured for payment on an each (EA) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install signs and posts in accordance with the plans, SCDOT Standard Specifications, and SCDOT Manual on Uniform Traffic Control Devices (MUTCD), Latest Revision.

Item No. 54 – Double Pipe Rail Gate

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the gates in locations shown in the plans and in accordance with the specifications.

Item No. 55 – Black Vinyl Coated Chain Link Fence

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install fencing in locations shown in the plans and in accordance with the specifications.

Payment for this item shall also include yellow poly safety cap for outfield fence, barbed wire for pump station fences, and 6' windscreen on backstop.

Item No. 56 – Black Vinyl Coated Lockable Swing Gates

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the gates in locations shown in the plans and in accordance with the specifications.

Payment for this item shall also include barbed wire for pump station gates.

This item is to include both gates when listed as double.

Item No. 57 – Foul Poles

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans.

Item No. 58 – Seeding and Mulching of Disturbed Areas

This item will be measured for payment on a lump sum (LS) basis.

Payment is to be full compensation for providing all materials, equipment, and labor necessary to properly install seed and mulch on all disturbed areas in accordance with the plans and specifications.

Item No. 59 and 60 – Sod and Athletic Field Sprigging

These items will be measured for payment on the basis of square yards (SY) installed.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install sod or sprigging on all areas designated in the landscape plans and in accordance with the specifications.

Item No. 61 – Baseball/Softball Infield Material

This item will be measured for payment on the basis of cubic yards (CY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the infield material in accordance with the plans, details, and specifications.

Item No. 62 – Fine Crushed Brick Warning Track

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the warning track in accordance with the plans, details, and specifications.

Item No. 63, 64, 65, 66, and 67 – Catch Basin, Drop Inlet, Manhole, and Drain Basin

These items will be measured for payment on an each (EA) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install these drainage structures in locations shown in the plans and in accordance with plans, details, SCDOT Standard Drawings and Specifications.

Item No. 68 – Channel Drain

This item will be measured for payment on the basis of horizontal linear foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install

channel drain in accordance with the plans and details.

Item No. 69, 71, 72, 75, 76, 79, and 81 – RCP and HDPE Storm Drainage Pipe

These items will be measured for payment on the basis of horizontal lineal foot (LF) installed.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install storm drainage pipe in locations shown in the plans and in accordance with the specifications.

Payment for these items shall also include “O”-ring gaskets where specified.

Item No. 70, 73, 74, 77, 78, and 80 – R.C.P. Beveled End Sections (B.E.S.) and HDPE Flared End Sections (F.E.S.)

These items will be measured for payment on an each (EA) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install these drainage structures in the locations shown in the plans and in accordance with SCDOT Drawings and Specifications.

Item No. 82 – Perforated PVC Subdrain

This item will be measured for payment on the basis of horizontal lineal foot (LF) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the subdrain complete including filter fabric, #57 washed stone, and topsoil/sand mix as top of trench backfill.

Item No. 83 – Hand Placed Rip Rap

This item will be measured for payment on the basis of (TONS) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to place rip rap in accordance with the plans and specifications.

Item No. 84 – Conduit

This item will be measured for payment on the basis of horizontal lineal foot (LF) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install conduit in locations shown in the plans.

Utility conduit shall be 6” Schedule 40 P.V.C.

Item No. 85 and 86 – Sanitary Sewer Manhole

These items will be measured for payment on an each (EA) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install these items in locations shown in the plans and in accordance with the specifications.

Item No. 87 – Service Line Tap to Existing Sanitary Sewer Manhole

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to connect sanitary sewer force main to existing manhole in accordance with the plans and specifications.

Item No. 88, 89, and 90 – Sanitary Sewer Pipe

These items will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install sanitary sewer service pipe in locations shown in the plans and in accordance with the specifications.

Item No. 91 – Sanitary Sewer Cleanouts

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install sanitary sewer service cleanouts in locations shown in the plans and in accordance with the specifications.

Item No. 92 – Sanitary Sewer Force Main

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install sanitary sewer force main pipe in locations shown in the plans and in accordance with the specifications.

Item No. 93 – 5” HDPE (DR9) Sanitary Sewer Force Main Roadway Crossing by Directional Drilling

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install HDPE sanitary sewer force main via directional drilling and including installation of couplings at each end of HDPE to connect back to 4” PVC force main.

Item No. 94, 102, 103, 105, 108, 109, 110, 114, 117, 118, 121, 123, 124, 125, and 127 – PVC, DI, and Galvanized Fittings

Fittings will be measured for payment on an each (EA) basis.

Payment for fittings is to be full compensation for providing all materials, equipment, and labor necessary to properly install tees, plugs, bends, and other fittings complete, irrespective of bury, including blocking and bracing.

Item No. 95 – Air Vacuum Valve and Manhole

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans and in accordance with the specifications.

Item No. 96 – Sanitary Sewer Pump Station

This item will to be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install sanitary sewer duplex submersible pump station complete including wet well, pumps, piping, floats, valve box and vales, electrical panel with electrical connection, stone/screenings yard area, and related work in accordance with plans, details, and specifications.

Item No. 96A – Package Grinder Pump Station

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install sanitary sewer package grinder pump station complete including related work in accordance with plans, details, and specifications.

Item No. 97 – Jumper Connection

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans and in accordance with the specifications.

Item No. 98, 106, 112, 115, 120, and 126 – PVC, DI, and Galvanized Steel Water Main

These items will be measured for payment on the basis of horizontal lineal foot (LF) installed.

Payment for water main construction shall be full compensation for constructing water mains complete, in place, including trenching, dewatering, grading, furnishing and laying pipe, backfilling with suitable material and consolidating backfill, cleaning up construction sites, testing, disinfecting, restoring and stabilizing surfaces, and related work.

Payment for water main construction shall include locating and protecting all existing above and below ground utilities or structures. The work shall include repairing, replacing, or relocating any utilities and appurtenances damaged during the construction operation.

Item No. 99 – Bore and Jack 8” Water Main with 16” Steel Casing

This item will be measured for payment on the basis of horizontal lineal foot (LF) distances.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install 8” D.I. water main via bore and jacking 16” steel casing with spiders in accordance with plans, details, and specifications.

Item No. 100 and 111 – Water Main Stub Out

These items will be measured for payment on an each (EA) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install water main stub out including mechanical joint thrust pipe, concrete collar assembly, corporation stop, and mechanical joint plug-in locations shown in the plans and in accordance with the details and specifications.

Item No. 101, 106, 107, and 122 – Gate Valve with Box

These items will be measured for payment on an each (EA) basis.

Payment for valves is to be full compensation for providing all materials, equipment, and labor necessary to properly install valves complete, irrespective of bury, including blocking, bracing, valve box and cover, valve box adjustment, concrete valve protector ring if valve is installed outside of pavement, cleaning up and restoring the work area and related work.

Item No. 104 – Fire Hydrant Assembly with Blocking

This item will be measured for payment on an each (EA) basis.

Payment for fire hydrants and associated appurtenances will be full compensation for furnishing and properly installing fire hydrants complete, irrespective of bury, including tees, bends, gate valves with boxes, concrete valve protector rings if valves are installed outside of pavement, hydrant legs, standard fire hydrants, drainage stone, blocking, bracing and related work. All fire hydrants shall be installed at a height per the plans.

Item No. 113 – Blow-Off Assembly

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install this item in locations shown in the plans and in accordance with the specifications.

Item No. 116 and 119 – Water Service Connection

These items will be measured for payment on an each (EA) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install these items in locations shown in the plans and in accordance with the specifications.

Item No. 128 – Pump Station Yard Hydrant

This item will be measured for payment on an each (EA) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install yard hydrant in location shown in the plans and in accordance with the specifications.

Item No. 129, 130, 131, 132, and 133 – Landscape Plants

These items are to be measured for payment on an each (EA) basis.

Payment for these items shall be full compensation for all labor, materials, and equipment necessary to install the proposed trees and shrubs in the locations shown in the plans and in accordance with the types and sizes specified in the plans and per the landscape general notes, details, and specifications.

Item No. 134 – Construction Surveying and As-builts

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to stake horizontal and vertical locations of all proposed site, grading, erosion control, drainage, and utility features.

Payment for this item shall also include survey, preparation, and provision of all required record drawing (as-built) information.

Item No. 135 – Mobilization

This item will be measured for payment on a lump sum (LS) basis.

Payment for mobilization shall be full compensation for all costs associated with job start-up, moving men and equipment to and from the project site; and for any other start-up related overhead costs.

Item No. 136 – Traffic Controls

This item will be measured for payment on a lump sum (LS) basis.

Payment for traffic control shall be full compensation for providing traffic control measures (warning signs, barricades, lights, flagmen, pylons, etc.) to ensure the smooth flow of traffic through the construction zone. Payment shall include submitting a traffic control plan complying with the SCDOT Manual on Uniform Traffic Control Devices, Latest Revision.

Item No. 137 – Field Sports Lighting (1,500 HID Metal Halide)

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the 1,500-metal halide sports lighting on the five (5) ball fields in the baseball/softball complex and the three (3) large fields in the soccer complex complete in accordance with plan sheets E1.0 and E2.0, and lighting specifications.

Payment for this item shall also include installation of electrical panel box within mechanical room and electrical services from panel box to all sports lighting fixtures.

Item No. 138 – Irrigation

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the

three (3) irrigation systems complete in accordance with the irrigation plans and specifications.

Item No. 139 – Design/Build Baseball/Softball Complex Restroom/Concessions Building

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and construct the restroom/concessions building complete in the location shown in the plans and in accordance with the performance specifications.

Payment for this item shall also include installation of electrical service from the York Electric Cooperative's transformer to the building and electrical services to the ballfield scoreboards.

Item No. 140 – Design/Build Maintenance Building

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and construct the maintenance building complete in the location shown in the plans and in accordance with the performance specifications.

Item No. 141 – Design/Build Restroom Building

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and construct the restroom building complete in the locations shown in the plans and in accordance with the performance specifications.

Item No. 142 – Design/Build Soccer Complex Restroom Building

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and construct the restroom building complete in the location shown in the plans and in accordance with the performance specifications.

Payment for this item shall also include installation of electrical service from the York Electric Cooperative's transformer to the building.

Item No. 143 – Design/Build Dugouts

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and construct the dugouts complete in the location shown in the plans and in accordance with the performance specifications.

Item No. 144 – Design /Build Monument Sign and Park ID Columns

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and construct the monument sign and park ID columns complete in the park entrance areas shown in the plans and in accordance with the performance specifications.

Item No. 145 – Design/Build Soccer Complex Synthetic Turf Fields and Aprons

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and install synthetic turf soccer fields and aprons between fields in the color green with white and yellow line striping and including shock/drainage pad, finished stone and gravel base courses, geotextile non-woven membrane, flat panel drainage system, and related work.

Item No. 146 – Design /Build Open Play Meadow Stage

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and construct the open play meadow stage complete with stacked stone stairs as shown in the plans and in accordance with the performance specifications.

Item No. 147 – Baseball/Softball Complex Field Sports Lighting (LED) – Alternate Bid Item #1A

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the alternate LED sports lighting on the five (5) ball fields in the baseball/softball complex complete in accordance with plan sheet E1.1 and lighting specifications.

Payment for this item shall also include installation of electrical panel box within mechanical room and electrical services from panel box to all sports lighting fixtures.

Item No. 147A – Soccer Complex Field Sports Lighting (LED) – Alternate Bid Item #1B

This item will be measured for payment on a lump sum (LS) basis.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install the alternate LED sports lighting on the three (3) ball fields in the soccer complex complete in accordance with plan sheet E2.1 and lighting specifications.

Payment for this item shall also include installation of electrical panel box within mechanical room and electrical services from panel box to all sports lighting fixtures.

Item No. 148 – Design/Build Baseball/Softball Complex Synthetic Turf Surface – Alternate Bid Item #2

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all design, labor, materials, and equipment necessary to design and install synthetic turf on ball field infields, including surrounding infield turf areas, to include synthetic turf in a minimum of two (2) different colors (green and brown) with white line striping, shock/drainage pad, finish stone and gravel base courses, geotextile non-woven membrane, flat panel drainage system, and related work.

Payment for this item will replace Bid Item 61, 186 CY of topsoil in Bid Item 14, 1,095 SY of athletic field sprigging in Bid Item 60, and 47 SY of fine crushed brick warning track in Bid Item 62.

Item No. 149 –Deduction to Bid Item #14 to Use Graded and Screened Existing On-Site Topsoil in lieu of Imported Topsoil –Alternate Bid Item #3

This item is to document the addition or deduction to the bid price quoted in Bid Item #14 on the basis of cubic yards (CY). This notes for project savings to use graded and screened on-site topsoil for use in ballfield sprigged areas, plant beds and parking lot islands in lieu of imported topsoil. On-site topsoil must meet criteria within the Soils for Earthwork specification section 310513 and confirmed by Owner's Geotechnical Engineer. Bid item entry shall be a negative value.

Item No. 150 – Deduction to Bid Item #1 to Grind Clearing Debris and Stockpile in lieu of Disposal of Material Off-Site –Alternate Bid Item #4

This item is to document the addition or deduction to the bid price quoted in Bid Item #1 on a lump sum basis. This deduction notes the project savings to the clearing and grubbing of the site by eliminating the need to dispose of the clearing debris at an approved off-site location. Ground mulch may be stockpiled at a future designated location within 5 miles of the site as identified by the Owner.

Item No. 151 – Bridge over Unsuitable Soil Material (Unit Price Only)

This item will be measured for payment on the basis of square yards (SY) installed.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to install SCDOT Type B4 biaxial geogrid material and 12-inch depth of graded aggregate base in accordance with SCDOT standard specification.

Item No. 152 – Unsuitable Soil Stabilization w/40 Lbs/SY of Lime or Soil Cement Mixed to Depth of 12-Inches (Unit Price Only)

This item will be measured for payment on the basis of square yards (SY) of unsuitable soil stabilized.

Payment for this item shall be full compensation for all labor, materials, and equipment necessary to stabilize the top 12 inches of unsuitable soil material with 40 lbs.sy of either lime or soil cement, as determined by Contractor's geotechnical lab.

DESIGN/BUILD PERFORMANCE SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Baseball/Softball Complex Restroom/Concession Building.
2. Maintenance Building.
3. Open Play Meadow Restroom Building.
4. Soccer Complex Restroom Building.
5. Baseball/Softball Complex Dugouts.
6. Park Entrance Monument Sign and Park ID Columns.
7. Open Play Meadow Stage.
8. Synthetic Turf Athletic Fields.

1.2 DESIGN/BUILD SERVICES

A. Qualified design firm/partnership to provide the following services:

1. Design and Construction documentation.
2. Design Coordination with Owner.
3. Cost Analysis.
4. Design Specifications.
5. Construction Administration.

PART 2 - PERFORMANCE SPECIFICATION

2.1 BASEBALL/SOFTBALL COMPLEX RESTROOM/CONCESSION BUILDING

A. Building size:

1. 30' x 30' outside dimension.
2. 900 SF.
3. 9' ceiling.

B. Interior Description:

1. Public restrooms (male and female):
 - a. Lavatory (sensor activated valves): 1 male, 1 female.
 - b. Urinal (flush valve): 2 male.
 - c. Water closet (flush valve): 2 male, 4 female.
 - d. Cold water to be supplied only.
 - e. ADA accessible.
 - f. Standard metal partitions and doors, painted.

- g. Paper towel and toilet paper dispensers will be provided and installed by Owner.
 - h. Ventilated w/occupancy sensor operated exhaust fan (1 per restroom).
 - i. Floor drains (1 per restroom) connected to sanitary sewer plumbing.
 - j. GFCI electrical outlet (1 per restroom).
 - k. 4 LF LED light fixtures, vandal resistant, hung on wet wall above fixture units and stalls, with occupancy sensors. (2 minimum)
 - l. Polyurethane waterproof baseboard molding.
2. Concession area:
- a. Kitchen sink (private). Hot and cold water to be supplied.
 - b. Roll-up lockable serving window.
 - c. Counter space for food display and warming along back wall and under serving window. Cabinets to be provided under counters.
 - d. GFCI electrical outlets for food warming (5 located along back wall above counter).
 - e. Space and GFCI electrical outlets for 2 standard size refrigerators (w/freezers above). No water hook-ups for refrigerators needed. Refrigerators to be provided and installed by Owner.
 - f. Floor drain connected to sanitary sewer plumbing.
3. Mechanical room:
- a. Coordinate space to include riser, field/landscape irrigation control panel and sports lighting electrical panel.
 - b. Equipment storage room.
 - c. GFCI electrical outlets: 2 double outlets.
4. Wood framed with interior wall and ceiling finishes throughout the entire building to be smooth painted moisture/impact resistant drywall except as follows: Fiberglass reinforced panels (FRP) to be placed on plumbing walls behind all fixture units.
5. Finished sealed concrete flooring.
6. Thermostat controlled electric heat (wall mounted), no AC.
7. Insulated.

C. Exterior Description:

- 1. One-story building with exterior finish of stacked stone base and Hardie Plank siding.
- 2. Tyvek wrapped, or approved equal.
- 3. Exterior design to be in character with City's new Police Station at 7705 Tega Cay Drive, Tega Cay. (Refer to attached photo #1)
- 4. Exterior public drinking fountains: 2 (1 ADA accessible) and include bottle filler station.
- 5. Water and sanitary sewer service to be brought to within 5 feet of exterior wall as shown in Drawings. Contractor to design and install plumbing into and within building from that point.
- 6. Exterior hose bib with water key turn-off: 1 ea.

7. Gutters, downspouts w/boots, and underground roof leader system to proposed drainage system.
8. Electrical service to be provided by York Electric Cooperative to and including meter and transformer. Secondary service to building and fencing w/gate around transformer to be installed by contractor.
9. Architectural shingle roofing.
10. Commercial hollow core steel doors.
11. Schlage hardware (owner preferred) with closet/pantry style handle (no locking handle) and keyed deadbolt (keyed on both sides).
12. Men and woman ADA restroom signage (black and white w/brail, installed at required ADA height).

2.2 MAINTENANCE BUILDING

A. Building size:

1. 30' x 50' outside dimension.
2. 1,500 SF.

B. Interior Description:

1. Private unisex restroom:

- a. Lavatory (sensor activated valve): 1.
- b. Water Closet (flush valve): 1.
- c. Cold water to be supplied only.
- d. ADA accessible.
- e. Paper towel and toilet paper dispensers will be provided and installed by Owner.
- f. Ventilated w/occupancy sensor operated exhaust fan to outside.
- g. Floor drain connected to sanitary sewer plumbing.
- h. GFCI electrical outlet: 1.
- i. 4 LF LED light fixture, vandal resistant, hung on wet wall above fixture units, with occupancy sensor: 1.
- j. Polyurethane waterproof baseboard molding.

2. Shop area:

- a. Service sink/Mop basin: 1.
- b. GFCI electrical outlet: 5 double outlets equally placed around interior walls.

3. Mechanical Room:

- a. Coordinate space to include riser, irrigation control panel and 200 AMP service electrical panel.
- b. GFCI electrical outlet: 2 double outlets.

4. Overhead shop lighting.

5. Gable exhaust fans, no HVAC.

6. Insulate interior space. No interior walls or ceiling treatments.

7. Finished sealed concrete flooring.

8. Floor drains (2 ea) connected to sanitary sewer plumbing.

C. Exterior Description:

1. One-story metal prefab building.
2. 2 – 10' x 10' roll-up shop access doors.
3. 1 – Commercial hollow core steel man door.
4. No windows.
5. Water and sanitary sewer service to be brought to within 5 feet of exterior wall as shown in Drawings. Contractor to design and install plumbing into and within building from that point.
6. Exterior hose bib with water key turn-off: 1 ea.
7. Gutters w/downspouts to discharge on surface. Splash pads at down spouts at back of building.
8. Electrical service to be provided by York Electric Cooperative to include transformers, secondary service to building w/meter.
9. Metal roofing.
10. Schlage hardware (owner preferred) with closet/pantry style handle (no locking handle) and keyed deadbolt (keyed on both sides).

2.3 OPEN PLAY MEADOW RESTROOM

A. Building Size:

1. 15' x 30' outside dimension.
2. 450 SF.
3. 9' ceiling.

B. Interior Description:

1. Public Restrooms (male and female):
 - a. Lavatory (sensor activated valve): 1 male, 1 female.
 - b. Urinal (flush valve): 1 male.
 - c. Water closet (flush valve): 1 male, 2 female.
 - d. Cold water to be supplied only.
 - e. ADA accessible.
 - f. Standard metal partitions and doors, painted.
 - g. Paper towel and toilet paper dispensers will be provided and installed by Owner.
 - h. Ventilated w/occupancy sensor operated exhaust fan (1 per restroom).
 - i. Floor drains (1 per restroom) connected to sanitary sewer plumbing.
 - j. GFCI electrical outlet (1 per restroom).
 - k. 4 LF LED light fixtures, vandal resistant, hung on wet wall above fixture units and stalls, with occupancy sensors. (2 minimum)
 - l. Polyurethane waterproof baseboard molding.
2. Wood framed with interior wall and ceiling finishes throughout the entire building to be smooth painted moisture/impact resistant drywall except as follows: Fiberglass reinforced panels (FRP) to be placed on plumbing walls behind all fixture units.

3. Finished sealed concrete flooring.
4. Thermostat controlled electric heat (wall mounted), no AC.
5. Insulated.

C. Exterior Description:

1. One-story building with exterior finish of stacked stone base and Hardie Plank siding.
2. Tyvek wrapped, or approved equal.
3. Exterior design to be in character with City's new Police Station at 7705 Tega Cay Drive, Tega Cay. (Refer to attached photo #1)
4. Water and sanitary sewer service to be brought to within 5 feet of exterior wall as shown in Drawings. Contractor to design and install plumbing into and within building from that point.
5. Exterior hose bib with water key turn-off: 1 ea.
6. Gutters w/downspouts to discharge on surface. Splash pads to be placed at downspouts.
7. Electric service to be provided by York Electric Cooperative to include secondary service to building and meter base.
8. Architectural shingle roofing.
9. Commercial hollow core steel doors.
10. Schlage hardware (owner preferred) with closet/pantry style handle (no locking handle) and keyed deadbolt (keyed on both sides).
11. Men and woman ADA restroom signage (black and white w/brail, installed at required ADA height).

2.4 SOCCER COMPLEX RESTROOM BUILDING

A. Building size:

1. 30' x 40' outside dimension.
2. 1,200 SF.
3. 9' ceiling.

B. Interior Description:

1. Public restrooms (male and female):
 - a. Lavatory (sensor activated valve): 1 male, 1 female.
 - b. Urinal (flush valve): 2 male.
 - c. Water closet (flush valve): 2 male, 4 female.
 - d. Cold water to be supplied only.
 - e. ADA accessible.
 - f. Standard metal partitions and doors, painted.
 - g. Paper towel and toilet paper dispensers will be provided and installed by Owner.
 - h. Ventilated w/occupancy sensor operated exhaust fan (1 per restroom).
 - i. Floor drains (1 per restroom) connected to sanitary sewer plumbing.
 - j. GFCI electrical outlet (1 per restroom).
 - k. 4 LF LED light fixtures, vandal resistant, hung on wet wall above fixture units and stalls, with occupancy sensors. (2 minimum)

- I. Polyurethane waterproof baseboard molding.
2. Mechanical room:
 - a. Coordinate space to include riser, landscape irrigation control panel and sports lighting electrical panel.
3. Equipment storage room.
 - a. Double door access.
 - b. GFCI electrical outlets: 2 double outlets.
4. Wood framed with interior wall and ceiling finishes throughout the entire building to be smooth painted moisture/impact resistant drywall except as follows: Fiberglass reinforced panels (FRP) to be placed on plumbing walls behind all fixture units.
5. Finished sealed concrete flooring.
6. Thermostat controlled electric heat (wall mounted), no AC.
7. Insulated.

C. Exterior Description:

1. One-story building with exterior finish of stacked stone base and Hardie Plank siding.
2. Tyvek wrapped, or approved equal.
3. Exterior design to be in character with City's new Police Station at 7705 Tega Cay Drive, Tega Cay. (Refer to attached photo #1)
4. Exterior public drinking fountains: 2 (1 ADA accessible) and include bottle filler station.
5. Water and sanitary sewer service to be brought to within 5 feet of exterior wall as shown in Drawings. Contractor to design and install plumbing into and within building from that point.
6. Exterior hose bib with water key turn-off: 1 ea.
7. Gutters, downspouts w/boots and underground roof leader system to discharge into water quality basin #4A.
8. Electrical service to be provided by York Electric Cooperative to and including meter and transformer. Secondary service to building and fencing w/gate around transformer to be installed by contractor.
9. Architectural shingle roofing.
10. Commercial hollow core steel doors.
11. Schlage hardware (owner preferred) with closet/pantry style handle (no locking handle) and keyed deadbolt (keyed on both sides).
12. Men and woman ADA restroom signage (black and white w/brail, installed at required ADA height).

2.5 BASEBALL/SOFTBALL COMPLEX DUGOUTS

A. Dugout Size:

1. 10' x 20' outside dimension.
2. 200 SF.

3. 8' height on low side.
4. 2 – dugouts/each for baseball field #1 and softball field #'s 2-4 at locations shown in Drawings.

B. Interior Description:

1. Concrete floor as designated on Drawings.
2. Owner to supply portable benches.

C. Exterior Description:

1. Stacked stone base to match restroom/concession building to height of 3-feet on three sides.
2. Black vinyl-coated chain-link fence from top of stacked stone base to height of 8-feet on three sides. Chain-link fence to be supported with rough cut wood timber frame.
3. Roof to be a color vinyl canopy with venting. Coordinate color with Owner.

2.6 PARK ENTRANCE MONUMENT SIGN AND PARK ID COLUMNS

A. Park Entrance Monument Sign:

1. Stacked stone base to match appearance of Baseball/Softball Complex Restroom/Concession Building to a height of 2-feet.
2. An electronic message board similar to the monument sign at the Tega Cay City Hall at 7725 Tega Cay Drive, Tega Cay will be mounted above the stacked stone base. (Refer to attached photo #2) Electronic message board to display on entrance side only.
3. A wooden park ID sign will be mounted above the electronic message board and will display the park name and logo as shown in attached photo #3.
4. Electronic sign and park ID sign will be mounted to 6" x 8" rough cut timber end posts extending up out of stacked stone base to a height of 2-feet above the park ID sign to support a pergola style top similar to the Living Memorial Garden sign located on Shoreline Parkway near its intersection with Tega Cay Drive. (Refer to attached photo #4)
5. Electric service provided by York Electric Cooperative to include secondary service and meter base mounted on sign. Contractor to provide and connect electronic message board and two ground mounted spotlights to highlight sign at night.

B. Park ID Columns:

1. 3-foot square stack stone column to match appearance of park entrance monument sign base. Two columns to be installed in locations shown on Plan Sheet C3.1, Inset B.
2. Catawba Park logo mounted on side of column facing New Gray Rock Road. (Refer to attached photo #5)
3. Contractor to provide one ground mounted spotlight to highlight logo on columns at night and run secondary service from meter to lights.

2.7 OPEN PLAY MEADOW STAGE

A. Stage Size:

1. 30' outside radius.

B. Exterior Description:

1. Concrete pavement slab on grade stage.
2. Concrete stairs around one half of stage with handrails to meet IBC regulations and added detail 9 on Sheet C3.11.
3. Refer to Spot Elevation sheet C4.5 for grading of stage.
4. Electric service to be provided by York Electric Cooperative to include secondary service and meter base. Contractor to provide 100 AMP service electrical panel with at least one single phase cam lock or 50 AMP California twist lock and four (4) separate 20 AMP circuits. Meter base and electrical panel are to be mounted on a 5' high x 3' wide panel support consisting of two (2) pressure treated 4x4 wood posts, and three (3) pressure treated 2x8 cross supports mounted at 14" O.C. starting from the top of posts.

2.8 SYNTHETIC TURF ATHLETIC FIELDS

A. Synthetic Turf Product

1. Turf product to be rubber and sand infilled 2.0" fiber silt-film/monofilament synthetic grass system on a resilient underlayment system. Below are the minimum standards required.

<u>Turf Requirements:</u>	<u>Description</u>
a. Turf Type	Dual Fiber (Slit Tape/Mono Hybrid)
b. Base Turf Color	As specified on plans
c. Pile Height	2.0"
d. Exposed Fiber Height	Per Manufacturer Specifications
e. Pile Yarn	UV Resistant Polyethylene
f. Slit Tape Fiber	XP Blade + or Equal
g. Mono Fiber Type	Ridged
h. Face/Pile Weight	41 oz per SY Min.
i. Primary Backing	8 oz/SY Min.
j. Primary Backing UV Stabilizer	1000 hours of QUV A testing
k. Secondary Backing	20 oz/SY Min.
l. Total Carpet Weight	69 oz/SY Min.
m. Machine Gauge	Per Manufacturer Specifications
n. Single Needle Tufting	Required > 1/2" stitch gauge to prevent corn rows
o. Tuft Bind	Min. 8lbs without infill, 10lbs with infill
p. Grab Strength	> 200 lbs. avg.
q. Grab Tear Width	> 200 lbs. avg.
r. Pill Burn Test	Pass
s. Shock/Drainage Pad	Brock SP14 or Approved Alternate

t. Infill Mix	Cushion Fall Green Coated SBR (color to match turf) 50% Sand 50%
u. Infill Rubber Granule Comp	Acrylic Coated SBR (Cushion Fall)
v. Infill Rubber Spec. Gravity	1.1 min to 1.2 max
w. Infill Rubber Ash Content	Between 5% and 15%
x. Infill Rubber Sieve Analysis	10 / 20 Mesh (2.0mm – 0.85mm)
y. Infill Sand Granule Shape	Semi-rounded to rounded angularity
z. Infill Sand Sieve Analysis	20 / 40 Mesh (085mm – 0.425mm)
aa. Infill per SF	Min. 5.0 lbs.
bb. Infill Depth	1.5"
cc. Fabric Width	15'-0
dd. Yard Denier Slit Film	5,000 Min.
ee. Yard Denier Mono	10,000 Min.
ff. Breaking Strength	18 lbs./sf
gg. Yarn Melting Point	246 degrees

2. All vendors must submit a turf spec sheet prior to final approval after bid.
3. The Secondary Backing of high-grade polyurethane shall be applied to the Primary Backing. The turf bind shall be a minimum average of 8 lbs. without infill and 10 lbs. with infill.
4. Turf products with permeable backing do not require perforations.
5. All perforations shall be unobstructed.
6. Turf products with a coated or non-drain thru backing must include perforations in the backing.
7. All turf carpet and infill material shall be provided by a single source and documented accordingly.
8. All inlaid lines will be tufted in the factory to the extent practical. All widths of lines per NFHS rules.
9. All seams shall be flat, tight, and permanent with no separation or fraying.
10. Carpet rolls shall be 15-foot widths.
11. The finished surface shall function as a grass field with similar natural playing grass field characteristics.
12. The use of all conventional athletic shoes shall be allowed and identified in the warranty specifications.
13. All components and their installation method shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified should be able to withstand full climatic exposure in all climates, be resistant to insect infestation, rot, fungus, mildew, ultraviolet light and heat degradation, and shall have the basic characteristics of flow-through drainage, allowing free movement of surface runoff through the synthetic turf fabric where such water may flow to the existing base and into the field drainage system.
14. The finished playing surface shall appear as mowed grass with no irregularities and shall afford excellent traction for conventional athletic shoes of all types. The finished surface shall resist abrasion and cutting from normal use.
15. Sew or glue seam turf as recommended by the synthetic turf manufacturer.

B. Infill (Sand and Acrylic Coated Cushion Fall (SBR))

1. Infill should be a combination of 50% SBR **Cushion Fall Rubber** (color to match turf) and 50% Sand.

2. Cushion Fall Sport infill material is comprised of 100% color-coated and encapsulated styrene butadiene rubber (SBR) rubber (ambiently processed) to be used exclusively or in combination with sand.
3. The crumb rubber shall have a specific gravity range from 1.1 minimum to 1.2 maximum as determined by ASTM D 297 (including any modification made by ASTM in the future).
4. The crumb rubber shall have an ash content of between 5 and 15% as determined by ASTM D 297 (including any modifications made by ASTM in the future).
5. The crumb rubber shall not contain more than .01% (of the total weight of crumb rubber) liberated fiber (no more than 0.6 lbs. per ton) tested per ASTM D 5603. The liberated fiber remaining in the CRI shall be free flowing and not agglomerated into clumps of fiber as received at the job site.
6. The infill materials shall conform to the synthetic turf vendor's standard specifications and warranty.
7. All sand infill to have clean rounded particles and meet manufacturer's requirements.
8. All infill materials must be approved as valid infills for each turf's manufacturer.
9. Any proposed alternates must be submitted prior to bid for review.

C. Shock Drainage Pad/Resilient Underlayment Pad

1. Description: Resilient Expanded Polypropylene Shock Pad Material.
2. Product format: Interlocking panels

Size: approximately 67.25 x 47.5 inches (1708 x 1207 mm) overall dimensions
 Area: Net coverage per panel 21.0 ft² (1.95 m²)
 Thickness: 0.55" (14mm) ± .08"
 Panel Weight: approximately 3.5 lbs. / panel

3. General Requirements for Underlayment System: An impact energy absorbing sub-base drainage system designed specifically for use with synthetic turf is required. The specified material must have physical, drainage and performance properties that meet the following requirements:
 - a. Minimum material nominal thickness 14mm – material thickness must be within ± 1.5mm
 - b. Tensile Strength > 45 psi (ASTM D3574-08 Test E)
 - c. Tensile Elongation > 10% (ASTM D3574-08 Test E)
 - d. Compression Strength > 25 psi @ 25% strain (ASTM 3575-08 Test D)
 - e. Linear Thermal Expansion < 0.10 mm /m /° C (ASTM D696)
 - f. Water Absorption ≤ 5% after 24 hrs. (ISO 62:2008 / DIN 53428)
 - g. Water Permeability > 500 in/hr. (ASTM 1551 DIN 18-035, Part 6)
 - h. Head Injury Criterion < 1,000 from > 0.4 m drop height (ASTM F3146-18, Procedure A)
 - i. Gmax < 160 g (ASTM 355-16 Missile A)
 - j. Shock Absorption > 55% (EN 14808:2005 / ASTM F3189-17)
 - k. Vertical Deformation < 4.0 mm (EN 14809:2005)
 - l. Resistance to Chemicals ≤ 2 (ASTM F925)
 - m. Resistance to Bacteria – no growth (ASTM G22)

- n. Resistance to Fungi – no growth (ASTM G21)
 - 4. Install per manufactures recommendations.
- D. Geotextile
- 1. Geotextile Filter Fabric for the Subgrade and Collector Drainage: Non-woven polypropylene geotextile fabric shall be chemically and biologically inert. The subgrade shall be covered in its entirety with a geotextile fabric meeting the following specifications. The geotextile shall be woven from high-tenacity long-chain synthetic polymers composed of at least 95 percent by weight of polyolefins or polyesters and pass a minimum of 135 gpm. They shall form a stable network such that the filaments or yarns retain their dimensional stability relative to each other, including selvages.
 - 2. Geotextile for the subgrade shall have minimums:
 - a. Mass/Weight of 4.5oz oz/yd²
 - b. Flow rate 135 gal/min/ft²
 - c. Permivity 1.8 cm/sec
 - d. Tensile Strength 120 lbs.
 - e. Elongation 50%
 - f. Trapezoid Tear Strength 50lbs
 - g. Apparent Opening Size 70 US Sieve
 - h. UV Resistance 70/500 % hours
 - i. Mass/Weight of 3.2oz oz/yd²
 - j. Flow rate 95 gal/min/ft²
 - k. Permivity 1.3 cm/sec
 - l. Tensile Strength 110 lbs.
 - m. Elongation greater than 50%
 - n. Trapezoid Tear Strength 40lbs
 - o. Apparent Opening Size 50 US Sieve
 - p. Geotextile for the stone base shall be approved by the Shock/Drainage Pad manufacturer to confirm compatibility.
 - 3. Provide geotextile on field subgrade, top of finished stone layer and collector drainage trenches.
 - 4. Secure geotextile to subgrade with staples as recommended by the manufacturer.
- E. Drainage Pipe, Panel Drain and Collector Pipe
- 1. Drainage Pipe: A network of perforated HDPE highway grade drainage pipe (1” x 12” flat panel pipe) shall be installed under an 8” layer of free draining base aggregate. The drainage pipe and perimeter collector lines will be sized and installed per manufacturer recommendations.
 - 2. Perforated pipe shall be double wall high-density polyethylene pipe (HDPE) and shall conform to all associated AASHTO requirements.
 - 3. HDPE Perforated pipe shall be Class 2 and have slotted perforations in accordance with associated AASHTO requirements.

4. Solid wall pipe shall be high-density polyethylene pipe (HDPE) and shall conform to associated AASHTO requirements.
5. Underdrain Panel Drains and Fittings shall be 1"x12" wide flat panel composite pipe.
6. The panel drain core shall have a minimum in-plane flow rate of 170 gpm/ft width at 3600 psf and a hydraulic gradient of 1.0, per ASTM D-4716. The core shall have a minimum compressive strength of 7,500 psf.
7. Corrugated panel drain shall conform to the requirements for Class B Geocomposite as defined in ASTM D7001-06.
8. Provided panel drain complete with all fittings such as bends, reducers, adapters, couplings, collars, and joint materials. All fittings shall be supplied by the same manufacturer as the panel drain.
9. Inline structures only are to be used for collector drains. Risers with fittings are not allowed.
10. Collector basins/cleanouts to be Nyloplast or approved equal with solid grates.

F. Stone Base Course for Outdoor Field

1. Stone Base Courses: The following graduation of stone is a typical and recommended specification. The Synthetic Turf Base Contractor is required to focus on achieving the planarity, porosity and compaction requirements to provide a sound crushed stone base for synthetic turf installation. The free-draining base aggregate base layer shall consist of a consistent depth of open graded material. Base drainage aggregate used must achieve a 95% minimum overall compaction rate.
2. Material shall conform to the AASHTO #57 and #78 classifications. Local or regional stone specifications that meet sieve, compaction and porosity requirements are permitted, but must be approved by the designer prior to construction.
3. The stone base shall conform to the turf vendor's standard specifications subject to the Designer's approval and meet the following requirements using ASTM Method C136: The open graded aggregate material shall conform to the following criteria:

#78 Finish Stone	
Sieve Size	% Passing by Weight
3/4"	100
1/2"	98-100
No. 4	20-45
No. 8	0-15

#57 Free Draining Base Stone	
Sieve Size	% Passing by Weight
1-1/2"	100
3/4"	95-100
1/2"	25-60
No. 4	0-10
No. 8	0-5

4. All stone shall be angular. Rounded or river stone is not acceptable.
5. The stone material shall be AASHTO#57 and #78. Material must be clean.
6. In no instance, shall multiple quarry sources be used within a single playing field area.
7. Stone shall not come from multiple source locations.
8. Permeability for base stone shall be greater than 50" /hr. 3rd Party Testing Required. (ASTM F 1551-6)
9. Permeability for combined stone sections shall be greater than 30" /hr. 3rd Party Testing Required. (ASTM F 1551-6)

G. Pressure Treated Nailer

1. A pressure treated 2" x 4", or equivalent nailing strip shall be used.

H. Field Concrete Curb

1. All new concrete field curbs shall be 12" x 15" minimum.
2. Anchor attachments shall be approved by the manufacture for concrete setting.
3. Concrete curbing shall have appropriate control and construction joints installed per specifications.
4. Concrete shall be 3600 PSI minimum.
5. Field curb shall be designed to contain all infill within the curb line.

END OF SECTION A-2



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5