

DANNY CLEMENS, DIRECTOR

TRACY PARSLEY, MAINTENANCE SUPERVISOR THOMAS STOKES, CUSTODIAL SUPERVISOR GEORGE BROCK, ENERGY MANAGER

DEPARTMENT OF FACILITIES

MEMO TO:

Dr. Jesse Bacon, Superintendent

FROM:

Danny Clemens, Director of Facilities

Date:

August 19, 2024

RE:

BEHS Fine Arts - Change Order 11 -Added Parking Lot and Softball Field

Demolition DC

It was recommended by the Design Team and confirmed by BCPS Leadership that work to construct a new 191 car parking lot and underground storm detention system be shifted to the Bullitt East Fine Arts Contract held by EH Construction. This is recommended due to the parking lot's location above the geothermal field that EH is constructing. Work also includes the demolition of the existing Softball Field. Originally, it was assumed this work would be held by the Phase II Athletics Contractor, however, the parking lot design and construction allowed for this work to be shifted to the BEHS Fine Arts contract which shifted the responsibility of all the work in the area to one contractor. This is a better outcome for the project and Owner in case any work needs to be corrected during construction. EH Construction provided two change order requests for this work, one shows costs based on Contract Unit Prices, the other shows the Bid Cost that can be extended by the Construction team. The cost difference between these two Change Order Requests is \$622,400.48.

I recommend approval of this request.

OUR MISSION IS TO INSPIRE AND EQUIP OUR STUDENTS TO SUCCEED IN LIFE BULLITT COUNTY PUBLIC SCHOOLS IS AN EQUAL EDUCATION AND EMPLOYMENT INSTITUTION

I recommend approval of this request.

Attached paperwork is listed below with action items noted for each:

- <u>AIA G701 BEHS Fine Arts-CO #11</u> Added Parking Lot and Softball Field Demolition for Board Signature
- <u>BEHS-Fine Arts-COR #16-RFP-13-Parking Lot & Storm Revisions</u> (BID COST)- No action for Board Reference.
- <u>BEHS-Fine Arts-COR #16-RFP-13-Parking Lot & Storm Revisions</u> (UNIT PRICES) No Action for Board Reference.
 - Please note, this COR is showing the cost if Contract Unit Prices were utilized.
 EH/Trademark have extended a Bid Cost for this work per the "Bid Cost" COR listed above resulting in a \$622,400.48 reduction in cost for this Work.
- <u>BEHS FA RFP 13</u> Parking Lot and Storm Revisions (Issued 6-5-2024) No Action for Board Reference.



Change Order

PROJECT: (Name and address) Bullitt East High School Fine Arts Addition

11450 KY-44, Mt Washington, KY 40047

OWNER: (Name and address) Bullitt County Public Schools Board of Education 1040 Hwy 44 East Shepherdsville, KY 40165

CONTRACT INFORMATION:

Contract For: General Construction

Date: December 18, 2023

ARCHITECT: (Name and address) Studio Kremer Architects, Inc.

1231 S. Shelby Street Louisville, KY 40203

CHANGE ORDER INFORMATION:

Change Order Number: 011

Date: August 12, 2024

CONTRACTOR: (Name and address)

EH Construction, LLC

1188 E. Bluelick Road Shepherdsville, KY 40165

THE CONTRACT IS CHANGED AS FOLLOWS:

(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

See COR #16 (BID COST) and RFP #13 for scope of Work included in this Change Order.

The original Contract Sum was

The net change by previously authorized Change Orders

The Contract Sum prior to this Change Order was

The Contract Sum will be increased by this Change Order in the amount of

The new Contract Sum including this Change Order will be

The Contract Time will be unchanged by Zero (0) days.

The new date of Substantial Completion will be

25,486,890.80

601,438.62 26,088,329.42

1.720,950.41

27,809,279.83

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the

Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

Studio Kremer Architects, Inc.

ARCHITECT (Firm name)

EH Construction, LLC

Bullitt County Public Schools Board

Education

OWNER (Firm name)

SIGNATURE

Catherine Noble Ward, AlA

PRINTED NAME AND TITLE

SIGNATURE

Mike Rippy, Project Manager

CONTRACTOR (Firm name)

PRINTED NAME AND TITLE

SIGNATURE

Dr. Jesse Bacon, Superintendent

PRINTED NAME AND TITLE

DATE

DATE

DATE

EH

EH CONSTRUCTION, LLC

GENERAL CONTRACTORS • CONSTRUCTION MANAGERS
P.O. BOX 910
BROOKS, KY 40109
(502) 957-7471 • FAX (502) 957-3420

July 17, 2024

Studio Kremer Architects 1231 Shelby Street Louisville, KY 40203

Re: BEHS-Fine Arts Addition/COR #16/RFP-13/Parking Lot and Storm Revisions (BID PRICING)

Trademark Excavating	\$ 1	1,467,162.00
Uesseler Construction (2,500 SF Sidewalk @ 5.80)	\$	14,500.00
15% OH & Profit	\$	222,249.30
1% Payment & Performance Bond	\$	17,039.11

Total Requested Change Order:

8 1.720.950.41

Sincerely,

Mike Rippy Mike Rippy

EH Construction, LLC

TRADEMARK EXCAVATING COMPANY, LLC

151 Atkinson Hill Avenue Bardstown, Kentucky 40004

Office: 502.348.1204 Fax: 502.348.3504

Phillip (c): 502.827.8584 Tyler(c): 502.460.6901

e-mail: tyler@trademarkexcavating.com e-mail: phillip@trademarkexcavating.com

www.trademarkexcavating.com



Bullitt East High School - RFP #13 Mt. Washington, Kentucky July 16, 2024

ITEM	UNIT	TAKE OFF QUANTITY	UNIT PRICE	EXTENS	ION
General Conditions					
Additonal Mobilization	L.S.	1			
Additional Construction Staking	L.S.	1	•		
Vacuum Excavation for Utilities	L.S.	1			
		Genera	al Conditions Total:	\$	41,500.00
Erosion Prevention & Sediment Control	-				
BMP Maintenance	L.S.	1			
	Erosion Prev	vention & Sedir	ment Control Total:	\$	5,200.00
Demolition					
Remove 48" HDPE	L.F.	40			
Remove 48" Headwall	Each	1			
Saw Cut Asphalt	L.F.	160			
Demo Asphalt	C.Y.	10			
Demo Asphalt Stone	C.Y.	19			
Demo Concrete	C.Y.	34			
Demo Concrete DGA	C.Y.	34			
Demo Gravel	C.Y.	6			
Demo Softball Field Sand	C.Y.	250		•	
Demo Softball Field Fence	L.F.	602			
Demo Tall Fence	L.F.	170			
Demo Retaining Wall	L.F.	190			
Demo Press Box	Each	1			
Demo Block Dugouts	Each	2			
Demo Water Spigot	Each	2			
Demo Existing Lights	Each	4			
Clear Trees	L.S.	1			
		•	Demolition Total:	\$	56,082.00
<u>Earthwork</u>				•	00,002.00
Strip Topsoil	C.Y.	1,810	,	•	
Excavation and Embankment On Site	C.Y.	1,575			
Shape and Roll Asphalt Subgrade	S.Y.	6,653			
Shape and Roll Sidewalk Subgrade	S.Y.	488			
Replace Topsoil	C.Y.	924	•		
Stage Excess Topsoil Onsite	C.Y.	886			
Export Fill Material	C.Y.	4,031			
Export Spoils from UGB 1	C.Y.	712			
Stage Excess Fill Onsite	C.Y.	1,333			
Export Soild Rock	C.Y.	1,333 1,226			
Mass Finish Grade	S.Y.	5,574			
Temporary Seed & Straw	S.Y.	5,574 5,574	•		
Chiporaly Occu & Ollaw	3.1.	5,514	Earthwork Total:	· •	287,556.00
			Laitiiwoik 10tai.	. Ф	201,330.00

Ollo Oloriii Work					
#9 Bedding (4" Below & 12" Above)	Tons	45			
#3 Stone to Subgrade	Tons	34			
Export Pipe Spoils	C.Y.	50			
Tie into Existing CB15 & Core New Hole	Each	1			•
Tie into Existing Pipes with 4' Dia CI Type G	Each	1			
Replace 48" Headwall	Each	1 .			
2' x 2' Outlet Structure	Each	1			
4' Diameter Curb Inlet Type G	Each	1			•
3' x 3' Catch Basin	Each	2			
2' x 2' Catch Basin	Each	1			
12" HDPE	L.F.	75			
18" HDPE	L.F.	81			•
Concrete Cap	C.Y.	8			
Soild Rock Removal	C.Y.	126			
Solid Nock Nemoval	0.1.		Storm Work Total:	•	91,894.00
Hadrones and Batantian Basin		Site	Storm work rotal:	Þ	91,094.00
Underground Detention Basin	2.1				
Excavate Basin Stage On Site	C.Y.	1,667			
4' Diameter Storm Manhole	Each	4			
#2 Stone Below (12")	Tons	505			
#2 Stone Around (16")	Tons	290			
#2 Stone Above (12")	Tons	505	,		
#2 Stone (to Subgrade)	Tons	733			
Non-Woven Geotextile Fabric	S.Y.	2,219			
Install UGB	L.S.	1			
Soild Rock Removal	C.Y.	1,100			
	Und	erground Dete	ention Basin Total:	\$	664,298.00
Curb		J			•
12" Vertical Curb	L.F.	620			
Stone under Curb	Tons	95			
ctorio aridor Garb	10110	00	Curb Total:	•	18,244.00
Asphalt			outb rotal.	Ψ	10,244.00
Asphalt Asphalt Mahilimatian	Fasts	0			
Asphalt Mobilization	Each	2			
Asphalt Overlay (1")	Tons	90			
Light Duty Asphalt Surface (1.5")	Tons	551			•
Light Duty Asphalt Base (2.5")	Tons	915			
Light Duty Asphalt DGA (8")	Tons	3,062			
Striping	L.S.	1			
Edge Key	L.S.	1			
		•	Asphalt Total:	\$	302,388.00

Site Storm Work

Project Total \$1,467,162.00

Exclusions
Sanitary Sewer
Domestic Water
Fire Water
Permits, bonding, and fees. Our bonding rate is 3% to be added to the above price.
Allowances.
Compaction or concrete testing.
Footer excavation and/or backfill or foundation drainage.
Stone base under building slab, sidewalk or dumpster pads.
Undercutting/removal of unsuitable or contaminated material or refill of same.
Removal or relocation of existing utilities & light poles.
Utility disconnections. Utility removal will take place when utilities are deemed disconnected by others.
Any work to be performed by a licensed fire protection contractor.
Trademark Excavating is NOT a licensed sprinkler contractor.
Fire protection, telephone, cable, gas, communication or electric work.
Spoils removal for others or cleanup after others.
Fencing, retaining walls, bollards or dumpster enclosures.
Site concrete work
Landscaping, mulch, or sod.
As-builts, or PLS services.
Any signage
Relocation of existing electric lines
Cast Iron Downspout Boots
Addition, removal and/or replacement of stone after initial shape & roll is excluded
Additional shape and roll(s) to previously prepped areas are excluded
Prevailing Wages
Notes
Only the items in the above scope of work are included in this proposal.
Due to current supply chain disruptions, materials are subject to pricing at time of shipment. Material availability and timliness
of shipments cannot be guaranteed. This term supersedes all other contractual provisions.
Pricing subject to change as market value fluctuates
Pricing based off plans RFP 13 by Buzick Construction
Pricing is based off a normal (5) day/40 hour work week
Pricing is considered lump sum - therefore any additions or deletions to this quote should be approved by TME
No Addenda Acknowledged
Any borrow or waste material to be obtained from open areas on site.
TME must be notified of plan revisions as soon as possible to minimize construction delays. TME reserves the right to revise pricing should revisions be made to plans.
TME reserves the right to revise pricing should revisions be made to pros. TME reserves the right to revise pricing if scopes of work are removed this proposal
Utility installation will match existing unless plans indicate other
Not responsible for unmarked utility lines.
All utilities are to be installed to 5' from building.
Signature: Signature:
Disast.
Printed: Printed:
Title: Title:
Date:
Customer T 1 1 E ' C 11C
Customer Trademark Excavating Co. LLC



EH CONSTRUCTION, LLC

GENERAL CONTRACTORS • CONSTRUCTION MANAGERS
P.O. BOX 910
BROOKS, KY 40109
(502) 957-7471 • FAX (502) 957-3420

July 17, 2024

Studio Kremer Architects 1231 Shelby Street Louisville, KY 40203

Re: BEHS-Fine Arts Addition/COR #16/RFP-13/Parking Lot and Storm Revisions (BID PRICING)

Trademark Excavating	\$ 2	,227,506.00
Uesseler Construction (2,500 SF Sidewalk @ 5.80)	\$	14,500.00
15% OH & Profit (Non Unit Price Items)	\$	78,143.40
1% Payment & Performance Bond	\$	23,201.49

Total Requested Change Order: \$ 2,343,350.89

Sincerely,

Mike Rippy

EH Construction, LLC

Mike Rippy

TRADEMARK EXCAVATING COMPANY, LLC

151 Atkinson Hill Avenue Bardstown, Kentucky 40004

Office: 502.348.1204 Fax: 502.348.3504
Phillip (c): 502.827.8584 Tyler(c): 502.460.6901
e-mail: tyler@trademarkexcavating.com
e-mail: phillip@trademarkexcavating.com

www.trademarkexcavating.com



Bullitt East High School - RFP #13 Mt. Washington, Kentucky July 16, 2024

		TAKE OFF		UNIT		•	
ITEM	UNIT	QUANTITY		PRICE		EXTENSION	
Unit Rate Pricing							
Earthwork Products							
Excavation and Embankment On Site	C.Y.	1,575	\$	45.00	\$		70,875.00
Stage Excess Topsoil Onsite	C.Y.	886	\$	45.00	\$		39,870.00
Export Fill Material	C.Y.	4,031	\$	45.00	\$		181,395.00
Export Spoils from UGB 1	C.Y.	712	\$	45.00	\$		32,040.00
Stage Excess Fill Onsite	C.Y.	1,333	\$	45.00	\$		59,985.00
Pipe Spoils	C.Y.	50	\$	45.00	\$		2,250.00
Excavate Basin Stage Onsite	C.Y.	1,667	\$	45.00			75,015.00
Asphalt Products		•					
Asphalt Overlay (1")	S.Y.	1,585	\$	18.00	\$		28,530.00
Light Duty Asphalt Surface (1.5")	S.Y.	6,653	\$	27.00	\$		179,631.00
Light Duty Asphalt Base (2.5")	S.Y.	6,653	\$	45.00	\$		299,385.00
Light Duty Asphalt base (2.5)	5.1.	0,000	Ψ	43.00	Ψ .		200,000.00
DGA Products							
Light Duty Asphalt DGA (8")	Tons	3,062	\$	46.00	\$		140,852.00
Stone under Curb	Tons	95	\$	46.00	\$		4,352.00
Excavate and Haul Off Rock							
Storm	C.Y.	126	\$	495.00	\$		62,370.00
Underground Basin	C.Y.	1,100	\$	495.00	\$		544,500.00
		Unit	Rate P	ricing Total:	\$		1,721,050.00
Additonal Work Non Unit Rate							
General Conditions						•	
Additional Mobilization	L.S.	1					
Additonal Construction Staking	L.S.	1					
Vacuum Excavation for Utilities	L.S.	1					
		Genera	d Cond	litions Total:	\$		41,500.00
Erosion Prevention & Sediment Control		4					
BMP Maintenance	L.S.	1 evention & Sedir		autual Tatuli	•		5,200.00
Demolition	Erosion Pr	evention & Seair	ment C	ontroi i otai:	Þ		5,200.00
Remove 48" HDPE	L.F.	40					
Remove 48" Headwall	Each	1					•
Saw Cut Asphalt	L.F.	160				•	
•	C.Y.	100					
Demo Asphalt Demo Asphalt Stone	C.Y.	19					
Demo Concrete	C.Y.						
		34					
Demo Concrete DGA	C.Y.	34					
Demo Gravel	C.Y.	6					
Demo Softball Field Sand	C.Y.	250					
Demo Softball Field Fence	L.F.	602					
Demo Tall Fence	L.F.	170					•
Demo Retaining Wall	L.F.	190					
Demo Press Box	Each	1					
Demo Block Dugouts	Each	2					
Demo Water Spigot	Each	2					
Demo Existing Lights	Each	4					
Defile Existing Lights		•					
Clear Trees	L.S.	1					

<u>Earthwork</u>						
Strip Topsoil	C.Y.	1,810				
Shape and Roll Asphalt Subgrade	S.Y.	6,653				
Shape and Roll Sidewalk Subgrade	S.Y.	488				
Replace Topsoil	C.Y.	924	·			
Mass Finish Grade	S.Y.	5,574				
Temporary Seed & Straw	S.Y.	5,574				
			Earthwork Total:	\$		70,269.00
Site Storm Work						
#9 Bedding (4" Below & 12" Above)	Tons	45				
#3 Stone to Subgrade	Tons	34				
Tie into Existing CB15 & Core New Hole	Each	1			•	
Tie into Existing Pipes with 4' Dia CI Type G	Each	1	•			
Replace 48" Headwall	Each	1				
2' x 2' Outlet Structure	Each	1				
4' Diameter Curb Inlet Type G	Each	1				
3' x 3' Catch Basin	Each	2				
2' x 2' Catch Basin	Each	1				
12" HDPE	L.F.	75			•	
18" HDPE	L.F.	81				
Concrete Cap	C.Y.	8 .				
		Si	te Storm Work Total:	\$		46,344.00
Underground Detention Basin			-			,
4' Diameter Storm Manhole	Each	4				
#2 Stone Below (12")	Tons	505				
#2 Stone Around (16")	Tons	290				
#2 Stone Above (12")	Tons	505				
#2 Stone (to Subgrade)	Tons	733				_
Non-Woven Geotextile Fabric	S.Y.	2,219				
Install UGB	L.S.	1				
		nderground D	etention Basin Total:	\$		260,961.00
Curb		J		• .		•
12" Vertical Curb	L.F.	620				
TE VOITION ONLY	, .	0_0	Curb Total:	\$		15,500.00
Asphalt				•		
Mobilization	Each	2				
Striping	L.S.	1				
Edge Key	L.S.	1				
Lagortoy	2.0.	'	Asphalt Total:	\$		10,600.00
			. topitale i otali	-	and the second s	,

Project Total 2,227,506.00

\$

Exclusions	 -	
Sanitary Sewer		
Domestic Water		
Fire Water	V to be added to the above rules	
Permits, bonding, and fees. Our bonding rate is 39 Allowances.	% to be added to the above price.	
Rock excavation or blasting.		
Compaction or concrete testing.		
Footer excavation and/or backfill or foundation drain	inage.	
Stone base under building slab, sidewalk or dumps	•	
Undercutting/removal of unsuitable or contaminate	•	
Removal or relocation of existing utilities & light pol	les.	
Utility disconnections. Utility removal will take place	e when utilities are deemed disco	nnected by others.
Any work to be performed by a licensed fire protect		
Trademark Excavating is NOT a licensed sprinkler		
Fire protection, telephone, cable, gas, communicat	tion or electric work.	
Spoils removal for others or cleanup after others.		
Fencing, retaining walls, bollards or dumpster encl Site concrete work other than slip form curb	osures.	
Landscaping, mulch, or sod.		
As-builts, or PLS services.		
Any signage		
Existing Building Demolition		
Relocation of existing electric lines		
Cast Iron Downspout Boots		
Addition, removal and/or replacement of stone after		
Additional shape and roll(s) to previously prepped Prevailing Wages	areas are excluded	
Notes		
Only the items in the above scope of work are inclu-	, ,	sinment Metarial evallability and timeliness
Due to current supply chain disruptions, materials of shipments cannot be guaranteed. This term sup	· · · · ·	· ·
Pricing subject to change as market value fluctuate		TSIONS.
Pricing based off plans RFP 13 by Buzick Constru		
Pricing is based off a normal (5) day/40 hour work		
Pricing is considered lump sum - therefore any add	ditions or deletions to this quote sl	hould be approved by TME
No Addenda Acknowledged	<u>.</u>	
Any borrow or waste material to be obtained from	•	. deleve
TME must be notified of plan revisions as soon as TME reserves the right to revise pricing should rev	·	delays.
TME reserves the right to revise pricing should rev		posal
Utility installation will match existing unless plans in		
Not responsible for unmarked utility lines.		
All utilities are to be installed to 5' from building.		·
· .		
•		
Signature:		Signature:
•		orginature.
Printed:	\.	Printed:
Title:	(*	Title:
Date:		Date:
Customer		Trademark Excavating Co. LLC
		The second secon

REQUEST FOR PROPOSAL

PROJECT:

Bullitt East High School Fine Arts Addition

Mt Washington, KY

REQUEST FOR PROPOSAL NO .:

OWNER:

Bullitt County Public Schools

1040 Highway 44 East Shepherdsville, KY 40165 ARCHITECT:

DATE:

5-Jun-2024 Studio Kremer Architects

1231 S Shelby Street

Louisville, KY 40203

TO CONTRACTOR:

EH Construction

ARCHITECT'S PROJECT NO .:

2022-35

BG# 23-050

Please submit an itemized quotation for changes in the Contract Sum and/or Time incidental to proposed modifications to the Contract Documents described herein.

THIS IS NOT A CHANGE ORDER NOR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED HEREIN

Description:

Provide price proposal for the following:

Item 1:

Expand parking lot over existing softball field and proposed geothermal field, as shown, including extension of sidewalk.

Include two access points to access road. Proposed contours have been provided.

Item 2:

Provide storm system for new parking lot including StormTech detention system. Details of StormTech system are

included in the second attachment to this RFP.

Item 3:

Remove 40 If of 48" storm pipe and place headwall in new location.

Item 4:

Remove portion of cul-de-sac and create entrance to existing access road. Tie in sidewalk and provide crosswalk.

Replace existing catch basin with new curb inlet adjacent to sidewalk. Provide asphalt overlay on access road past

entry to existing running track.

Item 5:

Add new storm box and 12" storm pipe near new access drive adjacent to College and Career Center parking lot.

Item 6:

Provide Credit for Balance of Track Skirt and Fence that is not yet installed around the Track.

Attachments:

C1.2, C1.3, C1.4, C2.2, C3.2, Storm Tech Details (7-Pages)

ISSUED:

5-Jun-2024

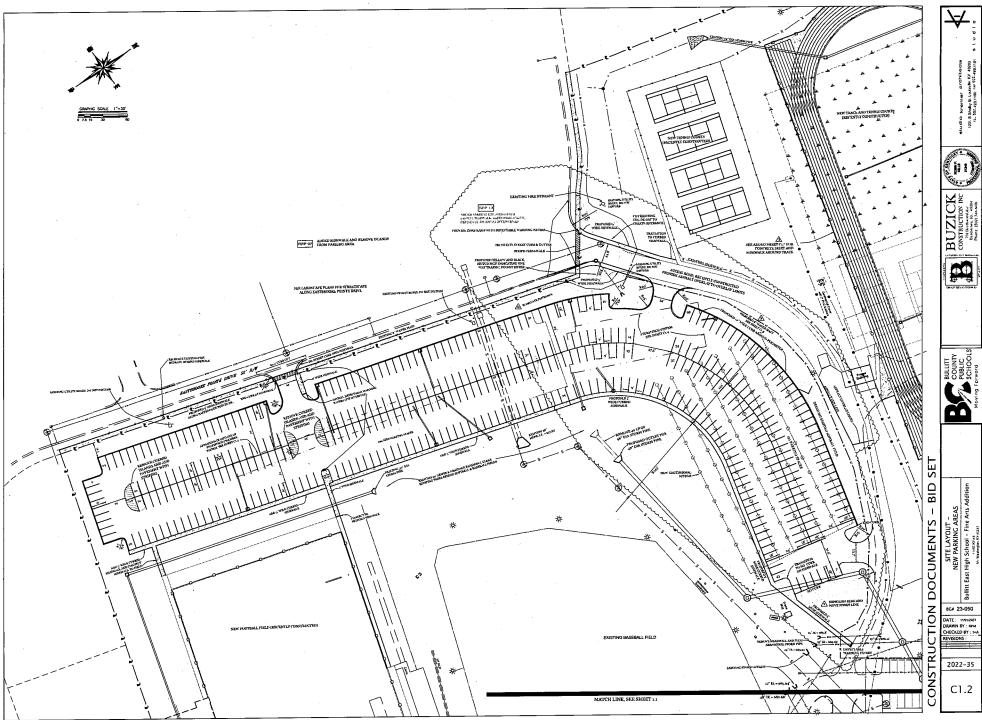
ARCHITECT:

studio kremer architects

CONTRACTOR: EH Construction

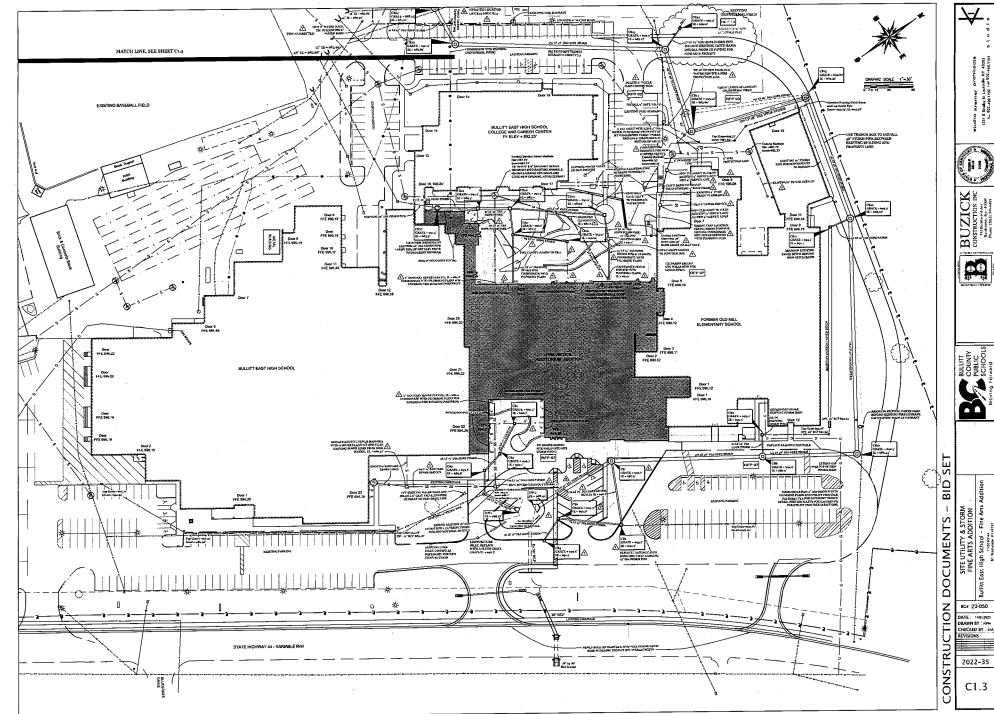
BY:

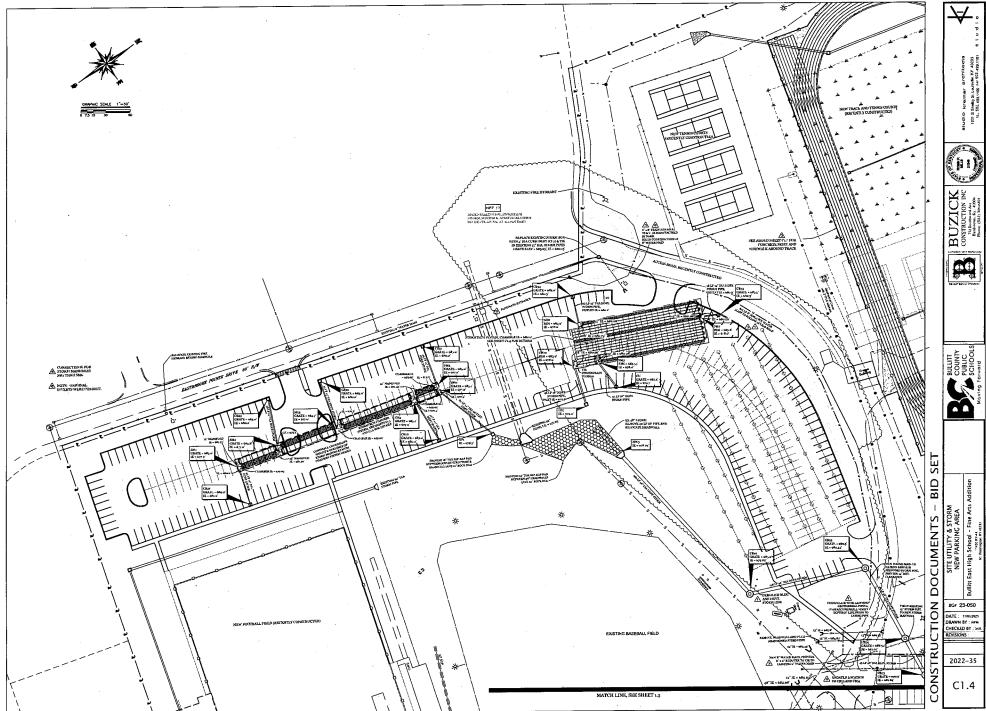
Robin Mills, PE | CMTA

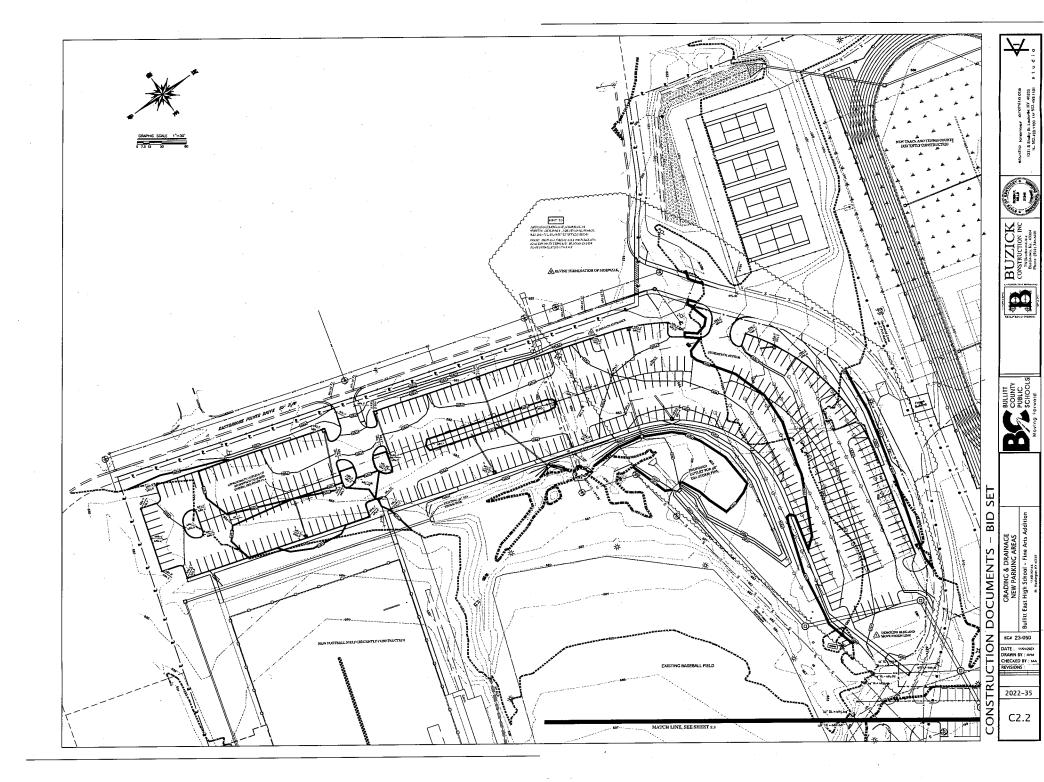


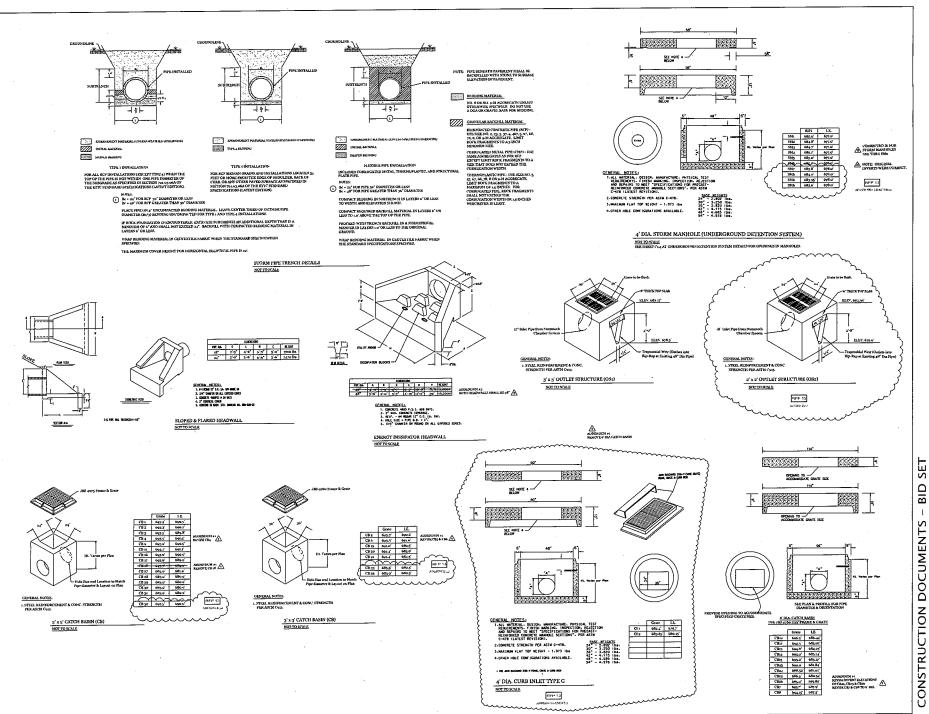












studio kramer architects 1231 Sheby St Louwie KY 40203 12, 502, 499, 1100 1 w 502, 493, 1101

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CONSTRUCTION INC
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Bullitt East High School - Fine Arts STORM DETAILS

8G# 23-050 DATE: 11/81/2023 DRAWN BY: RPM CHECKED BY: MA REVISIONS:

2022-35

C3.2

PRO	JECT INFORMATION
ENGINEERED PRODUCT MANAGER:	AUSTIN BROCK 859-300-9778 AUSTIN.BROCK@ADSPIPE.COM
ADS SALES REP:	BRADLEY WESTERFIELD 502-773-1921 BRADLEY.WESTERFIELD@ADSPIPE.COM
PROJECT NO:	S411567





BULLITT EAST HIGH SCHOOL - BASEBALL & SOFTBALL

MT WASHINGTON, KY

SC-310 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-310.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2"
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

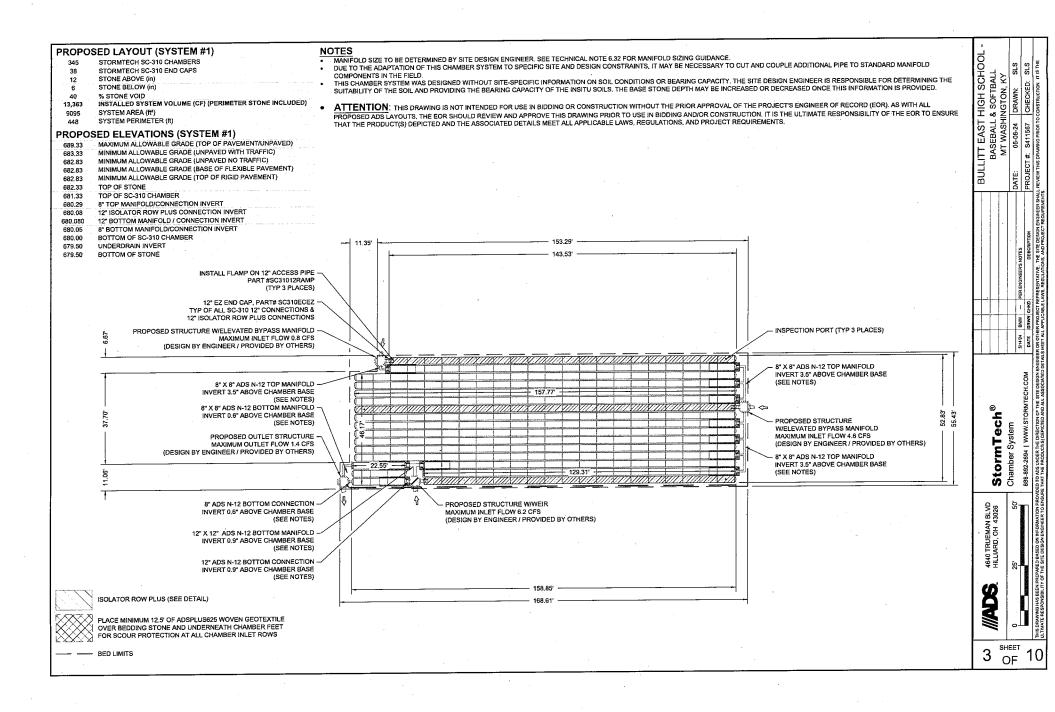
- STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH

CONTACT STORMTECH AT 1-888-892-2594 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

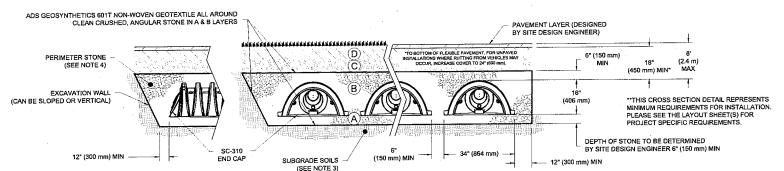


ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	· N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
c	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145¹ A-1, A-2-4, A-3 OR AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kM). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A'LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
Α	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

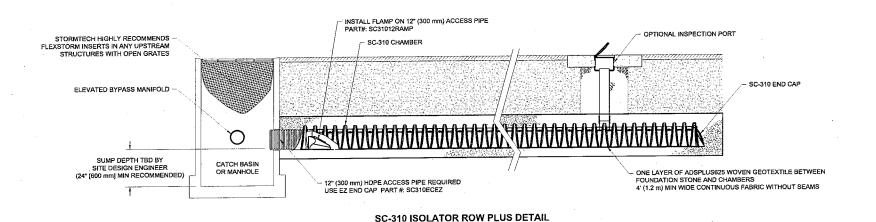
- EASE IN LE.
 THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR, FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
- TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

BULLITT EAST HIGH SCHOOL BASEBALL & SOFTBALL MT WASHINGTON, KY **StormTech[®]** Chamber System OF



INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

A. INSPECTION PORTS (IF PRESENT)

REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN

REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG

LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

B. ALL ISOLATOR PLUS ROWS

REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY

ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE

IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS

A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED

APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN

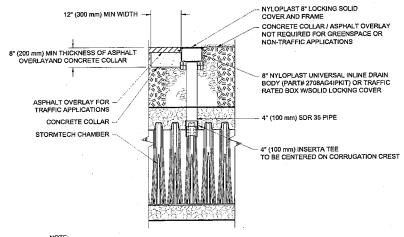
VACUUM STRUCTURE SUMP AS REQUIRED

REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM. STEP 4)

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY



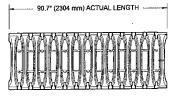
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST

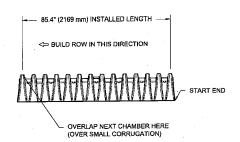
4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)

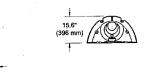
BULLITT EAST HIGH SCHOOL BASEBALL & SOFTBALL MT WASHINGTON, KY **StormTech®** Chamber System 4640 TRUEMAN BLVD HILLIARD, OH 43026

> SHEET OF

SC-310 TECHNICAL SPECIFICATION







(406 mm) (864 mm)

NOMINAL CHAMBER SPECIFICATIONS SIZE (W X H X INSTALLED LENGTH) CHAMBER STORAGE MINIMUM INSTALLED STORAGE*

9.9"

(251 mm)

34.0" X 16.0" X 85.4" 14.7 CUBIC FEET 31.0 CUBIC FEET

(864 mm X 406 mm X 2169 mm)

(0.42 m³) (0.88 m³) (16.8 kg)

*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS





PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T" PRE CORED END CAPS END WITH "PC"

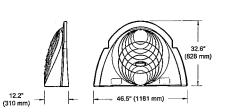
PART#	STUB	Α	В	С	
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	0.07.(044)	5.8" (147 mm)		
SC310EPE06B / SC310EPE06BPC		9.6" (244 mm)		0.5" (13 mm)	
SC310EPE08T / SC310EPE08TPC	8" (200 mm)		11 07 (000)	3.5" (89 mm)	
SC310FPE08B / SC310EPE08BPC		11.9" (302 mm)		0.6" (15 mm)	
SC310FPF10T / SC310EPE10TPC		40 777 /0000>	1.4" (36 mm)		
SC310EPE10B / SC310EPE10BPC	10" (250 mm)	12.7" (323 mm)		0.7" (18 mm)	
SC310ECEZ*	12" (300 mm)	13.5" (343 mm)		0.9" (23 mm)	

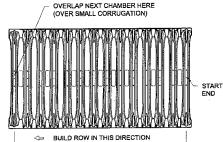
ALL STUBS, EXCEPT FOR THE SC319ECEZ ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC310ECEZ THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

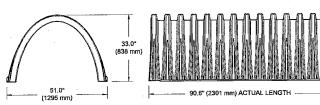
NOTE: ALL DIMENSIONS ARE NOMINAL

SC-800 TECHNICAL SPECIFICATION





85.4" (2169 mm) INSTALLED LENGTH



NOMINAL CHAMBER SPECIFICATIONS SIZE (W X H X INSTALLED LENGTH)

CHAMBER STORAGE MINIMUM INSTALLED STORAGE* WEIGHT

51.0" X 33.0" X 85.4" 50.6 CUBIC FEET 81.0 CUBIC FEET

(1295 mm X 838 mm X 2169 mm) (1.43 m³)

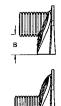
(2.29 m³) (37.1 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART#	STUB	В	С
SC800EPE06TPC	05 (450)	21.4" (544 mm)	
SC800EPE06BPC	6" (150 mm)	_	0.9" (23 mm)
SC800EPE08TPC	OF (000)	19.2" (488 mm)	
SC800EPE08BPC	8" (200 mm)		1.0" (25 mm)
SC800EPE10TPC	401 (050)	17.0" (432 mm)	
SC800EPE10BPC	10" (250 mm)		1.2" (30 mm)
SC800EPE12TPC	401 (000)	14.4" (366 mm)	
SC800EPE12BPC	12" (300 mm)		1.6" (41 mm)
SC800EPE15TPC	457 (075)	11.3" (287 mm) .	
SC800EPE15BPC	15" (375 mm)		1.7" (43 mm)
SC800EPE18TPC	400 (450)	8.0" (203 mm)	
SC800EPE18BPC	18" (450 mm)		2.0" (51 mm)
SC800EPE24BPC	24" (600 mm)	-	2.3" (58 mm)
SC800EPE	NONE	SOLID E	ND CAP

NOTE: ALL DIMENSIONS ARE NOMINAL





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BULLITT EAST HIGH SCHOOL BASEBALL & SOFTBALL

