COUNTY OF WESTCHESTER NEW YORK

DIVISION OF ENGINEERING

ADDENDUM NO. 5 CONTRACT NO. 20-530

Infrastructure Rehabilitation – Phase 2 Playland Park Rye, New York

The attention of the bidders is directed to the following changes, additions, and/or substitutions affecting the above referenced contract.

A. <u>RE: GENERAL CONTRACT INFORMATION</u>

<u>Item 1:</u>	Bidder Questions and Responses
	Attached hereto.

Item 2: Geotechnical Report Attached hereto, for information only. See AD-C-01

B. <u>RE: THE PLANS</u>

<u>Item 3:</u>	Drawing PR-S-07, Sheet 121 of 288, <i>Plaza Restaurant – Structural Foundation Plan.</i> <u>Modify</u> "Foundation Plan" as shown on Addendum Drawing AD-PR-S-01.
<u>Item 4:</u>	Drawing PR-S-14, Sheet 128 of 288, <i>Plaza Restaurant – Sections and Details</i> . Insert Section 1 as shown on Addendum Drawing AD-PR-S-02.
<u>Item 5:</u>	Drawing PR-S-14, Sheet 128 of 288, <i>Plaza Restaurant – Sections and Details</i> . Insert Section 2 as shown on Addendum Drawing AD-PR-S-03.
<u>Item 6:</u>	Drawing PR-S-14, Sheet 128 of 288, <i>Plaza Restaurant – Sections and Details.</i> <u>Insert</u> "TYPICAL SEQUENCE OF CONSTRUCTION" as shown on Addendum Drawing AD-PR-S-04.
<u>Item 7:</u>	Drawing PR-A-61 (Page 108), Door & Hardware Schedule. <u>Modify</u> the Contract drawing as shown on Addendum Drawing AD-A-01, attached.
<u>Item 8:</u>	Drawing BCR-A-61 (Page 249), Door & Window Schedule and Transition Details. <u>Modify</u> the Contract drawing as shown on Addendum Drawing AD-A-02, attached.
<u>Item 9:</u>	Drawing BCR-A-43 (Page 245), Interior Elevations. <u>Insert</u> the Contract drawing as shown on Addendum Drawing AD-A-03, attached.

ADDENDUM NO. 3, *cont'd* CONTRACT NO. 20-530 Infrastructure Rehabilitation – Phase 2

C. <u>RE: THE SPECIFICATIONS</u>

Item 10: Insert Section 06 83 16 – Fiberglass Reinforced Paneling.

All provisions of the contract not affected by the foregoing shall remain in full force and effect.

COUNTY OF WESTCHESTER DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

By: Hugh J. Greechan Jr., P.E. Commissioner

Dated: July 19, 2021 WHITE PLAINS, NEW YORK

BIDDERS QUESTIONS AND RESPONSES

WESTCHESTER COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING

CONTRACT NO. 20-530 INFRASTRUCTURE REHABILITATION – PHASE 2 Playland Park Rye, New York

The attention of all bidders is directed to the following responses to questions with regards to the above referenced Contract. These responses are presented for information purposes only and are not intended to modify the Contract. All provisions of the Contract remain in full force and effect. Where modification is required, the bidder's attention is directed to the addenda.

#	QUESTION	RESPONSE
	<u>STRUCTURE</u>	
1	In reviewing the structural steel for the canopy work the contract drawings leave up to the contractor to design the moment connections. Any moment connection that seems appropriate for this application will require plates and bolts on the bottom flange of the W10x33's. This will now influence the 2x6 runner/framing. Can you provide details to address this?	The 2"x6" runners and framing are meant to be anchor points for the decorative enclosure shown on the Architectural drawings, and are not structural elements. Runners and framing may be slightly modified/planed where plates and bolts are necessary for the moment connections.
2	Notes on drawing COL-S-18 and COL- S-19 call for all steel to be Hot dipped Galvanized, please confirm that this note applies to rebar, piles, structural steel and misc. steel.	Hot dipped galvanized is applicable to structural steel above grade only. Hot dipped galvanized steel is not required for reinforcing steel and piles.

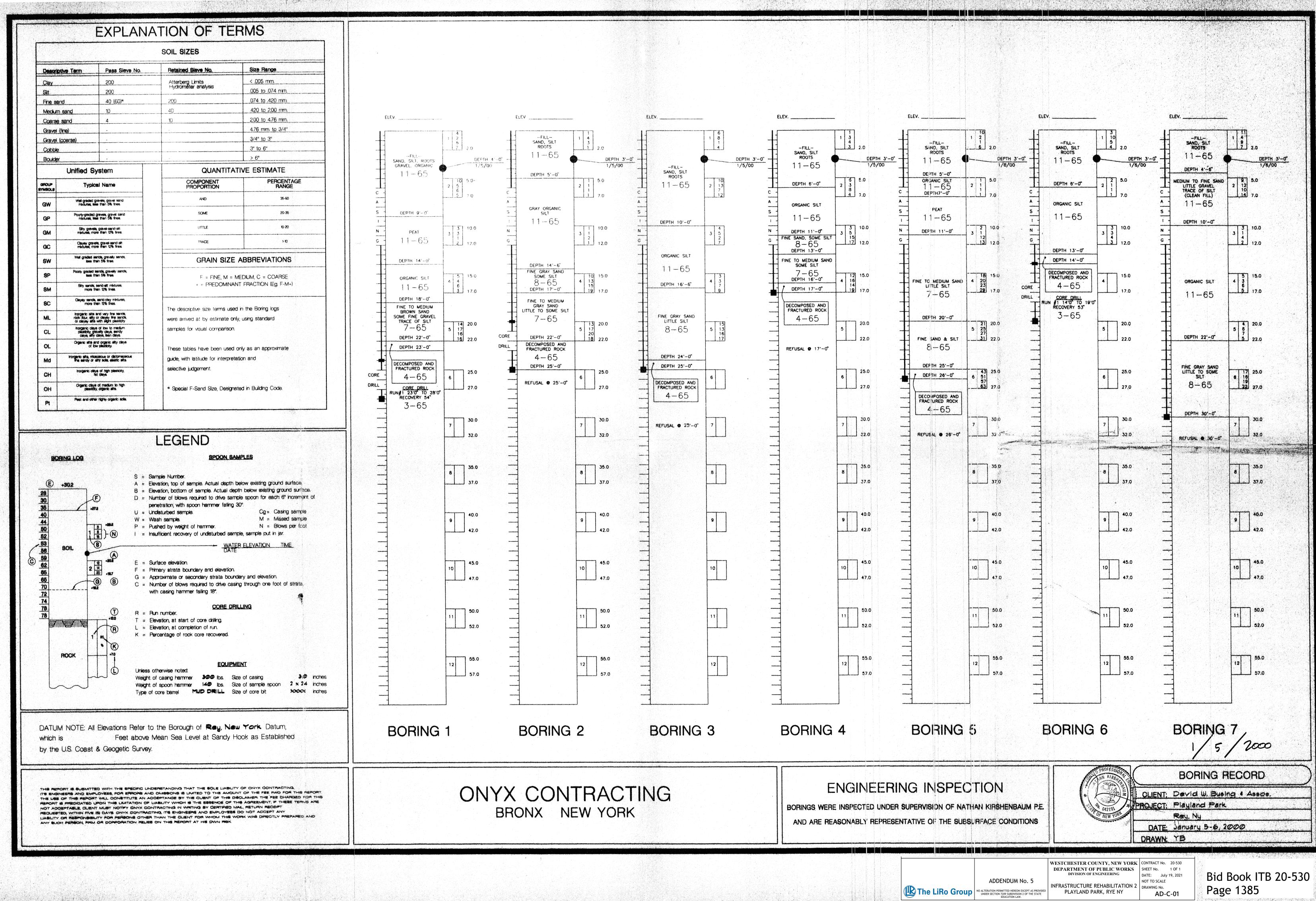
BIDDERS QUESTIONS AND RESPONSES

CONTRACT NO. 20-530 – Infrastructure Rehabilitation- Phase 2

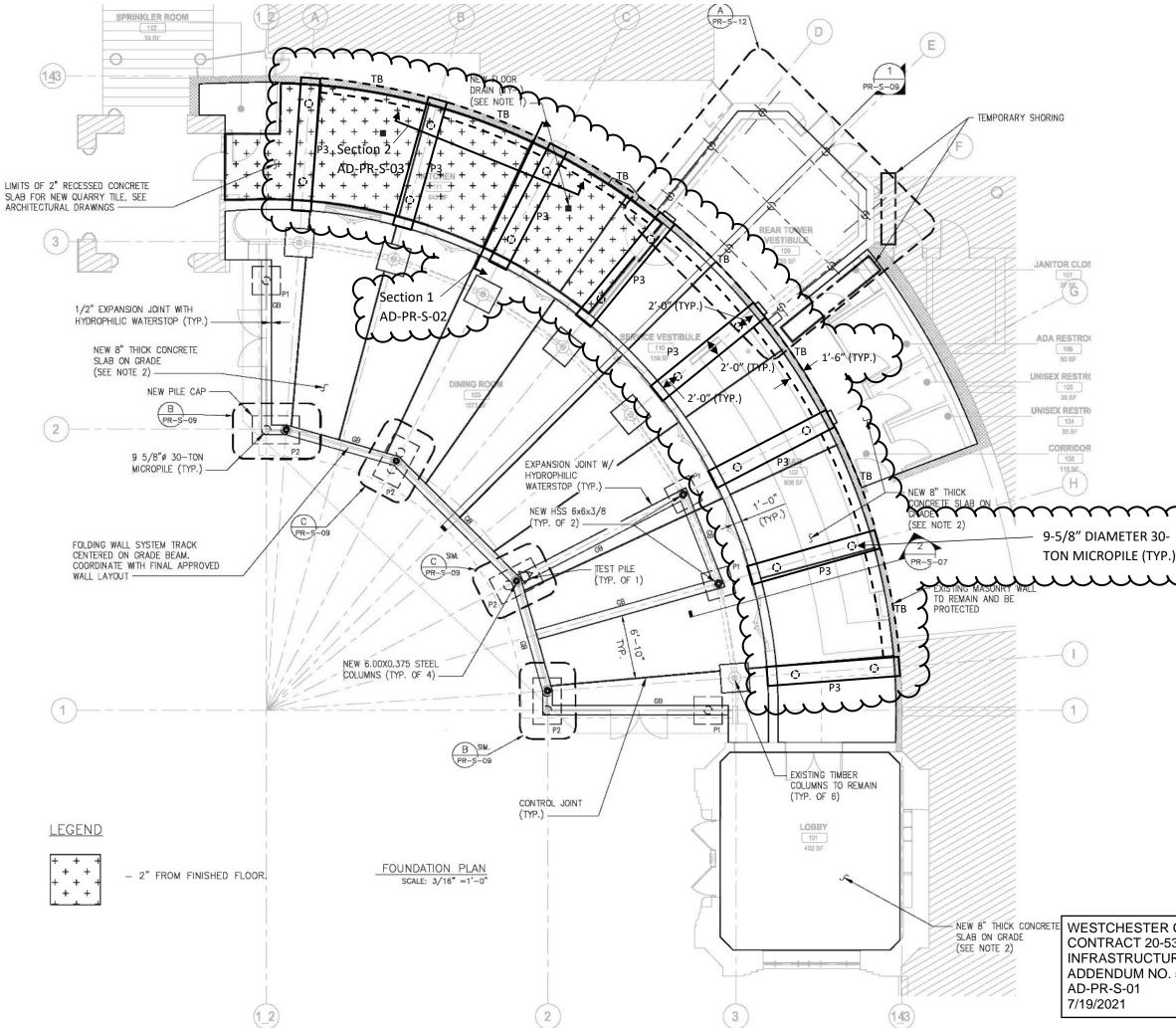
3	The micropile specs and drawings call out the use of 9.625" casing with a 10" rock socket to reach 60-ton ultimate and 30-ton allowable compression. With the information provide a smaller casing and rock socket diameter could be utilized to reach the 60-ton ultimate and 30-ton allowable compression criteria. Would a smaller diameter micropile be approved by the engineer?	All micropiles shall have the minimum diameter as indicated in the Contract Documents.
	CIVIL	
1	Page 1,385 of the specifications is not readable. When we zoom in the information is distorted. Can you provide a better version?	See attached AD-C-01
	<u>ARCHITECTURAL</u>	
1	What locations will we be able to stockpile large amounts of material?	There will not be areas for stockpiling large amounts of material. Materials should be brought to the site when they can be installed in a timely manner.
2	Please note that on sheet number COL- A-20 detail 6 the flagpole height is shown as 12'-6" meanwhile specification 2.3 of section 10 75 00-2 claims an exposed height of 15'.	All flagpoles in the 20-530 contract shall be 12'-6".
3	Sheet number PR-A-61 door schedule. All the finishes are listed as TBD. Please advise what finishes are required.	See attached AD-A-01
4	Dr. BCR-A-31, Corrugated Glass canopy. Please provide Manufacture/ BOD /detail.	See attached AD-A-03

BIDDERS QUESTIONS AND RESPONSES CONTRACT NO. 20-530 – Infrastructure Rehabilitation- Phase 2 Page **3** of **3**

		ſ
5	None of the tags shown on the Bumper Car Restroom door schedule have been assigned hardware sets. This was not addressed in Addenda #3. Please advise	See attached AD-A-02
6	Drawing PR-A-11, keynote 87 required FRP wall covers and accessories, please provide specifications.	See attached Specification 06 83 16 - Fiberglass Reinforced Paneling
7	Drawing Sheet PR-A-62. Are window Types A1 and A2 to be furnished with Specification Section 085123? Or are these Ornamental Grilles per Section 3/PR-A-54?	Window Types A1 and A2 to adhere to Specification Section 08 51 23 – Steel Windows. See detail 1/PR-A-62
8	Drawing Sheet BCR-A-61. Are window Types W1 and W2 to be furnished with Specification Section 085123?	Window Types W1 and W2 to adhere to Specification Section 08 51 13 – Aluminum Windows
9	Specification Section 085123, Section 2.2, Letter B "Simulated Divided Lite Muntins." Interior and exterior applied muntins are noted to be hot rolled steel. Can they be furnished as aluminum muntins? This is typical to make sure the VHB tape adheres them to the glass	Aluminum muntins may be provided.
10	What type and color of glass should be used for the Plaza Restaurant windows A1& A2? Are the frames angled as shown in the window schedule?	Insulated colored glass panels to be used. Colors to be selected from fabricator availability. Frame angled as depicted.

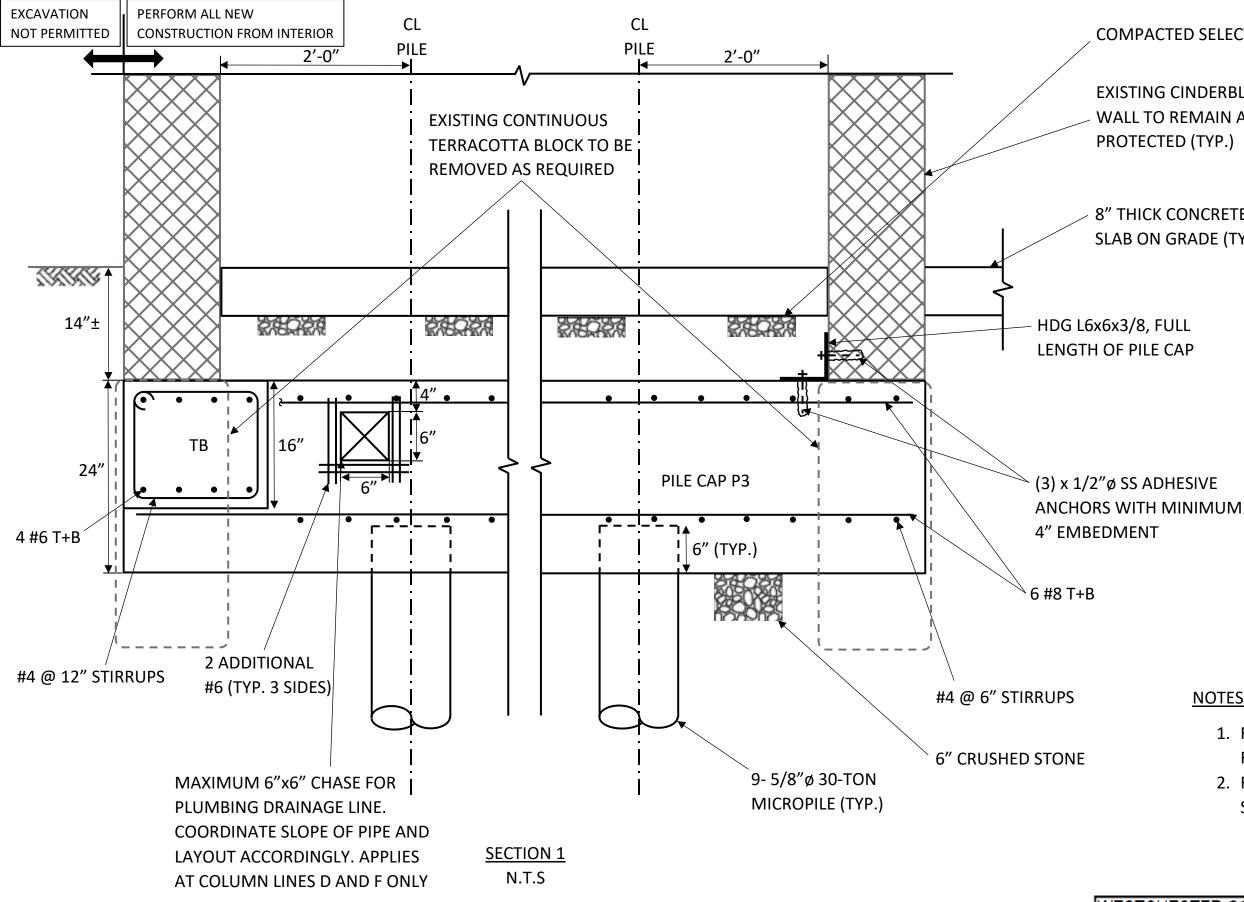


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NEW 8" THICK CONCRETE WESTCHESTER COUNTY DEPARTMENT OF PUBLIC WORKS CONTRACT 20-530 **INFRASTRUCTURE REHABILITATION PHASE 2** ADDENDUM NO. 5



WESTCHESTER COUNTY DEPARTMENT OF PUBLIC WORKS CONTRACT 20-530 INFRASTRUCTURE REHABILITATION PHASE 2 ADDENDUM NO. 5 AD-PR-S-02 7/19/2021

COMPACTED SELECT FILL

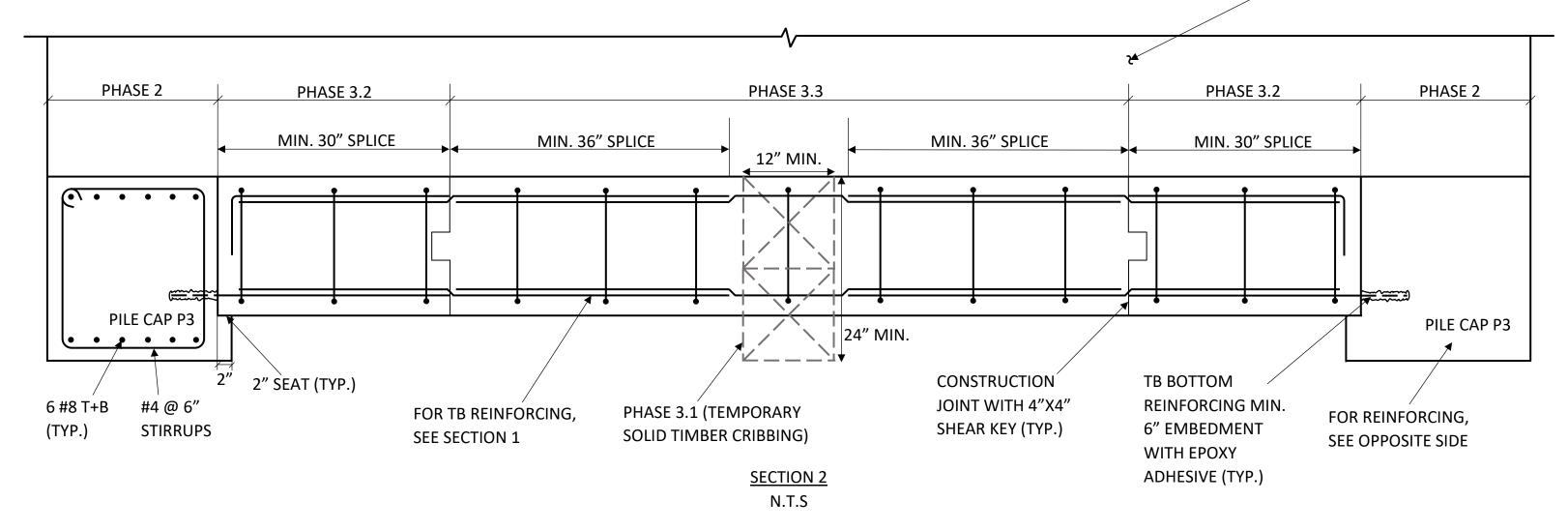
EXISTING CINDERBLOCK WALL TO REMAIN AND BE

8" THICK CONCRETE SLAB ON GRADE (TYP.)

NOTES:

- 1. FOR SEQUENCE OF CONSTRUCTION **REQUIREMENTS, SEE AD-PR-S-04**
- 2. FOR TYPICAL PILE HEAD DETAIL, SEE DRAWING PR-S-16

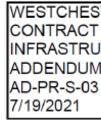




NOTES:

1. FOR SEQUENCE OF

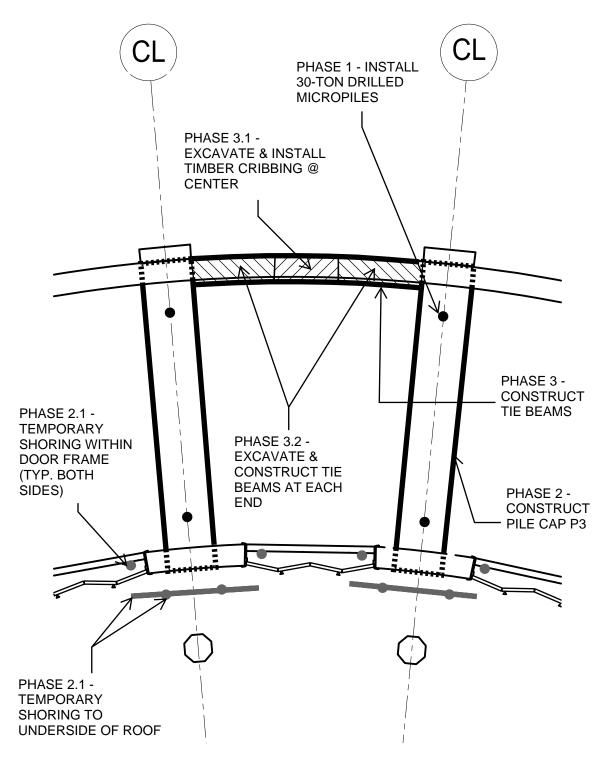
CONSTRUCTION REQUIREMENTS, SEE AD-PR-S-04



EXISTING CINDERBLOCK WALL TO **REMAIN AND BE PROTECTED**



WESTCHESTER COUNTY DEPARTMENT OF PUBLIC WORKS CONTRACT 20-530 INFRASTRUCTURE REHABILITATION PHASE 2 ADDENDUM NO. 5



TYPICAL SEQUENCE OF CONSTRUCTION

CONTRACTOR SHALL ENGAGE THE SERVICES OF A LICENSED SURVEYOR TO RECORD AND MONITOR ELEVATIONS OF THE BOTTOM OF THE EXISTING CINDERBLOCK WALL SLATED TO REMAIN IN THE VICINITY OF EACH PILE CAP P3. SURVEY READINGS SHALL BE RECORDED REGULARLY DURING PILE DRIVING, PILE CAP CONSTRUCTION AND TIE-BEAM CONSTRUCTION.

PHASE 1

1. INSTALL ALL DRILLED MICROPILES ASSOCIATED WITH PILE CAP P3 WITHIN EXISTING INTERIOR SPACE.

SEQUENCE BELOW (PHASE 2 THROUGH 3) SHALL BE REPEATED AT EACH BAY BETWEEN COLUMN LINES. CONTRACTOR MAY PERFORM WORK CONCURRENTLY AT OTHER NON-ADJACENT BAYS.

PHASE 2

1. INSTALL TEMPORARY SHORING AS SHOWN AT INNER WALL.

2. EXCAVATE AND REMOVE EXISTING TERRACOTTA BLOCK BELOW EXISTING CINDERBLOCK WALLS (BOTH INNER AND OUTER WALL) AS REQUIRED FOR NEW PILE CAP P3.

3. CONSTRUCT REINFORCED CONCRETE PILE CAP P3. ALLOW CONCRETE TO CURE MINIMUM FOUR (4) DAYS BEFORE ADVANCING TO PHASE 3.

PHASE 3

1. EXCAVATE AND REMOVE EXISTING TERRACOTTA BLOCK BELOW EXISTING CINDERBLOCK WALL AS REQUIRED FOR INSTALLATION OF TEMPORARY TIMBER CRIBBING AT CENTER OF EXISTING WALL BETWEEN PILE CAPS. INSTALL TEMPORARY TIMBER CRIBBING.

2. EXCAVATE AND REMOVE EXISTING TERRACOTTA BLOCK BELOW EXISTING CINDERBLOCK WALLS AS REQUIRED FOR CONSTRUCTION OF TIE BEAM. CONSTRUCT 2 SEGMENTS OF TIE BEAM AS SHOWN ON SECTION 2 ON AD-PR-S-03. ALLOW CONCRETE TO CURE MINIMUM FOUR (4) DAYS BEFORE ADVANCING TO STEP 3.

3. REMOVE TIMBER CRIBBING FROM PHASE 3.1 AND CONSTRUCT REMAINDER OF TIE BEAM.



WESTCHESTER COUNTY DEPARTMENT OF PUBLIC WORKS CONTRACT 20-530 INFRASTRUCTURE REHABILITATION PHASE 2 ADDENDUM NO. 5 AD-PR-S-04 7/19/2021

Modify:

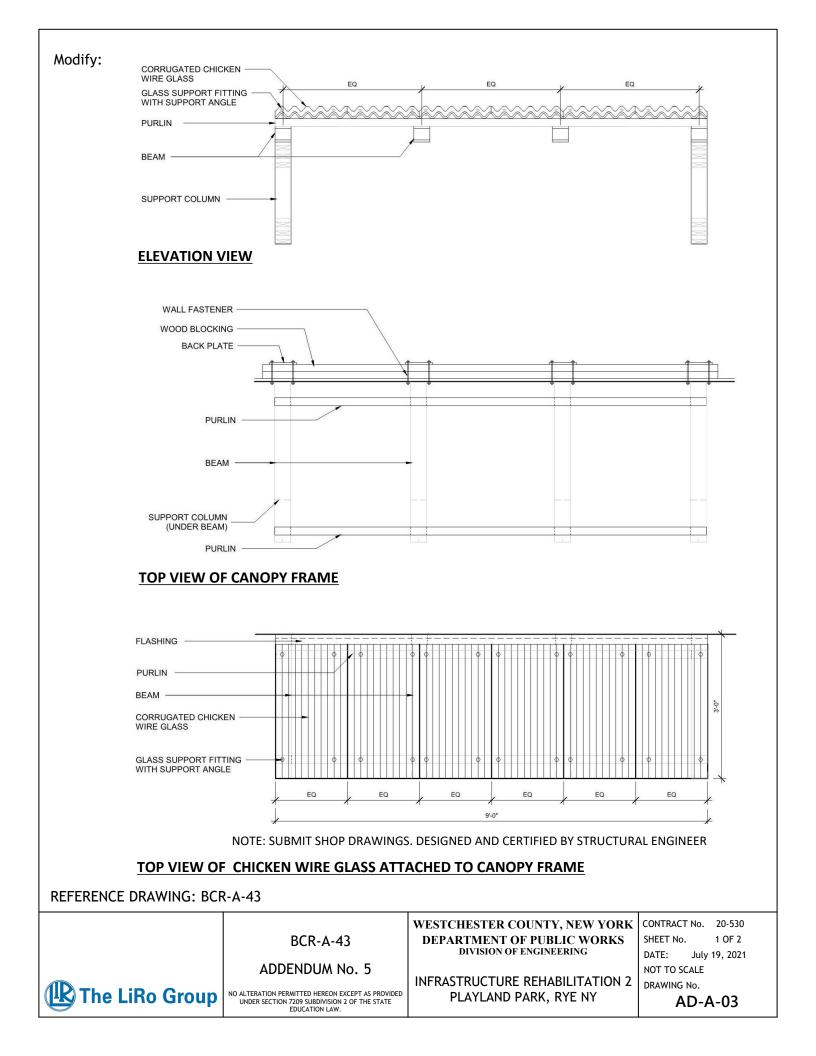
DOOR SCHEDULE													
		DOOR/ TRANSOM DOOR/ TRANSOM FRA								5 D 4145	DOOK SCHEDDEE	<u>.</u>	-
		DOOR/		DOOR	TRANSUM			DUUR/ TRANSUM		FRAME			
		TRANSOM						EXTERIOR/			EXTERIOR/		
Number	Level	TYPE	WIDTH	HEIGHT	THICKNESS	MATERIAL	GLASS	INTERIOR FINISH	FRAME TYPE	MATERIAL	INTERIOR FINISH	HDWR SET	REMARKS
											<u> </u>	\	
1	1ST FLOOR	D	6° - 0°	7' - 6"	0' - 1 3/4"	WOOD	YES	AINTER		wood	PAINTED, TBD	L 5	(2) 3'-0" Wide doors
2	1ST FLOOR	с	6" - 0"	8° • 0"	B' - 2 1/4"	ALUMINUM	YES	FACTORY FINISHED, TBD) 6	ALUMINUM	FACTORY FINISHED, TRD		(2) 3'-0" Wide doors. Refer to Sheet PR-A-67 for details.
3	1ST FLOOR	6	11' - 0"	8' - 1 1/2"	0' - 2 3/4"	ALUMINUM	YES	FACTORY	W Manufacturer	ALUMINIM	FACTORY FINISHED.	SEE REMARKS	Hardware by the door manufacturer. Hurricane resistant aluminum folding glass door system. Refer to Sheet PR-A68 for details.
,		, i	11 . 5	• • • • • • •	0 . 1 0.1	1 COMING		FINISHED, TBD	1 manufactorer	1 and the	TBD		Interest by the bot material edge. Instrument esize a summary gass door system. Here to one of the second
4	1ST FLOOR	н	17' - 0"	8" · 1 1/2"	0' 2 3/4"	ALUMINUM	YES	FACTORY	By Manufacutrer	ALUMINUM	FACTORY FINISHED.	SEE REMARKS	Hardware by the door manufacturer. Hurricane resistant aluminum folding glass door system. Refer to Sheet PR-A58 for details.
							<u> ۲</u>	FINISHED, TBD	γ		TBD	/	
5	1ST FLOOR	G	11' - 0"	8' - 1 1/2"	0' - 2 3/4"	ALUMINUM	YES (FACTORY FINISHED, TBD	B) Manufacturer	ALUMINUM	FACTORY FINISHED, TBD	SE REMARKS	Hardware by the door manufacturer. Hurricane resistant aluminum folding glass door system. Refer to Sheet PR-A58 for details.
6	1ST FLOOR	с	6" - 0"	8' · 0"	0' - 2 1/4"	ALUMINUM	YES	FACTORY	K 6	ALUMINUM	FACTORY FINISHED.	1	(2) 3'-0" Wide doors. Refer to Sheet PR-A-57 for details.
							(FINISHED, TBD		\	TBD	K	
7	1ST FLOOR	1	6" - 0"	8' - 0"	0' - 1 3/4"	WOOD	YES	AINTER	4	WOOD	PAINTED, TBD	SEE REMARKS	Replicated door, transom, & hardware by door fabricator to match historic door and transom in North Admin building. V.I.F. existing openin
8	1ST FLOOR	1	6° · 0"	8° • 0"	0' - 1 3/4"	WOOD	YES	PAINTED	4	WOOD	PAINTED, TBD	SE REMARKS	
9	1ST FLOOR	1	6° - 0"	8. • 0	0' - 1 3/4"	WOOD	YES	PAINTED	4	WOOD		SEE REMARKS	Replicated door, transom, & hardware by door fabricator to match historic door and transom in North Admin building. V.I.F. existing openi
10	1ST FLOOR	1	6' - 0"	8. • 0	D' - 1 3/4"	WOOD	YES	PAINTED	4	WOOD	PAINTED, TBD	SEE REMARKS	Replicated door, transom, & hardware by door fabricator to match historic door and transom in North Admin building. V.I.F. existing openi
11	1ST FLOOR	1	6° · 0"	8' · 0"	0 13/4	WOOD	YES	PAINTED	4	WOOD	PAINTED, TBD	SEE REMARKS	
12	1ST FLOOR	1	6° - 0"	8. • 0	0' - 1 3/4"	WOOD	YES	PAINTED	4	WOOD	PAINTED TBD	SEE REMARKS	
13	1ST FLOOR	1	6' - 0"	8. • 0	D' - 1 3/4"	WOOD	YES	PAINTED	4	WOOD	PAINTED, TBD	SEE REMARKS	Replicated door, transom, & hardware by door fabricator to match historic door and transom in North Admin building. V.I.F. existing openie
14	1ST FLOOR	в	3. • 0.,	7' - 0"		•	•		1	WOOD	PAINTED, TBD	Z N/A	Cased opening.
15	1ST FLOOR	в	3" - 0"	7" · 0"				100 A	1	wood >	PAINTED, TBD	N/A	Cased opening.
16	1ST FLOOR	F	3 0.	7" - 0"	0' - 1 3/4"	ALUMINUM	SEE REMARKS	PAINTED	3	нм (PAINTED, TBD	SEE REMARKS	Double acting door with bulit-in 9"W x 14"H clear acrylic window. Hardware by the door manufacturer.
17	1ST FLOOR	SEE	3' - 0"	7" · 0"	0' - 1 3/4"	SEE		SEE REMARKS		SEE		<u>Υ</u> .	See TW - Series drawings from Contract # 20-501 for more information.
		REMARKS				REMARKS				REMARK			
18	1ST FLOOR	E	3. • 0.,	7' · 0"	B' - 1 3/4"	HM	NO	PAINTED	1	HM	PAINTED, TBD	27	
19	1ST FLOOR	к	6' - 0"	8. • 0	0 13/4	WOOD	YES	PAINTED	4	WOOD	PAINTED TOD	SEE REMARKS	Replicated transom & hardware by fabricator to match historic transom in North Admin building. V.I.F. existing opening
20	1ST FLOOR	E	3" - 0"	7' · 0"	0' 1 3/4"	HM	NO	PAINTED	1	нм /	PAINTED, TBD	4	2HR. Fire-rated door and frame.
21	1ST FLOOR	E	3" - 0"	7" · 0"	B' - 1 3/4"	HM	NO	PAINTED	1	HM	PAINTED, TBD	10	
22	1ST FLOOR	E	3. • 0.,	7" · 0"	0' - 1 3/4"	HM	NO	PAINTED	1	HM >	PAINTED, TBD	10	
23	1ST FLOOR	E	3. • 0.,	7' · 0"	0 13/4	HM	NO	PAINTED	1	нм	PAINTED, TBD	10	
24	1ST FLOOR	E	3. • 0.,	7' · 0"	B' - 1 3/4"	НМ	NO	PAINTED	1	НМ	PAINTED, TBD	\angle $^{\circ}$	<u> </u>
25	1ST FLOOR	D	6" - 0"	7' + 6"	0' - 1 3/4"	WOOD	YES	PAINTED	1	wood	PAINTED, TBD	2	(2) 3 V Wide Hoors Y Y Y Y Y Y Y Y Y Y Y Y Y
26	1ST FLOOR	EXISTING	3' - 0"	7" - 0"	0' - 1 3/4"	EXISTING	· ·	SEE REMARKS	1	wood	SEE REMARKS	\mathcal{I}	New Hardware sets to be provided. Existing door to be re-swung outward as indicated on the floor plan. Primed and repaint the interior frame and interior door. Painted, TBD.
27	1ST FLOOR	EXISTING	3. • 0.,	7" · 0"	0' - 1 3/4"	EXISTING	•	SEE REMARKS	1	WOOD	SEE REMARKS	$)^{3}$	New Hardware sets to be provided. Existing door to be re-swung outward as indicated on the floor plan. Primed and repaint the interior frame and interior door. Painted, TBD.
28	1ST FLOOR	в	3. • 0.,	7" · 0"					1	WOOD	PAINTED, TBD	/ N/A	Casely opening. XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
	TO CONFIRM DOO	R SIZES IN FIEL			1	I	1		· ·				

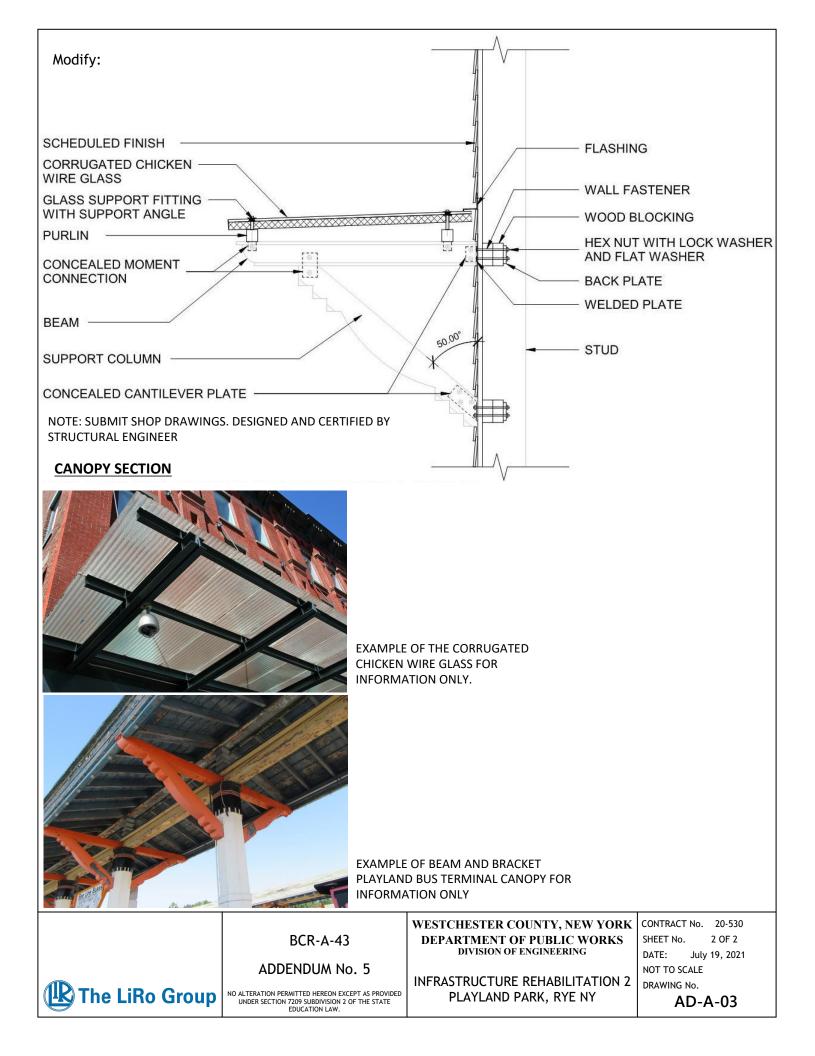
REFERENCE DRAWING: PR-A-61

R

		WESTCHESTER COUNTY, NEW YORK	CONTRACT No. 20-530
	PR-A-61	DEPARTMENT OF PUBLIC WORKS	SHEET No. 1 OF 1
		DIVISION OF ENGINEERING	DATE: July 19, 2021
	ADDENDUM No. 5		NOT TO SCALE
The LiRo Group	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED	INFRASTRUCTURE REHABILITATION 2	DRAWING No.
The LING Group	UNDER SECTION 7209 SUBDIVISION 2 OF THE STATE EDUCATION LAW.	PLAYLAND PARK, RYE NY	AD-A-01

Modify:									
DOOR SCHEDULE									
DOOR		DOOR PANEL	INISH GLASS RATED	FRAME		DOOR FRAME		(X
NUMBER LOCATION TYPE 1 GROUND FLOOR D	WIDTH HEIGHT 3' - 0" 7' - 0" 5' - 0" 7' - 0"	HM P/	AINTED -	TYPE MA	TERIAL FINISH HM PAINTED HM PAINTED	H1	MB THRESHOLD	HARDWARE SET	REMARKS ASULATED DOOR WITH WEATHERSTRIPPING (2) 2'-6" WIDTH DOORS
2 GROUND FLOOR B 3 GROUND FLOOR C 4 GROUND FLOOR C	5' - 0" 7' - 0" 3' - 0" 7' - 0" 3' - 0" 7' - 0"	WD P/	AINTED - 45 MIN AINTED	3	WD PAINTED WD PAINTED	H2	11 2 12 2 12 2	HS-05 HS-03 HS-03	
5 GROUND FLOOR A 6 GROUND FLOOR E	3' - 0" 7' - 0" 0' - 0" 0' - 0"	WD P	AINTED -		HM PAINTED	H1	н	HS-01	ASED OPENING.
7 GROUND FLOOR E 8 GROUND FLOOR C	0' - 0" 0' - 0" 3' - 0" 7' - 0"		AINTED		WD PAINTED		J2 2	HS-03	CASED OPENING
9 GROUND FLOOR A 10 GROUND FLOOR A	3' - 0" 7' - 0" 3' - 0" 7' - 0"	WD P/ WD P/	AINTED -	1	HM PAINTED HM PAINTED	H1 H1	И 2 И	HS-02 HS-01	<u>_</u>
REFERENCE DRAWING: BCR-A-61									
			CR-A-61 NDUM No.	5	DEPAI	HESTER CO RTMENT O DIVISION OF	F PUBLIC	WORKS	CONTRACT No. 20-530 SHEET No. 1 OF 1 DATE: July 19, 2021 NOT TO SCALE
The LiRo G	Group	NO ALTERATION PERA UNDER SECTION 7	NITTED HEREON EXCEPT 209 SUBDIVISION 2 OF T DUCATION LAW.	AS PROVIDED		TRUCTURE LAYLAND F			DRAWING No. AD-A-02





SECTION 06 83 16 - FIBERGLASS REINFORCED PANELING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fiberglass reinforced plastic (FRP) wall panels.
- 1.2 RELATED REQUIREMENTS
 - A. Section 07 92 00 Joint Sealants.
- 1.3 REFERENCE STANDARDS
- A. ASTM International (ASTM) (www.astm.org):
 - 1. ASTM D 2583 Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
 - 2. ASTM D 5319 Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels.
 - 3. ASTM D 5420 Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact).
 - 4. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.

1.4 ACTION SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each type of product required.
- B. Samples: Submit manufacturer's selection and verification samples for finish, colors, patterns, and textures.
 - 1. Submit 2 samples of each type of panel, trim, and fastener.
- C. Certificates: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- D. Test and Evaluation Reports: Submit reports showing compliance with specified performance characteristics and physical properties.
- E. Manufacturer's Instructions: Submit manufacturer's installation and storage instructions.
- F. Manufacturer's Project References: Submit manufacturer's list of successfully completed FRP panel projects, including project name and location, name of architect, and type and quantity of FRP panels furnished.
- G. Installer's Project References: Submit installer's list of successfully completed FRP panel projects, including project name and location, name of architect, and type and quantity of FRP panels installed.

<u>CONTRACT No. 20-530</u> <u>DIVISION 6 – WOOD AND PLASTIC PRODUCTS</u>

1.5 CLOSEOUT SUBMITTALS

- A. Care and Maintenance Instructions: Submit manufacturer's care and maintenance instructions, including cleaning and repairing instructions.
- B. Warranty Documentation: Submit manufacturer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for a minimum of 10 years, in the manufacturing of FRP panels of similar type to that specified.
- B. Installer's Qualifications:
 - 1. Installer regularly engaged, for a minimum of 5 years, in installation of FRP panels of similar type to that specified.
 - 2. Employ persons trained for installation of FRP panels.
- C. Surface-Burning Characteristics: Determined by testing identical products according to ASTM E 84 by a testing agency acceptable to authorities having jurisdiction.
 - 1. Flame-Spread Index: 200 (Class C)
 - 2. Smoke-Developed Index: 450.
- D. Meets USDA/FSIS requirements.
- 1.7 DELIVERY, STORAGE, AND HANDLING
 - A. Delivery Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
 - B. Storage and Handling Requirements:
 - 1. Store and handle materials in accordance with manufacturer's instructions.
 - 2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
 - 3. Store materials in clean, dry area indoors at temperature and humidity conditions in accordance with manufacturer's instructions.
 - 4. Store materials on flat, level surface, raised above floor, with adequate support to prevent sagging.
 - 5. Store materials out of direct sunlight.
 - 6. Protect materials and finish during storage, handling, and installation to prevent damage.

1.8 AMBIENT CONDITIONS

- A. Do Not Begin Installation Until:
 - 1. Building is enclosed.
 - 2. Permanent heating and cooling equipment is in operation.
 - 3. Residual moisture from plaster, concrete, or terrazzo has dissipated.
- B. During installation and within 48 hours before installation, maintain ambient temperature and relative humidity within limits required by type of FRP panel adhesive used and adhesive manufacturer's instructions.

<u>CONTRACT No. 20-530</u> DIVISION 6 – WOOD AND PLASTIC PRODUCTS

1.9 WARRANTY

- A. Warranty Period: 1 year from date of installation.
- B. Limited Warranty Period: Prorated years 2 to 10 from date of installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Crane Composites, Inc. (formerly Kemlite) 23525 West Eames Street, Channahon, Illinois 60410. Toll Free 800-435-0080. Phone 815-467-8600. Fax 815-467-8666. Website www.cranecomposites.com. Email salesbp@cranecomposites.com.
- B. Substitutions: Manufacturers offering equal products may be incorporated in the work.
- C. Single Source: Provide FRP panels and accessories from single manufacturer.

2.2 FRP PANELS

- A. Fiberglass Reinforced Plastic (FRP) Panels:
 - 1. Class C.
 - 2. Use: Walls.
 - 3. Surface Finish: Pebbled embossed texture.
 - 4. Scratch Resistance, ASTM D 2583, Barcol Hardness: 35.
 - 5. Abrasion Resistance, Taber Abrasion Test, CS-17 abrasive wheels with 1,000 g weight: Weight loss after 25 cycles of no more than 0.038 percent.
- B. Panel Color: As selected by Architect from manufacturer's full range
- C. Panel Dimensions:
 - 1. Nominal Thickness: 0.09 inch (2.3 mm)
 - 2. Wall Panel Size: As indicated on the Drawings.

2.3 ACCESSORIES

- A. Moldings, Trim, and Caps: 1-piece extruded polypropylene, configured to cover panel edges and corners.
 1. Color: Match FRP panels
- B. Panel Adhesive: As recommended by FRP panel manufacturer for required substrates.
 1. VOC Content: Maximum 50 g/L
- C. Panel Seam Sealant: Bright white, 2-part urethane sealant, as recommended by FRP panel manufacturer.
 1. VOC Content: 0.0 g/L.

<u>CONTRACT No. 20-530</u> <u>DIVISION 6 – WOOD AND PLASTIC PRODUCTS</u>

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Examine areas to receive FRP panels.
 - B. Examine Substrate Surfaces to Determine:
 - 1. Corners: Plumb and straight.
 - 2. Surfaces: Smooth, sound, and uniform.
 - 3. Nails or Screw Fasteners: Countersunk.
 - 4. Joints and Cracks: Filled flush and smooth with adjoining surfaces.
 - C. Notify Architect of conditions that would adversely affect installation or subsequent use.
 - D. Do not begin preparation or installation until unacceptable conditions are corrected.

3.2 PREPARATION

- A. Clean substrates to remove substances that could impair bond of adhesive, including oil, grease, dirt, dust, or other contaminates.
- B. Acclimate FRP panels by unpacking and placing in installation space a minimum of 24 hours before installation.
- C. Lay out FRP panels before beginning installation.
 - 1. Locate panel joints to provide equal panel widths at ends of walls.
 - 2. Locate panel joints to provide trimmed panels at corners a minimum of 12 inches (300 mm) wide.

3.3 INSTALLATION

- A. Install FRP panels in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install FRP panels plumb, level, square, flat, and in proper alignment.
- C. Install FRP panels to be water resistant and washable.
- D. Install FRP panels with manufacturer's recommended gap for panel field and corner joints.
- E. Fasteners:
 - 1. Use fasteners in accordance with manufacturer's instructions to install FRP panels securely to supports.
 - 2. Pre-drill fastener holes in FRP panels, 1/8 inch (3.2 mm) greater in diameter than fasteners.
- F. Adhesive:
 - 1. Install FRP panels in full spread of adhesive.
 - 2. Follow adhesive manufacturer's instructions for application of adhesive.
- G. Install trim accessories with adhesive and nails or staples.
 - 1. Do not fasten through FRP panels.
- H. Sealant:

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- 1. Fill grooves in trim accessories with sealant before installing FRP panels.
- 2. Bed inside corner trim in bead of sealant.
- 3. Remove excess sealant and smears as FRP panels are installed.
- 4. Clean in accordance with sealant manufacturer's instructions.
- I. Tolerances: Install FRP panels within manufacturer's installation tolerances.

3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: If requested by Owner, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.5 ADJUSTING

- A. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- B. Remove and replace with new material, damaged components that cannot be successfully repaired, as determined by Architect.

3.6 CLEANING

- A. Clean FRP panels promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.7 **PROTECTION**

A. Protect installed FRP panels and finish surfaces from damage during construction.

END OF SECTION