

Wilton Station Pedestrian Walkway Addendum No. 1

TO: Prospective Bidders
FROM: Joseph Canas, PE, LEED AP, CFM
COPY: Frank Smeriglio, PE, Director of Public Works, Town of Wilton
DATE: April 18, 2022

The following questions were submitted:

1. **Question:** Please clarify the type of decking required on the pedestrian bridge, as the Bridge Partial Plan and Section B-B on sheet S-1 make reference to a composite wood, however the special provision indicates that it is to be Southern Yellow Pine.

Response: The decking for the bridge shall be fiberglass reinforced polymer planks. Planks shall be protected from weathering and ultraviolet light degradation and skid resistant. Color selection by Town. Please refer to the attached Special Provision for Fiberglass Reinforced Polymer Planks.

2. **Question:** Please clarify the railing requirements on the pedestrian bridge. The special provision notes horizontal steel safety rails up to 54", with weathering steel toe plates and rubrails. The section view on sheet S-1 does not show these rails, but instead shows two wood rails angle cut at the bottom along with an LED tape light attached to the bottom.

Response: The rails shall be steel as indicated in the special provision.

During the pre-bid meeting on April 8, 2022, the following issues were raised:

3. **Question:** Please provide the boring logs.

Response: The boring logs are attached.

4. **Question:** The overhead wiring for the parking lot lighting along the river will conflict with the installation of the bridge. With who is the temporary disconnection coordinated with?

Response: We reviewed with Metro North, who indicates that the Town is the entity to notify for the temporary disconnection of lighting. Metro North was also advised that the Wilton Station Pedestrian Walkway Project is out to bid.

Attachment: Special Provision – Fiberglass Reinforced Polymer Planks
Boring Logs

ITEM # 0603244A - FIBERGLASS REINFORCED POLYMER (FRP) PLANK

Description: Work under this item shall consist of furnishing and installing factory fabricated and finished Fiberglass Reinforced Polymer Planks as shown on the contract documents. Work shall include all labor, materials, equipment, and incidentals governed by this section necessary to install the fiberglass reinforced polymer (FRP) planks as specified herein.

Quality Assurance:

- A. The material covered by these specifications shall be furnished by an ISO-9001:2008 certified manufacturer of proven ability who is regularly engaged in the manufacture, fabrication, and installation of FRP systems.
- B. Substitution of any component or modification of system shall be made only when approved by the Architect or Design Engineer.
- C. Fabricator Qualifications: Firm experienced in successfully producing FRP fabrications similar to that indicated for this project, with sufficient production capacity to produce required units without causing delay in the work.
- D. In addition to requirements of these specifications, comply with manufacturer's instructions and recommendations for work.

Submittals and Shop Drawings:

- A. Shop drawings of all fabricated pultruded gratings and treads, structural shapes and plate, standard railings, ladders and cages, foam core building panels, building panel systems, planks, molded gratings and treads and appurtenances shall be submitted to the Design Engineer for approval. Fabrication shall not start until receipt of Design Engineer's approval marked "Approved as Submitted" or "Approved as Noted".
- B. Manufacturer's catalog data showing:
 - 1. Materials of construction
 - 2. Dimensions, spacings, and construction of grating, handrails and building panels.
- C. Detail shop drawings showing:
 - 1. Dimensions
 - 2. Sectional assembly
 - 3. Location and identification mark
 - 4. Size and type of supporting frames required
- D. Samples of each type of product shall be submitted for approval.

Materials:

General:

- A. All systems, sub-systems and structures shall be shop fabricated and assembled into the largest practical size suitable for transporting.
- B. All materials and equipment necessary for the fabrication and installation of planks shall be stored before, during, and after shipment in a manner to prevent cracking, twisting, bending, breaking, chipping or damage of any kind to the materials or equipment, including damage due to over exposure to the sun. Any material which, in the opinion of the Design Engineer, has become damaged as to be unfit for use, shall be promptly removed from the site of work, and the Contractor shall receive no compensation for the damaged material or its removal.
- C. Identify and match-mark all materials, items and fabrications for installation and field assembly.
- D. All FRP products shall be manufactured using a pultruded process utilizing polyester resin with flame retardant and ultraviolet (UV) inhibitor additives. A synthetic surface veil fabric shall encase the glass reinforcement. FRP shapes shall achieve a flame spread rating of 25 or less in accordance with ASTM test method E-84, the flammability characteristics of UL 94 V0 and the self- extinguishing requirements of ASTM D635.
- E. After fabrication, all cut ends, holes, and abrasions of FRP shapes shall be sealed with a compatible resin coating.
- F. FRP products exposed to weather shall contain an ultraviolet inhibitor.
- G. All exposed surfaces shall be gritted

Design Criteria:

- A. The design of FRP products including connections shall be in accordance with governing building codes and standards as applicable.
- B. Design live loads of FRP gratings and floor panels shall not be less than 100 PSF (4.79 kN/m) uniformly distributed unless specifically stated otherwise in drawings and/or supplementary conditions or in governing building code as applicable. Grating and floor panel deflection at the center of a simple span not to exceed 0.25" (6.4 mm).
- C. Deflection in any direction shall not be more than L/180 of span for structural members unless specifically stated otherwise in drawings and/or supplementary conditions. Connections shall be designed to transfer the loads.

Manufacturers:

Fiber Reinforced Polymer Plank:

1. Strongwell - Bristol Division
400 Commonwealth Avenue
P.O. Box 580
Bristol, VA 24203-0580
Tel: 276-645-8000
www.Strongwell.com

2. National Grating - FRP Solutions
180 North Avenue W.
Missoula, MT 59801
Tel: 877-984-7788
www.Nationalgrating.com

FRP Planks:

- A. shall be 2" (50.8 mm) deep and be capable of withstanding a uniform load of 100 PSF (4.79 kN/m) or a concentrated load of 300 lbs. (1.33 kN) on an area of 4 sq. inches (25.8 cm²) located in the center of the plank with a deflection of no more than 0.25" (6.4 mm).
- B. The top surface of all panels shall have a non-skid grit.
- C. Panels shall be fabricated to the sizes shown on the drawings.
- D. Hold down clamps shall be surface mounted type 316L stainless steel, minimum of two (2) each per panel.
- E. Color shall be as determined by owner.
- F. The FRP planks shall be manufactured by the pultrusion process. The planks shall be 2" (50.8 mm) deep and 12" wide with interlocking joints on outside legs of plank. The glass fiber reinforcement for the planks shall be a core of continuous glass strand rovings wrapped with continuous strand glass mat. A synthetic surface veil shall be the outermost layer covering the exterior surfaces.
- G. Fiberglass planks shall be made from a fire retardant isophthalic polyester resin system that meets the flame spread rating of 25 or less in accordance with ASTM E-84, flammability characteristics of UL 94 V0 and meets the self-extinguishing requirements of ASTM D635. UV inhibitors are added to the resin.

Construction Method:

Preparation:

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, including concrete inserts, sleeves, anchor bolts and

miscellaneous items having integral anchors that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to project site.

- B. Set sleeves in concrete with tops flush with finish surface elevations; protect sleeves from infiltration of water and debris.

Inspection and Testing:

- A. The Design Engineer shall have the right to inspect and test all materials to be furnished under these specifications prior to their shipment from the point of manufacture.
- B. All labor, power, materials, equipment, and appurtenances required for testing shall be furnished by the Contractor at no cost to the Owner.

Installation:

- A. Fastening to in-place construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous FRP fabrications to in-place construction; include threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts and other connectors as determined by the Design Engineer.
- B. Cutting, fitting and placement: Perform cutting, drilling, and fitting required for installation of miscellaneous FRP fabrications. Set FRP fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; measured from established lines and levels.
- C. All field cut and drilled edges, holes and abrasions shall be sealed with a catalyzed resin compatible with the original resin as recommended by the manufacturer.
- D. Install items specified as indicated and in accordance with manufacturer's instructions.

Method of Measurement: Fiberglass Reinforced Polymer Plank will not be measured separately for payment and will be included in the Prefabricated Pedestrian Bridge Item.

Basis of Payment: Fiberglass Reinforced Polymer Plank will not be measured separately for payment.

Project: Wilton Station Pedestrian Walkway
 Location: Wilton, CT
 Client: Town of Wilton

Boring No. B-1
 Page 1 of 2
 File No. W-21501-01-03
 Checked by: D. Brogan

Drilling Co.: Martin Geo/Environmental, LLC

Foreman: <u>J. Martin</u>	Type	Casing	Sampler
T&B Rep.: <u>J. Libby</u>	I.D./O.D.	<u>HSA</u>	<u>Split Spoon</u>
Date Start: <u>12/14/15</u> End: <u>12/14/15</u>	Hammer Wt.	<u>4.25"/8.25"</u>	<u>1-3/8"/2"</u>
Location: <u>See Exploration Location Plan</u>	Hammer Fall		<u>140#</u>
GS. Elev. <u>±184'</u> Datum: <u>NAVD88</u>	Other		<u>30"</u>
			<u>Auto Hammer</u>

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
#####		14'		End of Boring

Depth (ft.)	Casing Blows Per Ft.	Sample No. / Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5		S-1/2	0.3 - 2.3	15-20	0-0.3': Asphalt; S-1: Black, fine to medium SAND, some Asphalt fragments; S-1A: Dense, brown, fine to coarse SAND, some Gravel, trace Silt	0.3' Asphalt		No Well Installed
		S-1A/11		15-12		FILL		
		S-2/6	2.3 - 4.3	12-6	Loose, brown, fine SAND, little Silt, trace Gravel	2.3'		
				4-4				
		S-3/6	4.3 - 6.3	4-12	Loose, brown, fine SAND, little Silt, trace Gravel			
				14-18				
10								
		S-4/3	10-12	19-41	Very dense, brown, fine to coarse SAND, little Gravel, trace Silt			
				36-32				
15								
		S-5/6	15 - 17	7-17	Dense, brown, fine to coarse SAND, little Gravel, trace Silt	SAND		
				14-14				
20								
		S-6/11	20 - 22	1-3	Medium dense, brown, fine to coarse SAND, little Gravel, trace Silt			
				8-25				
25								
		S-7/13	25-27	16-4	Loose, brown, fine to coarse SAND, trace Silt, trace Gravel			
				2-3				
30								

Notes:

Proportions Used

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistency

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
		HARD	>30

Depth (ft.)	Casing Blows Per Ft.	Sample No. / Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
35		S-8/10	30-32	3-6	Medium dense, brown, fine to coarse SAND, little Silt	SAND		No Well Installed
				13-25				
40		S-9/24	35-37	6-6	Medium dense, brown, fine to coarse SAND, trace Silt	SAND		No Well Installed
				10-18				
45		S-10/18	40-42	12-8	Medium dense, brown, fine to coarse SAND, trace Silt			No Well Installed
				6-9				
50					Bottom of Exploration at 42 feet			No Well Installed
55					Bottom of Exploration at 42 feet			No Well Installed
60					Bottom of Exploration at 42 feet			No Well Installed
65					Bottom of Exploration at 42 feet			No Well Installed

Notes:

Project: Wilton Station Pedestrian Walkway
 Location: Wilton, CT
 Client: Town of Wilton

Boring No. B-2
 Page 1 of 2
 File No. W-21501-01-03
 Checked by: D. Brogan

Drilling Co.: Martin Geo/Environmental, LLC

Foreman: <u>J. Martin</u>	Type	Casing	Sampler
T&B Rep.: <u>J. Libby</u>	I.D./O.D.	<u>HSA/HW</u>	<u>Split Spoon</u>
Date Start: <u>12/14/15</u> End: <u>12/15/15</u>	Hammer Wt.	<u>4.3"/8.3"-4"/4.5"</u>	<u>1-3/8"/2"</u>
Location: <u>See Exploration Location Plan</u>	Hammer Fall	<u>300#</u>	<u>140#</u>
GS. Elev. <u>±182'</u> Datum: <u>NAVD88</u>	Other	<u>30"</u>	<u>30"</u>
			<u>Auto Hammer</u>

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
12/15/15		8'		End of Boring

Depth (ft.)	Casing Blows Per Ft.	Sample No. / Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5		S-1/3	0-2	5-10	S-1: Black, fine SAND, some Silt, some Organics;	0.3' TOPSOIL	1	No Well Installed
		S-1A/9		14-12	S-1A: Medium dense, dark brown, fine to medium SAND, some Gravel, little Silt	SAND		
		S-2/14	2-4	9-8	Medium dense, dark brown, fine SAND, little Silt, trace Gravel			
				13-17				
		S-3/9	4-6	6-6	Medium dense, dark brown to brown, fine to medium SAND, little Silt, trace Gravel			
			7-18					
10						8'		
		S-4/17	10-12	15-30	Very dense, brown, GRAVEL and fine to coarse SAND, trace Silt	GRAVEL and SAND		
				26-30				
15						13.5'		
		S-5/13	15 - 17	5-21	Medium dense, brown, fine to coarse SAND, some Gravel, little Silt	SAND		
				17-24				
20							2	
		S-6/15	20 - 22	4-2	Loose, brown, fine to coarse SAND, little Gravel, trace Silt			
				2-5				
25						3		
		S-7/2	25-27	1-3	Loose, brown, fine to coarse SAND, trace Gravel, trace Silt			
				7-7				
30								

Notes: 1. Augers were grinding from 10' to 15' below ground surface.
 2. Running sands were observed during auger advancement from 23' to 25'.
 3. During auger advancement to a depth of 30 feet the augers broke off 15 feet below the ground surface. The borehole was terminated and the bottom 15 feet of augers were abandoned in the borehole. On 12/15/15 a new hole was advanced 3 feet south of the original boring, and sampling commenced at a depth of 30'.

Proportions Used

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistency

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
		HARD	>30

Project: Wilton Station Pedestrian Walkway
 Location: Wilton, CT
 Client: Town of Wilton

Boring No. B-2
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 File No. W-21501-01-03
 Checked by: D. Brogan

Depth (ft.)	Casing Blows Per Ft.	Sample No. / Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
35	29	S-8/12	30-32	7-5	Loose, tan, fine to coarse SAND and GRAVEL, trace Silt	SAND and GRAVEL		No Well Installed
	33			5-5				
	31							
	22							
40	44				Dense, brown, fine SAND, some Silt, trace Gravel	SAND		
	49	S-9/13	35-37	6-15				
	97			15-22				
	47							
45	56				Very dense, brown, fine to coarse SAND, some Gravel, little Silt	SAND and GRAVEL	4	
	61							
	55	S-10/5	40-42	13-43				
	81			15-22				
50	101				Very dense, grey, fine to coarse SAND and GRAVEL, some Bedrock fragments, little Silt	SAND and GRAVEL		
	81							
	134							
		S-11/14	45-47	12-40				
55				36-50	Bottom of Exploration at 48.5 feet due to roller bit refusal			
60								
65								

Notes:
 4. At a depth of 47' the drill rig's hydraulic line burst and the casing could not be advanced further. The boring was advanced by washing with the roller bit ahead of the casing to refusal at 48.5 feet. The refusal surface could not be cored due to the broken hydraulic line.

Project: Wilton Station Pedestrian Walkway
 Location: Wilton, CT
 Client: Town of Wilton

Boring No. B-3
 Page 1 of 2
 File No. W-21501-01-03
 Checked by: D. Brogan

Drilling Co.: Seaboard Drilling, Inc.

Foreman: <u>J. Nitsch</u>	Type	Casing	Sampler
T&B Rep.: <u>B. Caswell</u>	I.D./O.D.	<u>HW</u>	<u>Split Spoon</u>
Date Start: <u>01/30/17</u> End: <u>01/31/17</u>	Hammer Wt.	<u>4"/4.5"</u>	<u>1-3/8"/2"</u>
Location: <u>See Exploration Location Plan</u>	Hammer Fall	<u>300#</u>	<u>140#</u>
GS. Elev. <u>±183'</u> Datum: <u>NAVD88</u>	Other	<u>30"</u>	<u>30"</u>
			<u>Auto Hammer</u>

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
See Note 1				

Depth (ft.)	Casing Blows Per Ft.	Sample No. / Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction	
5		S-1/12	0.3-2.3	7-5	0-0.3': Asphalt; S-1: Loose, brown, fine SAND, little Gravel, trace Silt, dry	0.3' Asphalt	1	No Well Installed	
				4-3		Fill			
		S-2/5	2.3-4.3	3-2	S-2: Loose, brown, fine SAND, little Gravel, trace Silt, dry	4.3'			
				2-3					
		S-3/14	4.3-6.3	4-5	S-3: Medium dense, brown, fine to coarse SAND, some Gravel, trace Silt, dry				
		181		9-16					
		212							
		220							
	10					S-4: Very dense, grey, fine to coarse SAND, some Gravel, trace Silt, dry			SAND
			53						
		140	S-4/9	10-12	49-34				
		87			29-20				
		77							
15					S-5: Medium dense, tan, fine to coarse SAND, little Gravel, trace Silt, wet				
		60							
		57							
		40	S-5/4	15-17			10-17		
		42					9-12		
20					S-6: Medium dense, tan, fine GRAVEL, little coarse Sand, trace Silt, wet	19'			
		48							
		27	S-6/4	20-22			11-10		
		29					7-5		
25					S-7: Medium dense, tan, fine to coarse SAND, some Gravel, trace Silt, wet	23'			
		37							
		40	S-7/4	25-27			8-7		
30					SAND				
		43					6-6		
		29							
	39								
	27								

Notes:
 1. Groundwater observed at a depth of 10' during drilling, based on sample wetness.

Proportions Used

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistency

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
		HARD	>30

Depth (ft.)	Casing Blows Per Ft.	Sample		Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
		No. /	Rec. (in)					
Sample Depth (ft.)								
35	37	S-8/0	30-32	3-4	S-8: No recovery	SAND		No Well Installed
	38			5-5				
	43							
	42							
	30							
40	34	S-9/14	35-37	3-3	S-9: Loose, brown, fine to medium SAND, trace Gravel, trace Silt, wet	SAND		
	31			6-8				
	40							
	65							
	123							
45	67	S-10/13	40-42	8-6	S-10: Medium dense, brown, fine to medium SAND, little Gravel, trace Silt, wet	SAND		
	54			6-7				
	67							
	64							
	74							
50	56	S-11/0	45-47	9-9	S-11: No recovery	SAND		
	75			10-13				
	71							
	96							
	82							
55	180	S-12/4	50-52	6-8	S-12: Medium dense, grey, fine GRAVEL, trace fine Sand, trace Silt, wet	GRAVEL		
	100			21-25				
	150							
	150							
	167							
60		S-13/4	55-57	55-32	S-13: Very dense, grey, fine GRAVEL, some fine SAND, little Silt, wet	GRAVEL	2	
				31-100/2"				
65		S-14/0	60-62	100/1"	S-14: No recovery	GRAVEL	3	
					Bottom of exploration at 62'			

Notes:
 2. Roller bit advanced from 55-60'.
 3. Roller bit advanced to 62', possible fractured bedrock.

Project: Wilton Station Pedestrian Walkway
 Location: Wilton, CT
 Client: Town of Wilton

Boring No. B-4

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File No. W-21501-01-03

Checked by: D. Brogan

Drilling Co.: Seaboard Drilling, Inc.

Foreman: J. Nitsch
 T&B Rep.: B. Caswell
 Date Start: 01/31/17 End: 01/31/17
 Location: See Exploration Location Plan
 GS. Elev. ±183' Datum: NAVD88

Casing _____ Type _____
 Sampler _____ Split Spoon _____
 I.D./O.D. _____ 1-3/8"/2"
 Hammer Wt. _____ 140#
 Hammer Fall _____ 30"
 Other _____ Auto Hammer _____

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
See Note 1				

Depth (ft.)	Casing Blows Per Ft.	Sample No. / Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5		S-1/6	0-1	3-5	S-1: Loose, brown, fine SAND, some Gravel, trace Silt, dry	SAND	1	No Well Installed
		S-1A/4	1-2	8-9	S-1A: Medium dense, fine to coarse SAND, little Gravel, trace Silt, dry			
		S-2/10	2-4	8-9	S-2: Medium dense, brown, fine SAND, little Silt, trace Gravel, dry			
				8-7				
		S-3/9	4-6	5-5	S-3: Medium dense, brown, fine SAND, little Silt, trace Gravel			
				24-23				
		S-4/11	6-8	26-16	S-4: Very dense, brown, fine to coarse SAND, some Gravel, trace Silt, wet at 7.5'			
			18-18					
10					Bottom of exploration at 8'			
15								
20								
25								
30								

Notes:
 1. Groundwater observed at a depth of 7.5' during drilling, based on sample wetness.

Proportions Used

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistency

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
		HARD	>30