COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: **Ethan Owens, Athletic Facilities Manager, City of Portland**
FROM: **Megan LaPierre, EI and Scott Hawk, PE**
DATE: **June 7, 2011**
RE: **Fitzpatrick Stadium Bleacher Replacement Project – Code Enforcement Inspection**

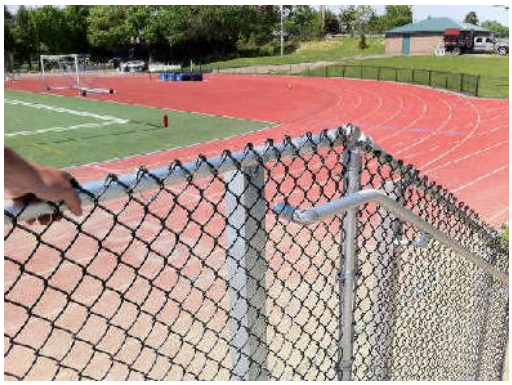
On May 26, 2011, Megan LaPierre met with Don McPherson, Code Enforcement Officer with the City of Portland's Planning & Urban Development Department, for the inspection of the new home bleachers at Fitzpatrick Stadium. Don indentified two code violations on the home bleachers. He also indicated that test reports and documentation confirming the bleachers have been constructed in compliance with the Statement of Special Inspections should be submitted. The intent of the memorandum is to provide the City with appropriate testimony and documentation ensuring the Fitzpatrick Stadium home and visitor bleachers were constructed in compliance with the Contract Documents, Statement of Special Inspections, and ADA standards. This memorandum will also provide evidence that identified violations on the home bleachers have been modified and are now code compliant.

City of Portland Code Enforcement Officer Site Inspection Violations and Comments:

Code Violation – The handrails at the ADA accessible ramp and the bottom stairs do not have returns.

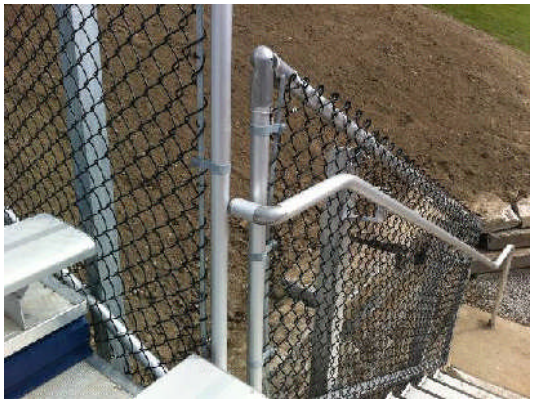
Returns have been added to all stair and ramp handrails. See the photos below for modifications.

Right Stair Handrail Before



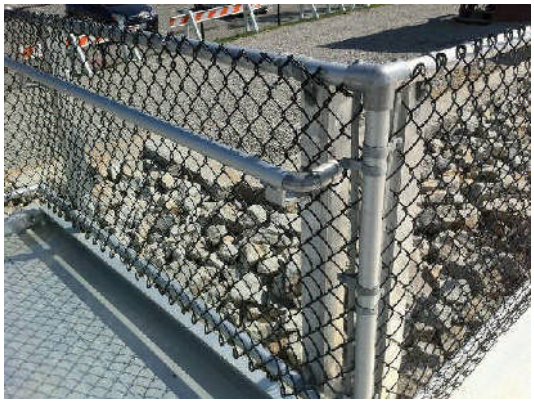
Right Side Handrail After

Left Stair Handrail Before



Left Stair Handrail After

ADA Ramp Handrail Before



ADA Ramp Handrail After

ADA Ramp Handrail Before

ADA Ramp Handrail After

Code Violation – Landings at base of stairs shall be cleared of all soils.

Stair landings have been cleared and the surrounding slopes have been re-graded. See the photos below for modifications.

Right Stair Landing Before

Right Stair Landing After

Left Stair Landing Before

Left Stair Landing After

Code Enforcement Office Comment – Permit shall be submitted by the State Fire Marshall's Office

The State Fire Marshall's Office reviewed the proposed bleacher plans for conformance with ADA standards and found the proposed bleachers to be acceptable.

During construction, the proposed 180-foot long steel ADA ramp for the home bleachers was shorten to a 40-foot long steel ramp. The shorter ramp had the same slope and width as the original ramp. A 5-foot wide paved walkway was constructed to connect the end of the ADA ramp to the existing pavement near the concession stand. The new paved walkway was constructed with a slope of 1:23. Per ADA standards, only walkways with slopes greater than 1:20 are classified as ramps. The new paved walkway is not required to meet the requirements of an ADA ramp because of the relatively flat slope of the walkway. Chain link fencing has been installed along the side of the new walkway to eliminate fall hazards along the open walkway.

The State Fire Marshall's Office indicated that no permit was requirement for the Fitzpatrick Stadium Bleacher Replacement project. See Attachment A for copies of email correspondents with the State Fire Marshall's Office. See Attachment B for a copy of the code review forwarded to the State Fire Marshall's Office.

Code Enforcement Office Comment – Submit test reports in accordance with Statement of Special Inspections.

Refer to the following pages and attachments for photos, test reports and testimonies in accordance with the Statement of Special Inspections.

Statement of Special Inspection – Inspection Plan:

Soil – Verify excavations are extended to proper depth and have reached proper suitable material. Verify materials below column footings are adequate to achieve design bearing capacity = 1,000 psf. Verify all new precast concrete footings are placed on re-compacted grade per geotechnical report and approved shop drawings.

Scott Hawk and Megan LaPierre made several site visits during the installation of the precast footings. All footings were installed at proper depth and on suitable material. When unsuitable material was encountered, the material was removed, and new material was brought to the site. See Attachment C for several email correspondents about foundation installation. See below for photos of foundation installation.

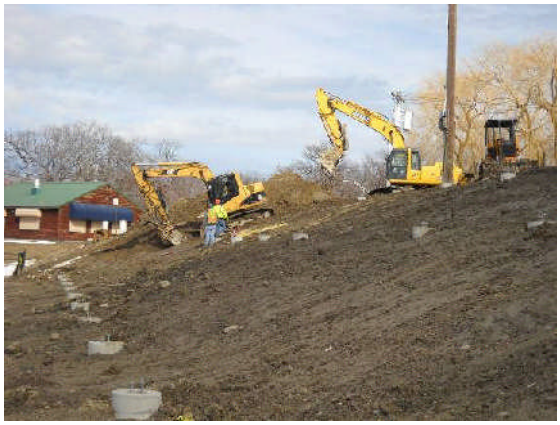
Excavation for Bleacher Footing

Footing Subgrade with Leveling Sand

Precast Footing Placed on Subgrade

Backfilled Footing

Offsite Material to Replace Unsuitable Soils



Home Bleacher Footing Installation

Precast Footings – Review submitted concrete mix design for compliance with Official Documents.

Precast footing design was submitted, reviewed and approved by Scott Hawk. See Attachment D for a copy of the approved precast footing design.

Concrete Slab – Verify concrete with fiber mesh mix design for compliance with Official Documents.

Scott Hawk and Megan LaPierre were on site the day of the concrete placement and observed the fiber mesh mixed throughout the concrete. Review of the concrete report indicated the concrete design mix complied with the Contract Documents in the follow areas:

Contract Document Design Mix	**Hissong Ready-Mix & Aggregates Report**
Design Strength = MDOT "Class A" (4350 psi)	Design Strength = 4350 psi
Entrained Air: Lower Specification Limit = 5.5% Upper Specification Limit = 8.5%	Entrained Air = 6.80%
Reinforcement = 5 lbs/c.y. of: Grace Strux 90/40 Fiber Mesh, Novomesh 950 Fiber Mesh, or Forta Ferro Fiber Mesh	Reinforcement = 5lbs per c.y. of Novomesh 950
Superplasticizer Admixture shall conform to: ASTM C494 Type F or G	Glenium 7500High Range Dosage (See Attachment E for Glenium Data Sheet)

See Attachment E for a copy of concrete mix report provided by Hissong Ready Mix & Aggregate.

Concrete Slab - Verify proper slab subbase material and preparation.

Megan LaPierre was on site to inspect and approve the subbase for the concrete slab beneath the visitor bleachers prior to placement.

Concrete Slab - Verify control joint and isolation joint location prior to concrete placement.

Scott Hawk and Megan LaPierre were on site during concrete placement and confirmed the control joint locations with the Contractor prior to saw-cutting. See below for a photo of a control joint.

Visitor Bleacher Concrete Slab Control Joint

Concrete Slab – Verify concrete slab is cured and sealed per Official Documents.

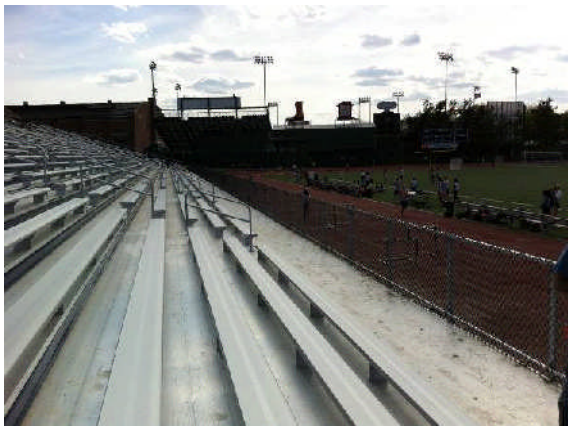
Scott Hawk and Megan LaPierre were on site during the sealing and curing process of the concrete slab beneath the visitor bleachers. The slab was sealed and cured with an A.H. Harris product equal to the Vexcon Chemicals product specified in the Contract Documents.

Structural Steel – Verify adequacy of installation; verify end anchorage, member to member connections, look for bent, warped, or damaged members.

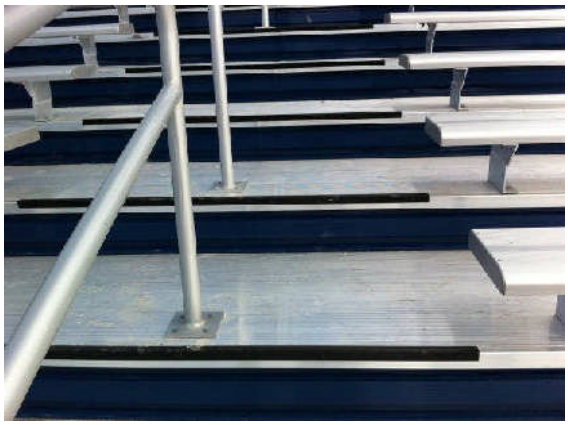
Scott Hawk and Megan LaPierre made several site visits to inspect the steel. No bent or damaged steel was identified on the home bleachers.

Steel Decking – Verify metal deck and riser attachment to all supports per Official Documents. Verify decking and riser installation is complete with no gaps, voids or tripping hazards.

Scott Hawk and Megan LaPierre made several site visits to inspect the metal deck and risers of the bleachers. No gaps or tripping hazards were found. See below for pictures of the metal deck, seats and risers.



Bleacher Seats and Decking



Bleacher Rails, Decking, and Risers

ATTACHMENTS

Attachment A: Emails from State Fire Marshall's Office

Attachment B: Bleacher Code Review

Attachment C: Emails about Foundation Installation

Attachment D: Precast Footing Design

Attachment E: Concrete Mix Report and Admixtures

ATTACHMENT A: EMAILS FROM STATE FIRE MARSHALL'S OFFICE

Megan LaPierre

From: Ethan Owens [EOWENS@portlandmaine.gov]
Sent: Thursday, February 10, 2011 9:42 AM
To: Megan LaPierre
Cc: Sally Deluca; Barry Sheff
Subject: RE: Visitor Stairs

Megan,
Could I ask you to give Rich McCarthy a call at the Fire Marshal's office? I talked with him yesterday while he was on the road, very nice guy and he said to call him this morning. Instead of playing operator, you might be able to put an end to his questions faster then I can. He gave the me the verbal to start but just had a few questions on the stairs.

Richard McCarthy CFI II / CFPE
Office of the State Fire Marshal
Senior Plans Examiner
Office (207)626-3886
Fax (207)287-6251
richard.mccarthy@maine.gov

Thanks Megan.

Have a great day,

Ethan Owens
Athletic Facilities, Playground & Courts Manager Recreation Department ~ City of Portland
134 Congress St
Portland, Maine 04103 ~ USA
207-756-8275/Fax 207-756-8279
eowens@portlandmaine.gov

>>> "Megan LaPierre" <mlapierre@woodardcurran.com> 2/10/2011 8:46 AM >>>
Ethan,

I have reviewed the proposed bleacher seating plans with the ICC 300 code and it appears all the exit stairs meet the egress width requirements. I have attached a memo for you to forward to the State's Fire Marshal Department for their review.

If you need anything else, please let me know.

Megan LaPierre, EI

Woodard & Curran
41 Hutchins Drive
Portland, ME 04102
Phone: 800.426.4262 x3354
Phone: 207.774.2112
Fax: 207.774.6635

-----Original Message-----
From: Ethan Owens [mailto:EOWENS@portlandmaine.gov]
Sent: Wednesday, February 09, 2011 11:49 AM
To: Megan LaPierre; Scott Hawk
Cc: Sally Deluca
Subject: Visitor Stairs

Hi Guys,
The only concern the Rich Mcarthy up at the State's Fire Marshal Dept has is with the width of the exit stairs and they wanted us and they will too - to run the numbers and make sure they are up to code. He though they may be a tad small. Otherwise they like everything and have given us the verbal to go ahead with the footings and substructure.

Can you guys wang that out for me? I though one of you had brought that up before and I wonder if I hadn't submitted older plans and this may have already been addressed?

Have a great day,

Ethan Owens
Athletic Facilities, Playground & Courts Manager
Recreation Department ~ City of Portland
134 Congress St
Portland, Maine 04103 ~ USA
207-756-8275/Fax 207-756-8279
eowens@portlandmaine.gov

Megan LaPierre

From: Ethan Owens [EOWENS@portlandmaine.gov]
Sent: Monday, May 09, 2011 3:56 PM
To: Jeanie Bourke; Sally Deluca; Megan LaPierre; Scott Hawk
Subject: Fwd: RE: Fitzpatrick Stadium

The State's Fire Marshal Office confirmed we don't need a permit from them.

Have a great day,

Ethan Owens
Certified Playground Safety Inspector
Athletic Facilities, Playground & Courts Manager Recreation Department ~ City of Portland
134 Congress St
Portland, Maine 04103 ~ USA
207-756-8275/Fax 207-756-8279
eowens@portlandmaine.gov
>>> Keith Gautreau 5/9/2011 3:15 PM >>>
Thank you Rich.

>>> "McCarthy, Richard" <Richard.McCarthy@maine.gov> 5/9/2011 3:13 PM
>>> >>>

Keith,

Yes they are all set no permit was applied for so no permit was issued from our office

Richard McCarthy CFI II / CFPE

Office of the State Fire Marshal

Senior Plans Examiner

Office (207)626-3886

Fax   (207)287-6251

richard.mccarthy@maine.gov

From: Keith Gautreau [mailto:KNG@portlandmaine.gov]
Sent: Monday, May 09, 2011 3:11 PM
To: Ethan Owens
Cc: McCarthy, Richard; Anita LaChance; Fred LaMontagne
Subject: Re: Fitzpatrick Stadium

Hi Ethan,

I'll figure out where it is and take care of it and get it to you. I have not heard back from Rich from the SFMO but will copy him to see if he has any additional conditions or issues. Last time we spoke on this he gave me the impression that things looked pretty good.

Regards,

Keith

Keith Gautreau, Fire Captain
Fire Prevention Bureau
Portland Fire Department
380 Congress Street
Portland, ME 04101
(207)874-8405
kng@portlandmaine.gov>>> Ethan Owens 5/9/2011 11:38 AM >>>

Hi Keith,

We are getting down to the final phase of the new bleachers at Fitzy and I am still trying to get my City Building permit. Do you know if the States Fire Marshall has sent anything in approving it and have you guys? I can't seem to get in touch with the state.

Thanks for your help.

Have a great day,

Ethan Owens

Certified Playground Safety Inspector

Athletic Facilities, Playground & Courts Manager Recreation Department ~ City of Portland
134 Congress St
Portland, Maine 04103 ~ USA
207-756-8275/Fax 207-756-8279
eowens@portlandmaine.gov

ATTACHMENT B: BLEACHER CODE REVIEW

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MEMORANDUM

TO: **Ethan Owens, City of Portland**
FROM: **Megan LaPierre, EI**
DATE: **February 9, 2011**
RE: **Fitzpatrick Stadium Bleachers Exit Stair Width Code Review**

The intent of this memorandum is to review the proposed Fitzpatrick Stadium Home and Visitor Bleachers for conformance with the ICC 300-2007 *Standards for Bleachers, Folding and Telescopic Seating, and Grandstands* exit stair width requirements. After completing the review, it has been determined the exit stair widths, as proposed by All Star Bleachers, meet the requirements of ICC 300-2007. Below is a summary of the code review. Home and visitor bleacher seating plans have also been attached for reference.

Home Bleachers:

All Star Bleachers (Provided)
Total Seating Capacity: 3,592
Total Number of Exits: 5 (4 Stairs, 1 Ramp)

- Exit Stair Width = 54" Clear (per drawings)
- Exit Ramp Width = 60" Clear (per drawings)

ICC 300-2007 - Section 404 – General Means of Egress (Code Requirements)
404.1 Minimum number of exits:

Occupant Load Over 2,500 = 4 Means of Egress

5 Exits Provided > 4 Exits Required **OK**

404.4 Travel Distance:

Exterior installations = Maximum travel distance from each seat to perimeter of seating structure shall not exceed 400 feet.

All travel distances are less than 400 feet **OK**
(see attached Home Bleacher Seating plan for approximate travel distances)

404.5 Require width:

Refer to Table 404.5(3): Width of Aisles and Means of Egress for Outdoor Smoke-Protected Assembly Seating:

Total Number Seats in Assembly Occupancy = Equal to or less than 15,000
Stair and aisle with handrails within 30 inches = 0.080 inches of clear width per seat served
Ramps not steeper than in 1:10 slope = 0.060 inches of clear width per seat served

Calculations:

Exit Stairs = 54" clear width / 1 exit stair x 1 seat serve / 0.080" clear width x 4 exit stairs = 2,700 seats served

Exit Ramp = 60" clear width / 1 exit stair x 1 seat serve / 0.060" clear width x 1 exit ramp = 1,000 seats served

Total seats served = 2,700 + 1,000 = 3,700 seats served

3,700 total seats exits serve > 3,592 seating capacity **OK**

Visitor Bleachers:

All Star Bleachers (Provided)
Total Seating Capacity: 2,504
Total Number of Exits: 4 (3 Stairs, 1 Ramp)

- Exit Stair Width = 54" Clear (per drawings)
- Exit Ramp Width = 60" Clear (per drawings)

ICC 300-2007 - Section 404 – General Means of Egress (Code Requirements)
404.1 Minimum Number of Exits:

Occupant Load Over 2,500 = 4 Means of Egress

4 Exits Provided = 4 Exits Required **OK**

404.4 Travel Distance:

Exterior installations = Maximum travel distance from each seat to perimeter of seating structure shall not exceed 400 feet.

All travel distances are less than 400 feet **OK**
(see attached Visitor Bleacher Seating plan for approximate travel distances)

404.5 Require Width:

Refer to Table 404.5(3): Width of Aisles and Means of Egress for Outdoor Smoke-Protected Assembly Seating:

Total Number Seats in Assembly Occupancy = Equal to or less than 15,000
Stair and aisle with handrails within 30 inches = 0.080 inches of clear width per seat served
Ramps not steeper than in 1:10 slope = 0.060 inches of clear width per seat served

Calculations:

Exit Stairs = $\frac{54\text{" clear width}}{1 \text{ exit stair}} \times \frac{1 \text{ seat serve}}{0.080\text{" clear width}} \times 3 \text{ exit stairs} = 2{,}025 \text{ seats served}$

Exit Ramp = $\frac{60\text{" clear width}}{1 \text{ exit stair}} \times \frac{1 \text{ seat serve}}{0.060\text{" clear width}} \times 1 \text{ exit ramp} = 1{,}000 \text{ seats served}$

Total seats served = 2,025 + 1,000 = 3,025 seats served

3,025 total seats exits serve > 2,504 seating capacity **OK**

ATTACHMENT C: EMAILS ABOUT FOUNDATION INSTALLATION

Megan LaPierre

From: Scott Hawk
Sent: Friday, March 18, 2011 5:00 PM
To: Ethan Owens
Cc: Megan LaPierre
Subject: Fitz

I met with Bill on-site today. Bill stopped installing footings at the Home side middle row due to saturated soil conditions. I used a rod to punch thru the area in question to determine the condition of the soil. The soil is completely saturated with water and very unstable to a depth of 4ft (the full length of the test rod). I instructed Bill to NOT place footings on ANY soil of this condition. I also informed Bill, that the City should not be responsible for this condition. In my opinion, the existing problem is due to seasonal conditions. Melting snow and recent rains have completely saturated the soils. Bill will likely be able to install 4 +/- more footings on Monday on the upper row where the soils are not saturated.

I have no concerns with the footings that are currently installed. Bill and his crew identified the problem and stopped work before placing footings in the area of saturated soils.

We discussed moving excavation work over to the visitor side bleachers while the home side bleacher soils dry. I visually inspected the visitor side and at least 50% of the surface area is fully saturated. Some areas even have standing water. This actually works in our favor...would the Contractor want the City to remove and replace all the soil due to the spring time soil conditions??? Just does not make sense. Should the City pay when it is too hot or too cold?? They obviously will argue otherwise.

I plan to visit the site on Monday to re-inspect the soils. I anticipate that I will recommend the Contractor stop foundation work until the groundwater recedes. The only other option would be to treat the soil with lime to dry it out. This obviously is expensive.

This weekend, I will review the contract documents, both City of Portland and Maine DOT, in regards to seasonal conditions.

Scott Hawk, P.E., S.E.
Project Engineer
Woodard & Curran
207.774.2112 ext 3327

Megan LaPierre

From: Scott Hawk
Sent: Wednesday, March 23, 2011 3:58 PM
To: Ethan Owens; Megan LaPierre
Cc: Megan LaPierre
Subject: RE: Fitzy

Ethan,

I went out to the site to see what was going on. They brought in good material and will have the Home Side bleachers completely installed by the end of the day. It appears that most of the bleacher steel has been delivered. The galvanized coating looks good.

They will begin final grading at the home side bleachers whenever weather permits. They said the morning frost has been difficult. Their machines just slide down the slope until the ground thaws.

-Scott

-----Original Message-----
From: Ethan Owens [mailto:EOWENS@portlandmaine.gov]
Sent: Wednesday, March 23, 2011 1:52 PM
To: Megan LaPierre; Scott Hawk
Subject: Fitzy

It looks like Bill Crawford is going ahead and replacing the materials because they are dumping trucks loads and placing footings.

Have a great day,

Ethan Owens
Certified Playground Safety Inspector
Athletic Facilities, Playground & Courts Manager Recreation Department ~ City of Portland
134 Congress St
Portland, Maine 04103 ~ USA
207-756-8275/Fax 207-756-8279
eowens@portlandmaine.gov

ATTACHMENT D: PRECAST FOOTING DESIGN

COMMITMENT & INTEGRITY
DRIVE RESULTS

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F 207.774.6635

SUBMITTAL REVIEW

Date:	02.04.2011			Submittal Number:	3				
Owner:	City of Portland			Specification Section:	N/A				
Submittal Description:	Precast Footing Shop Drawings and Mix Design								
Project Name:	Fitzpatrick Stadium Bleacher Replacement Project								
Contractor:	All Star Bleachers								
No of Copies Returned:	1 ☒	2 ☐	3 ☐	4 ☐	Returned Via:	Hand ☐	USPS ☐	FEDX ☐	UPS ☐	Other ☒

Submittal Action:

X A. NO EXCEPTIONS TAKEN
____ B. FURNISH AS NOTED
____ C. REVISE & RESUBMIT
____ D. REJECTED

Corrections or comments made by Woodard & Curran or its Agents on the shop drawings during this review do not relieve Contractor from compliance with requirements of the drawings and specifications. This check is conducted only for the purpose of review for the general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Contractor is responsible for: Confirming and coordinating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his or her work with that of all other trades; and performing all work in a safe and satisfactory manner. Woodard & Curran's return of the Submittal with a response of "No Exceptions Taken" is not to be construed as relieving the Contractor of any of the above mentioned obligations, or any other obligations under the Contract.

WOODARD & CURRAN INC. Date Received: 2.04.2011

By: Scott Hawk Date Reviewed: 2.07.2011

Spec. Section: N/A Submittal No: 3

Review Comments:

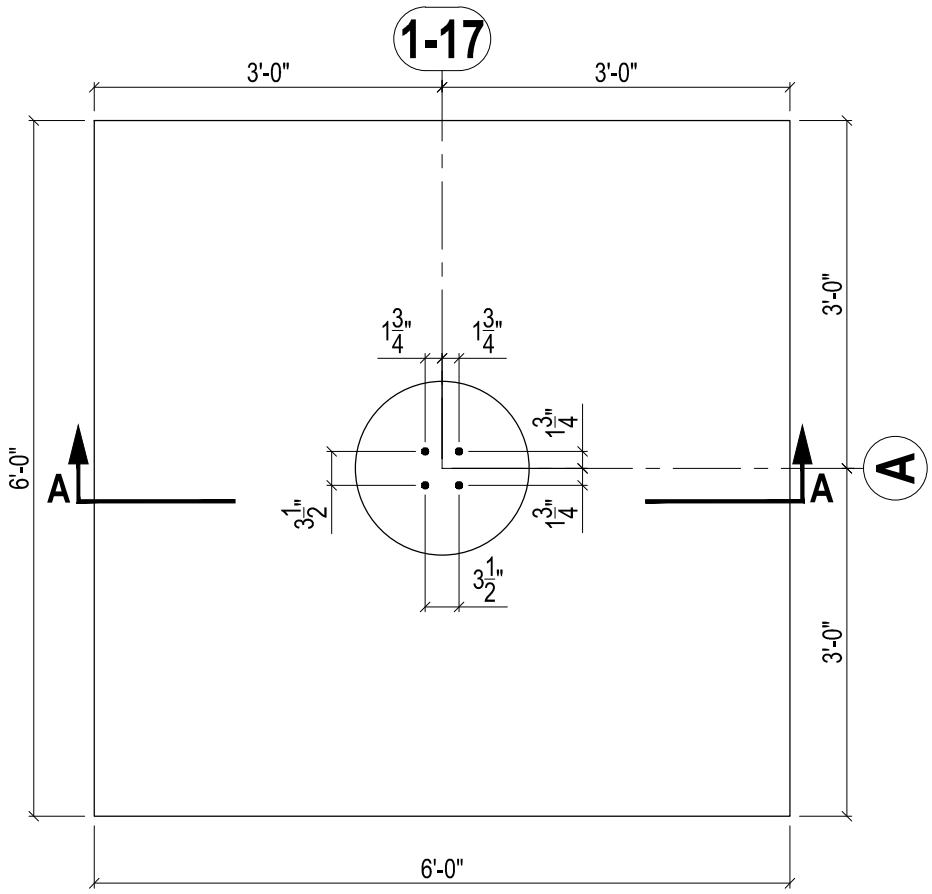
On Submittals:		No	If yes, see submittals for review comments
On an Attachment:		No	If yes, see below or attachment to this sheet

674 Bridgton Rd, Westbrook, ME 04092
207-854-5324 ph 207-854-1023 fax

FITZPATRICK STADIUM FORMULA

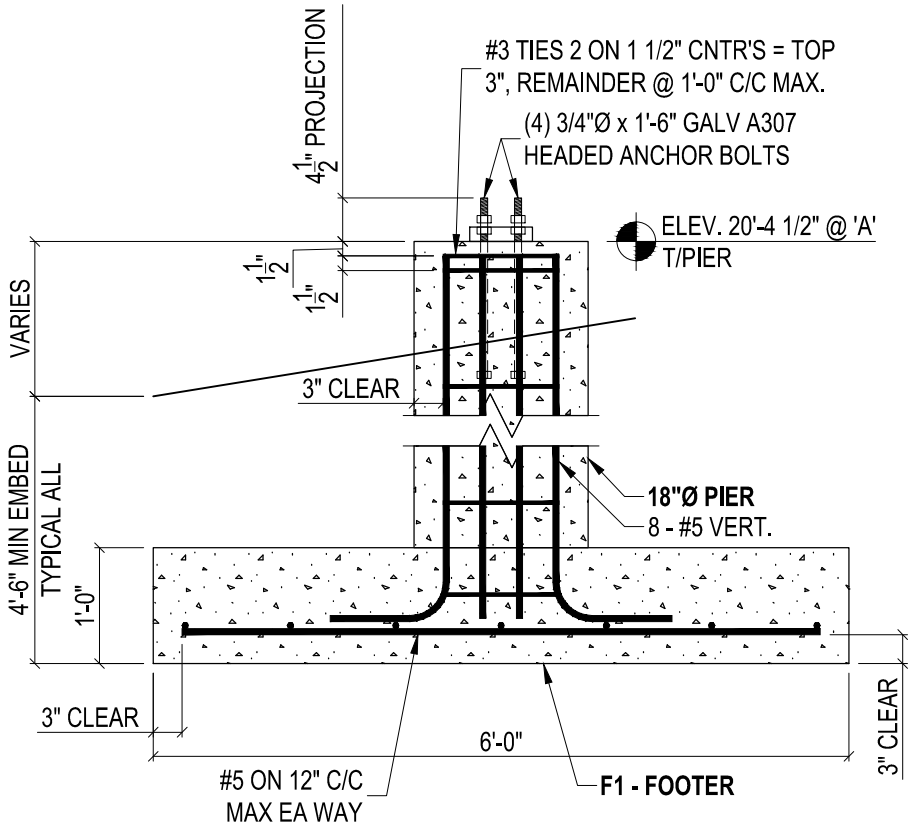
½ YARD MIX:

-360 LBS cement-type III
-650 LBS 3/8 aggregate
-750 LBS sand
-130 LBS water
-Daraccel 28oz (8 oz./100lbs)



PIER 1

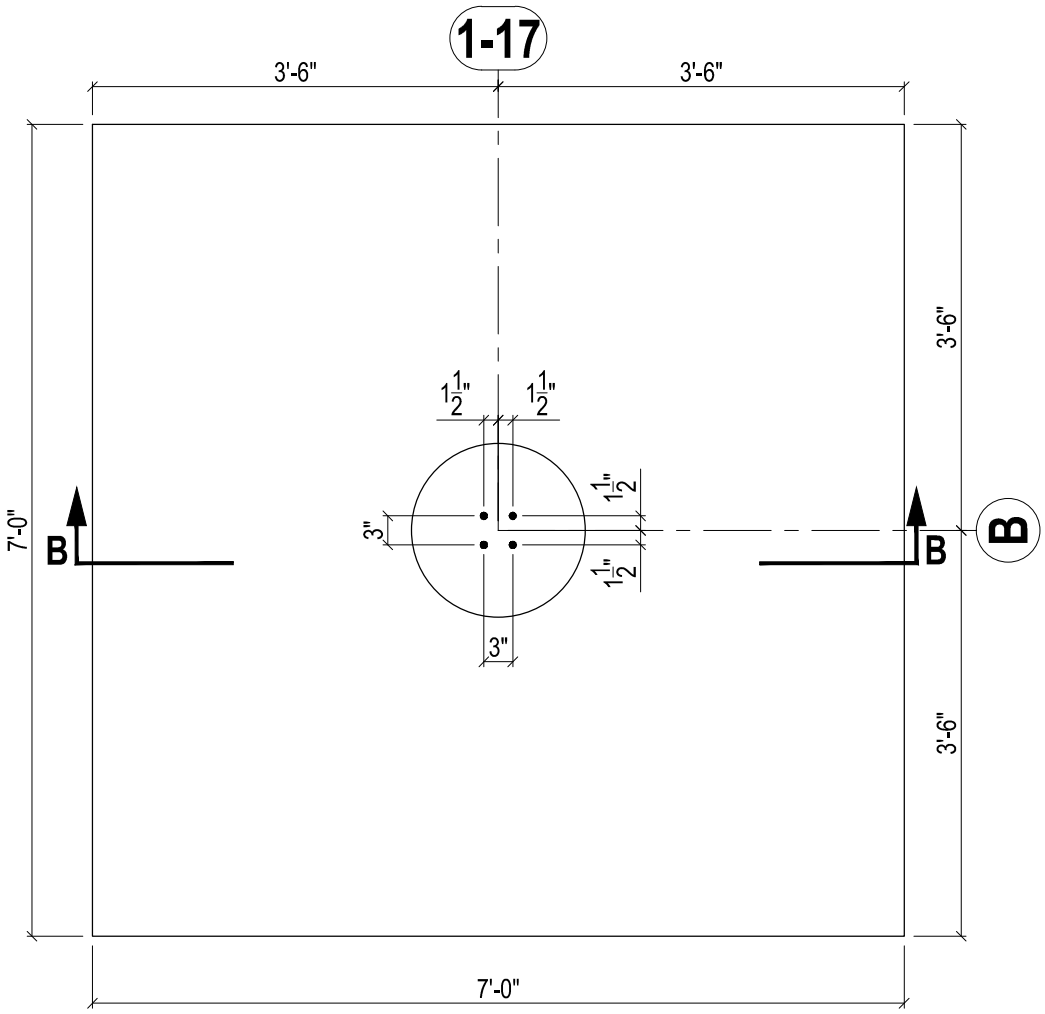
SCALE: 3/4"=1'-0"



SECTION A-A
3/4"=1'-0"

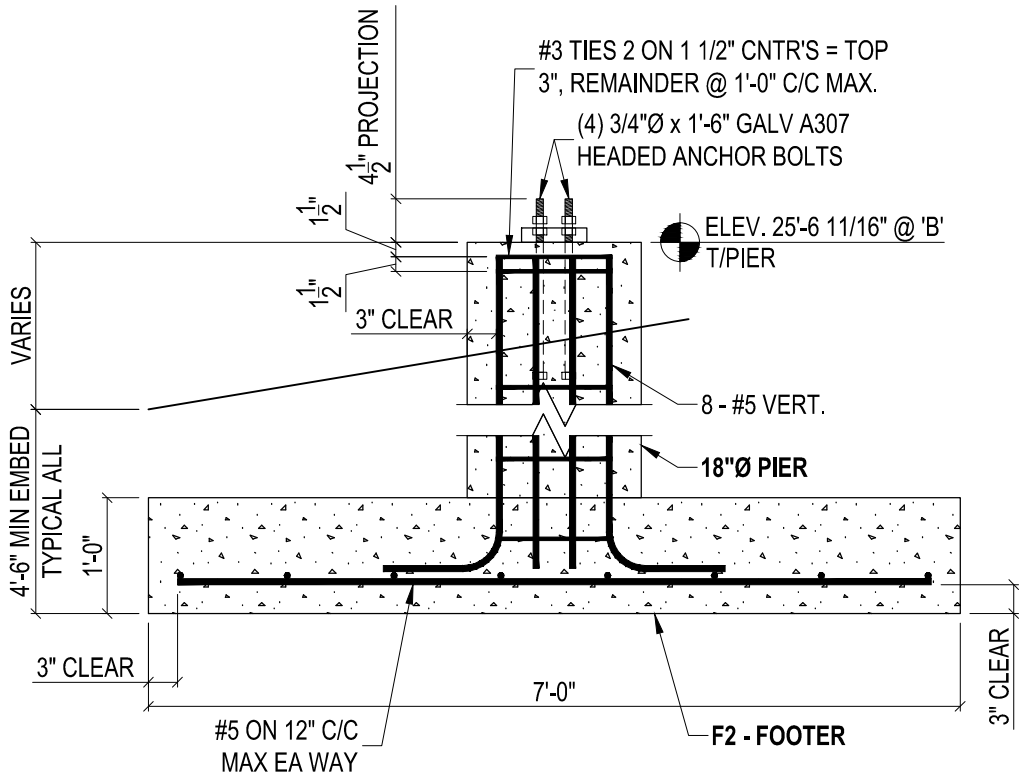
PIER 1 DETAIL

SCALE: 3/4"=1'-0"



PIER 2

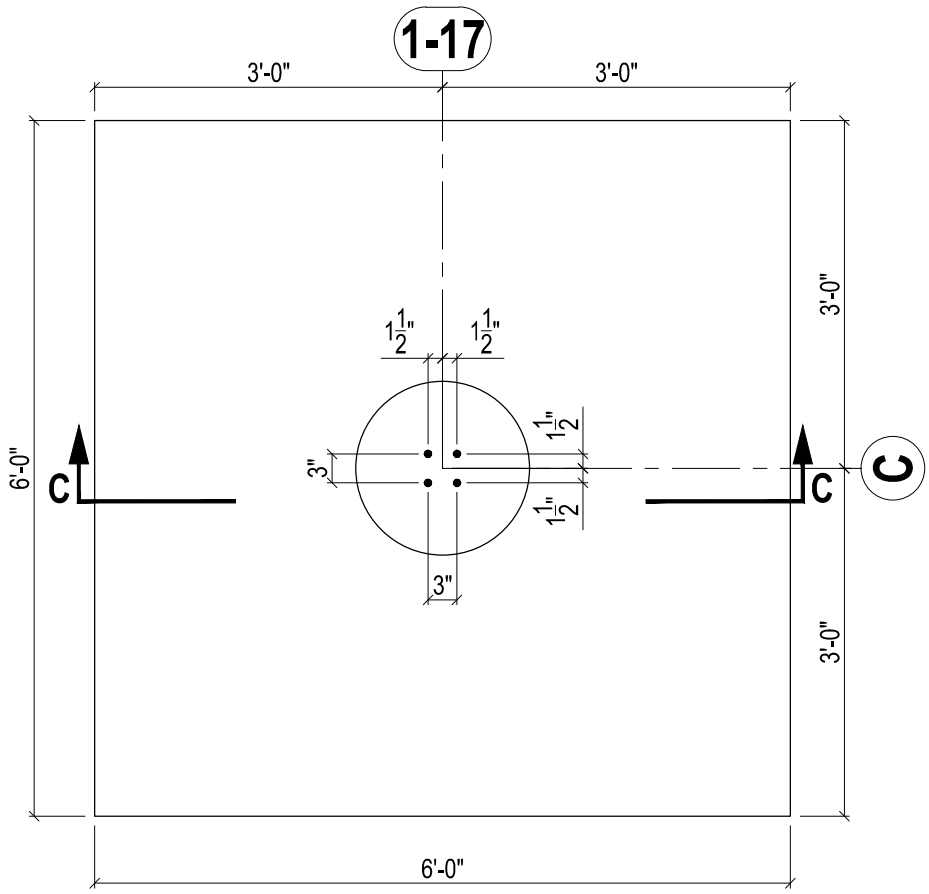
SCALE: 3/4"=1'-0"



SECTION B-B
3/4"=1'-0"

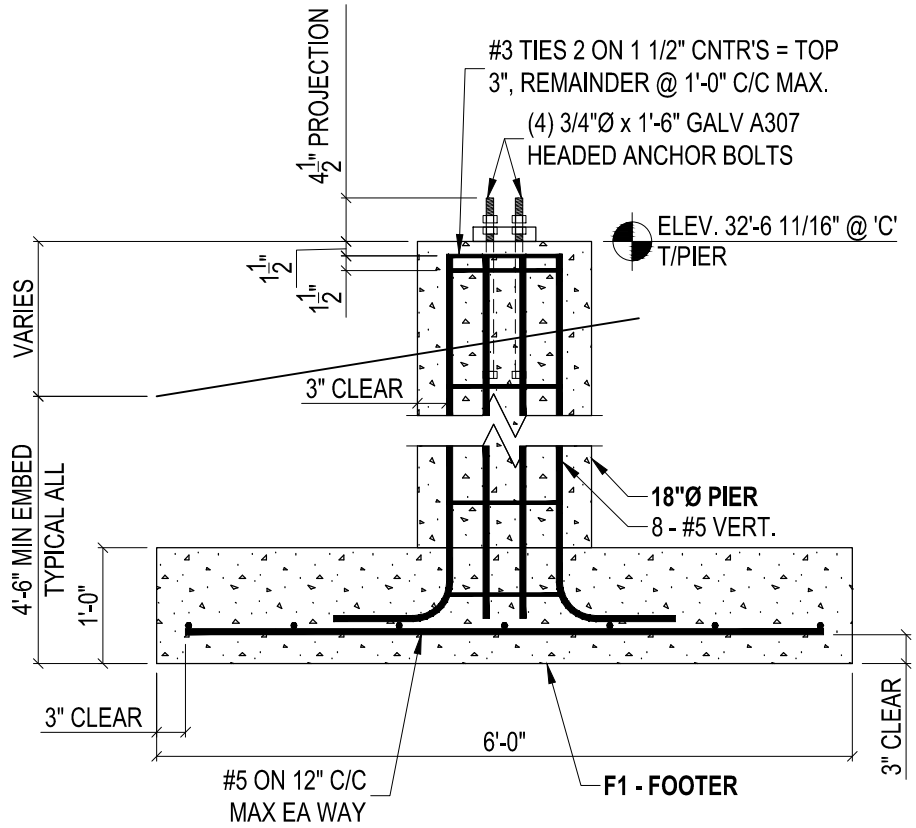
PIER 2 DETAIL

SCALE: 3/4"=1'-0"



PIER 3

SCALE: 3/4"=1'-0"



SECTION C-C **PIER 3 DETAIL**

3/4"=1'-0" - SCALE: 3/4"=1'-0"

ATTACHMENT E: CONCRETE MIX REPORT AND ADMIXTURES

Hissong Ready-Mix & Aggregates, LLC

Quality Control Services

Report of Concrete Compressive Strength

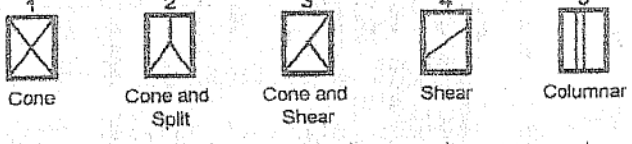
Project Name:	Fitzpatrick Stadium	Design Strength:	4,350 psi
Project Address:	Deering Avenue - Portland, ME	Project Number:	
Contractor:	Peter Petit	Supplier	Hissong Ready-Mix & Aggregates

Placement Information			
Placement Location:	Exterior Slab	Placement Method:	Chute
Placement Quantity:	30 yds	Cylinders Made By:	None Made
Date Tested:	4/14/2011	Time Cast:	NA

Initial Curing Conditions		**Delivery Information**	
Storage Location:		Load Number:	1
Temperature F : Minimum/ Maximum:		Ticket Number:	5550
		Load Size:	10 c.yds
Test Results at Placement		Truck Number:	317
Slump (in):	6 1/4"	Batch: 9:10 a.m.	Arrive: 10:05 a.m.
Air Content (%):	6.80%	Depart:	
Concrete Temp (F):	58	Admixtures:	
Air Temp (F)	52	Micro-Air	
		Glenium 7500 High Range Dosage	
		Novomesh 950 - 5 lbs. per c.yd	

Cylinder Designation	Cylinder Weight (lbs.)	Cylinder Diameter (in)	Cross Sectional Area (In)2	Test Date	Cure Type	Age (days)	Fracture Type	Strength (psi)
						7		
						28		
						28		
						56		

Fracture Types



10 MacLellan Lane, Eliot, ME 03104 * Tel (207)-449-4510 www.hissongreadymix.com

BASF

The Chemical Company

3/4

03 30 00
03 40 00
03 70 00
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Product Data
Cast-in-Place Concrete
Precast Concrete
Mass Concrete
Masonry Grouting

GLENIUM® 7500

Full-Range Water-Reducing Admixture

Description

GLENIUM® 7500 full-range water-reducing admixture is based on the next generation of polycarboxylate technology found in all of the GLENIUM 7000 series products. This technology combines state-of-the-art molecular engineering with a precise understanding of regional cements to provide specific and exceptional value to all phases of the concrete construction process.

GLENIUM 7500 admixture is very effective in producing concrete mixtures with different levels of workability including applications that require self-consolidating concrete (SCC). The use of GLENIUM 7500 admixture results in faster setting characteristics as well as improved early age compressive strength. GLENIUM 7500 admixture meets ASTM C 494/C 494M compliance requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

Applications

Recommended for use in:

- Concrete with varying water reduction requirements (5-40%)
- Concrete where control of workability and setting time is critical
- Concrete where high flowability, increased stability, high early and ultimate strengths, and improved durability are needed
- Production of Rheodynamic® Self-Consolidating Concrete (SCC) mixtures
- 4x4™ Concrete for fast-track construction
- Pervious Concrete mixtures

Features

- Dosage flexibility for normal, mid-range and high-range applications
- Excellent early strength development
- Controls setting characteristics
- Optimizes slump retention/setting relationship
- Consistent air entrainment

Benefits

- Faster turnover of forms due to accelerated early strength development
- Reduces finishing labor costs due to optimized set times
- Use in fast track construction
- Minimizes the need for slump adjustments at the jobsite
- Less jobsite QC support required
- Fewer rejected loads
- Optimizes concrete mixture costs

Performance Characteristics

Concrete produced with GLENIUM 7500 admixture achieves significantly higher early age strength than first generation polycarboxylate high-range water-reducing admixtures. GLENIUM 7500 admixture also strikes the perfect balance between workability retention and setting characteristics in order to provide efficiency in placing and finishing concrete. The dosage flexibility of GLENIUM 7500 allows it to be used as a normal, mid-range, and high-range water reducer.

Guidelines for Use

Dosage: GLENIUM 7500 admixture has a recommended dosage range of 2-15 fl oz/cwt (130-975 mL/100 kg) of cementitious materials. For most mid to high-range applications, dosages in the range of 5-8 fl oz/cwt (325-520 mL/100 kg) will provide excellent performance. For high performance and Rheodynamic Self-Consolidating Concrete mixtures, dosages of up to 12 fl oz/cwt (780 mL/100 kg) of cementitious materials can be utilized. Because of variations in concrete materials, jobsite conditions and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local BASF Construction Chemicals representative.

Mixing: GLENIUM 7500 admixture can be added with the initial batch water or as a delayed addition. However, optimum water reduction is generally obtained with a delayed addition.

Master Builders

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Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: GLENIUM 7500 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressing steel or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of GLENIUM 7500 admixture.

Compatibility: GLENIUM 7500 admixture is compatible with most admixtures used in the production of quality concrete, including normal, mid-range and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

Do not use GLENIUM 7500 admixture with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced.

Storage and Handling

Storage Temperature: GLENIUM 7500 admixture must be stored at temperatures above 40 °F (5 °C). If GLENIUM 7500 admixture freezes, thaw and reconstitute by mechanical agitation.

Shelf Life: GLENIUM 7500 admixture has a minimum shelf life of 9 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of GLENIUM 7500 admixture has been exceeded.

Packaging

GLENIUM 7500 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Material Safety Data Sheets: GLENIUM 7500 admixture.

Additional Information

For additional information on GLENIUM 7500 admixture or on its use in developing concrete mixtures with special performance characteristics, contact your BASF Construction Chemicals representative.

The Admixture Systems business of BASF Construction Chemicals is a leading provider of innovative admixtures for specialty concrete used in the ready mix, precast, manufactured concrete products, underground construction and paving markets throughout the North American region. The Company's respected Master Builders brand products are used to improve the placing, pumping, finishing, appearance and performance characteristics of concrete.

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