Clerk's Contract and Agreement Cover Page

Year: 2008

Multi Year: ☐

Legistar File ID#: 2008-0308

Amount $8,976,840.00

Contract Type: Construction-AIA

Contractor's Name: Joseph J Henderson & Son, Inc.

Contractor's AKA:

Execution Date: 5/27/2008

Termination Date: 9/15/2009

Renewal Date:

Department: Public Works/Water & Sewer

Originating Person: John Ingram

Contract Description: Main Pumping Station - East Reservoir Addition

change order #1 $20,907.03

DEC 20 2010

CLERK'S OFFICE

Friday, December 17, 2010

CONTRACT CHANGE ORDER NO. 1

OWNER: Village of Orland Park, Illinois

CONTRACTOR:
Joseph J. Henderson & Son, Inc.
P.O. Box 9
Gurnee, IL 60031

CONTRACT: East Reservoir Addition

DESCRIPTION OF CHANGE: See Page 2.

METHOD TO BE USED IN ADJUSTING THE CONTRACT AMOUNT:
The amount of the increase for this Change Order will be in accordance with the Contractor's proposals dated July 2009 through September 2010 and deductions for Contract Bid Items not used. See documentation summary on page 4.

ADJUSTMENT TO THE CONTRACT AMOUNT:

Original Contract Price	$8,976,840.00
Additions This Change Order	$94,453.33
Deductions This Change Order	($73,546.30)
Net Change Order Amount	$20,907.03
New Contract Price	$8,997,747.03

Recommended by: Ben Vogt
Greeley and Hansen
Date: Dec. 1, 2010

Accepted by:
Joseph J. Henderson & Son, Inc.
Date: 12-3-2010

Accepted by:
Village of Orland Park, Illinois
Date: 12/8/10

Approved by Village Board on 5/19/2008 2008-0308

CHANGE ORDER NO. 1

1. Following excavation of the Central Reservoir Cell, cracks were found in the exterior face of the east concrete wall where leakage occurred. Upon investigation, it was determined that two of the cracks required repair. At the request of the Engineer and Owner, Joseph J. Henderson & Son, Inc (JJH) performed the requested work to seal the existing cracks, which is documented in the Extra Work Order dated July 1, 2009. This work results in an increase to the Contract Price of $3,160.05

2. Following excavation of the existing 60-inch connections points on the existing Central Reservoir Cell, it was found that the existing connection bells had become deformed from true circular shape. This required modification to the new 60-inch PCCP interconnection piping arrangements and the addition of concrete collars to stabilize the joint at the existing Central Reservoir wall. At the request of the Engineer and Owner, JJH performed the requested work to make the connection based on the identified field conditions. This is documented in the Extra Work Order dated July 1, 2009. This worked results in an increase in the Contract Price of $25,517.01

3. In order to obtain a permit to construct and operate, the Illinois Environmental Protection Agency required modifications to the project design including: addition of two access locations to the new East Reservoir Addition with above grade hatches and associated intrusion alarm system and a separate sampling system including a sample line, pump, pump shelf, and associated electrical work. The two access hatches in the top slab replaced two of the three concrete slab openings, and were tied into the Main Pump Station Alarm System. The sampling pump was installed inside the Main Pump Station and sample line installed connecting the sampling pump to the new East Reservoir Addition to provide the Owner the ability to sample the water in the new East Reservoir Addition. These modifications were added following acceptance of bids for the project. At the request of the Engineer and the Owner, JJH performed the requested work, which is documented in the Extra Work Order dated July 1, 2009. This work results in an increase in the Contract Price of..$51,944.87

4. Associated with Item No. 3 above, it was necessary to install a new 4" DI sample line casing pipe wall pipe with water stop in the west concrete wall of the new East Reservoir Addition . At the request of the Engineer and Owner, JJH performed the requested work, which is documented in the Extra Work Order dated August 25, 2010. This work results in an increase in the Contract Price of $1,654.66

5. Following excavation of the existing Central Reservoir Cell, several cracks were found on the interior face of the east concrete wall that resulted in leakage. Upon investigation, it was determined that that numerous cracks required repair. At the request of the Engineer and Owner, JJH performed the requested work in August of 2009, which is documented in the Extra Work Order dated September 25, 2009. This work results in an increase to the Contract Price of $6,621.74

CONTINUED ON NEXT PAGE

CHANGE ORDER NO. 1

6. During construction, it was determined that additional asphalt paving was desired. At the verbal request of the Owner, JJH repaved the pedestrian pathway on the west side of the site in 2010, which is documented in the Extra Work Order dated September 30, 2010. This work results in an increase to the Contract Price of $5,555.00

7. The purpose of this item is to adjust the amounts of Contract Item Nos. 3, 4, 5, and 6 to reflect the actual amounts required during the execution of the Contract Work.

   a. Decrease Contract Item No. 3, Over-excavation, from 1,000 cubic yards to 111.3 cubic yards at a unit price of $15.00 per cubic yard .... ($13,330.50)

   b. Decrease Contract Item No. 4, Additional Select Fill, from 1,000 cubic yards to 111.3 cubic yards at a unit price of $34.00 per cubic yard .... ($30,215.80)

   c. Decrease Contract Item No. 5, Additional Class D Concrete, from 100 cubic yards to 0 cubic yards at a unit price of $250.00 per cubic yard .... ($25,000.00)

   d. Decrease Contract Item No. 6, Additional Steel Reinforcing, from 5,000 pounds to 0 pounds at a unit price of $1.00 per pound.. ($5,000.00)

   These decreases in unit price quantities result in a total decrease to the Contract Price of .... ($73,546.30)

CONTINUED ON NEXT PAGE

Village of Orland Park, Illinois
East Reservoir Addition

CHANGE ORDER NO. 1

Documentation Summary

Item No. 1	Joseph J. Henderson & Sons, Inc. Extra Work Order dated 07/01/2009 Email from John Ingram dated 10/07/2009 Email from Beth Vogt dated 10/07/2009
Item No. 2	Joseph J. Henderson & Sons, Inc. Extra Work Order dated 07/01/2009 Email from Frank Rowley of Meccon Industries, Inc. dated 04/16/2009 Meccon Industries, Inc. Labor and Material Voucher 044776
Item No. 3	Joseph J. Henderson & Sons, Inc. Extra Work Order dated 07/01/2009 Supplemental Drawing SD01 “Reservoir Hatches” dated June 2009 Supplemental Drawing SD02 “Hatch Details” dated June 2009 Specification Section 04050 “Masonry Mortar and Grout” Specification Section 04300 “Masonry” Specification Section 07620 “Sheet Metal Flashing and Trim” Specification Section 07724 “Access Hatches” Specification Section 11318 “Sampling Pump Specification Section 15061 “Sampling Piping and Accessories” Email from Beth Vogt dated 04/28/2009
Item No. 4	Joseph J. Henderson & Sons, Inc. Extra Work Order dated 08/25/2010 Email from Beth Vogt dated 03/25/2009 Email from Frank Rowley of Meccon Industries, Inc. dated 04/23/2009
Item No. 5	Joseph J. Henderson & Sons, Inc. Extra Work Order dated 09/25/2009 Email from Beth Vogt dated 07/29/2009 Invoice from R&J Construction Supply Co., Inc dated 08/31/2009 Invoice from Patent Construction Systems dated 08/31/2009
Item No. 6	Joseph J. Henderson & Sons, Inc. Extra Work Order dated 09/30/2010
Item No. 7	(No documentation provided for unused contract items.)

Documentation Item No. 1

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 07/01/09

Job #: 1224-00

Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

NOTIFICATION

Person Directing or Notified of Work: Beth Vogt

Date Notified:

Method of Notification: e-mail

Reason for Change (in detail): e-mail from Beth requesting proposal

Description of Work: Repair of cracks L5 and L10

Photographs Taken? **Yes** **No**

LABOR

Phase	Date	Name	Trade	Hours	OT Hours	Cost
		Mahoney; Michael J.	CARP	7.0		$ 579.14
		Alvarez; Rafael S.	LAB	26.0		$ 1,734.53
Rates good 6/1/09 to 5/31/10					***Labor Subtotal:***	**$ 2,313.67**

Materials

Description of Material or Equipment	Units	Price	Quant.	Cost
Deneef Flex	gallon	69.00	3	207.00
Deneef Catalyst and mizer injectors	ls	100.00	2	200.00
				-
				-
				-
			Material Subtotal:	**$ 407.00**

See page two for Equipment, and Subcontractor charges.

JJ Henderson __________ *Initial*

Greeley and Hansen & Village of Orland Park __________ *Initial*

Continued on next page

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 07/01/09

Job #: 1224-00   Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

JJH Equipment

Description of Material or Equipment	Units	Price/unit	Quant.	Cost
		-		-
		-		-
		-		-
		-		-
		-		-
		-		-
			Equipment Subtotal:	$ -

Subcontractors

Sub Name and Description of of work	Cost
Subcontractors Subtotal:	$ -

Extra Work Totals

Labor Subtotal from page 1:		$	2,313.67	*Equipment Subtotal from above*		$	-
Labor OH&P	15%	$	347.05	Equipment OH&P	15%	$	-
Labor total		**$**	**2,660.72**	**Equipment total**		**$**	**-**
Material Subtotal from page 1:		$	407.00	*Subcontract Subtotal from above*		$	-
Material OH&P	15%	$	61.05	JJH OH&P	5%	$	-
Material total		**$**	**468.05**	**Subcontract total**		**$**	**-**
				Subtotal		$	3,128.77
				JJH Bond	1%	$	31.29
				Total		**$**	**3,160.05**

Joseph J. Henderson & Son, Inc.
(sign & date:) ______________________ Date

____
(Print or Type name & Title)

Work Authorized by:
Greeley and Hansen & Village of Orland Park
(sign & date:) ______________________ Date

____
(Print or Type name & Title)

Gardner, Keith

From: John Ingram [JIngram@orland-park.il.us]
Sent: Wednesday, October 07, 2009 8:54 AM
To: Vogt, Beth
Cc: Johnson, Kenneth; Gardner, Keith; Linde, Roger
Subject: RE: OP ERA -Central Reservoir Leaks

Beth,

Inform JJH that we have two cracks (L5 and L10) on the existing reservoir that will potentially need injection filling. We can continue to monitor them over the next few days and if they self heel we will not do them. I would like to get a cost estimate for this work.

Thanks,

JJI

From: Linde, Roger [mailto:rlinde@greeley-hansen.com]
Sent: Tuesday, October 06, 2009 2:04 PM
To: Gardner, Keith; Vogt, Beth; John Ingram
Cc: Johnson, Kenneth
Subject: RE: OP ERA -Central Reservoir Leaks

The Lombard Company went through a similar leak testing program as JJH is undergoing today. I believe that the leakage expectations are much more stringent in JJH's contract than back when the original reservoir was installed and tested. I recall significant discussion about the size of the cracks and at what size of crack was remedial work required figuring that smaller cracks should self-heal.

Roger P. Linde

(773) 382-8396 (SWPP)
(773) 375-9758 (fax SWPP)
(708) 638-8558 (cell)

Please consider the environment before printing this email. Thank you

---

From: Gardner, Keith
Sent: Tuesday, October 06, 2009 1:38 PM
To: Vogt, Beth; John Ingram (JIngram@orland-park.il.us)
Cc: Johnson, Kenneth; Linde, Roger
Subject: OP ERA -Central Reservoir Leaks

Good morning. As requested I have attached several photos of the leaks in the central reservoir east wall as of today at 11:00 AM. By my count there are approximately 11 locations that are at least damp on the east wall of the central reservoir at this time. Only two of those leaks appeared to be actively weeping, L5 more so than L10 on the attached photos.

Let me know if you would like close up photos of the leaks.

Keith Gardner
Greeley and Hansen
847-812-4544

Gardner, Keith

From: Vogt, Beth
Sent: Wednesday, October 07, 2009 9:32 AM
To: 'Shirling, Jamie R.'; 'Mike Mahoney'
Cc: Gardner, Keith; Johnson, Kenneth; 'John Ingram'; Linde, Roger
Subject: Central Reservoir Wall Leak Repairs - Change Order Proposal Request
Attachments: 2009_10_06_Central Reservoir Leaks North.jpg; 2009_10_06_Central Reservoir Leaks South.jpg

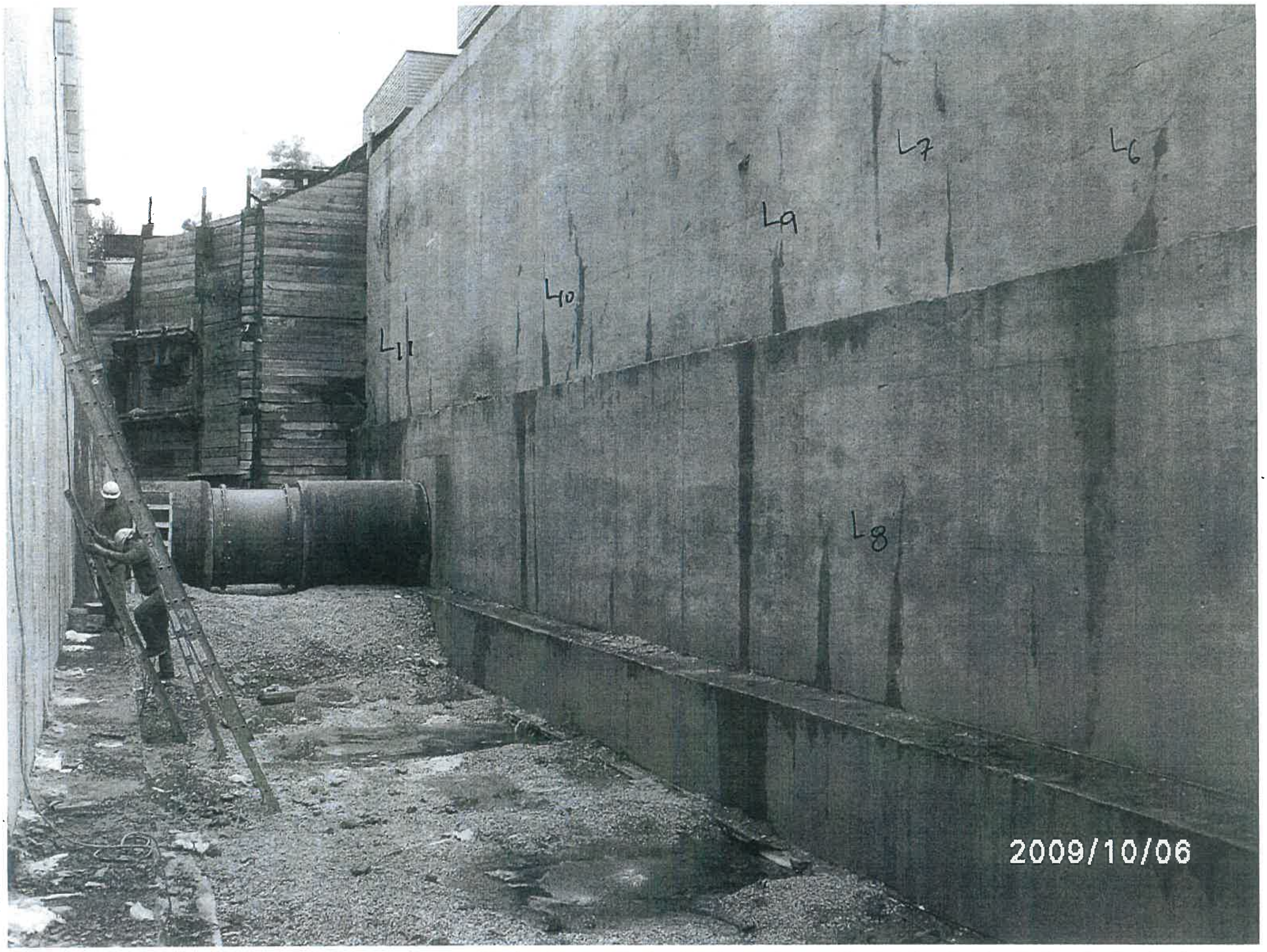
Mike and Jamie,

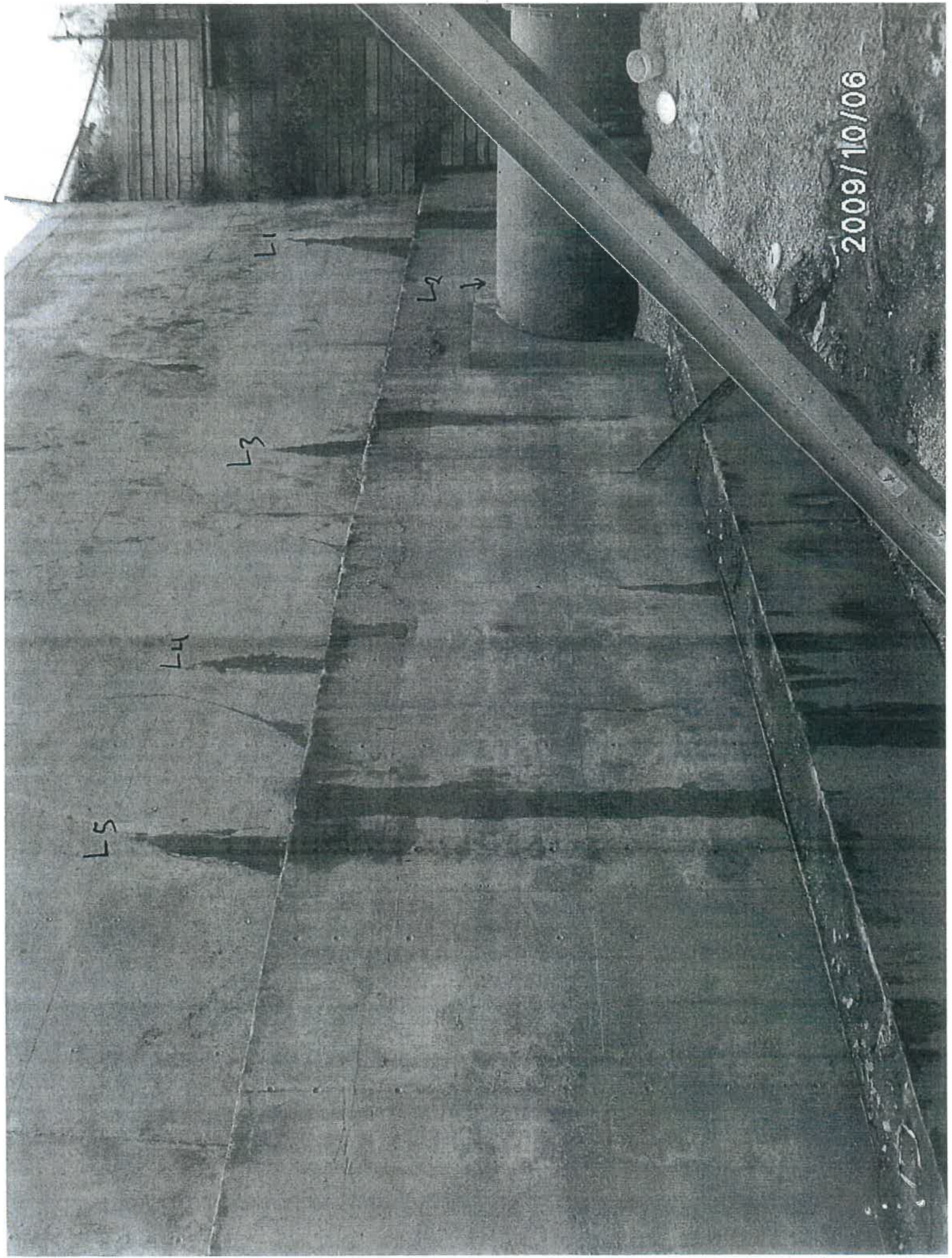
Keith has marked the visible leaks on the Central Reservoir wall. It appears that most of these are not very significant. I have attached the labeled photographs that Keith provided. Based on this information, we would like for JJH to do the following:

- Monitor the cracks over the next few days with Keith while work continues on leak repairs for the East Reservoir Addition
- Provide a change order cost estimate for repair of cracks L5 and L10 for our consideration

Based on information gathered above, we can then determine if the Village should proceed with repair of cracks L5 and L10. Let me know if you have questions on this request.

Beth Vogt
Greeley and Hansen


L6
L7
L9
L10
L11
L8
2009/10/06


2009/10/06
L1
L2
L3
L4
L5

Documentation Item No. 2

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 07/01/09

Job #: 1224-00 Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

NOTIFICATION		
Person Directing or Notified of Work:	Beth Vogt	Date Notified: 08/14/09
Method of Notification:	E-mail	

Reason for Change (in detail): Owner and Engineer requested that the 60" piping at the existing reservoir be encased in concrete.

Description of Work: Provide all labor, material and equipment to encase the 60" connection in concrete per above e-mail and subsequent direction from Greeley and Hansen.

Photographs Taken? **Yes** **No**

LABOR						
Phase	Date	Name	Trade	Hours	OT Hours	Cost
98/3-103	to date	[redacted]	CARP	26.0		$ 1,959.35
Rates good 6/1/09 to 5/31/10					***Labor Subtotal:***	**$ 1,959.35**

Materials				
Description of Material or Equipment	Units	Price	Quant.	Cost
Ozinga	yd	86.33	2.5	215.83
				-
				-
				-
				-
			Material Subtotal:	**$ 215.83**

See page two for Equipment, and Subcontractor charges.

JJ Henderson ________ *Initial*

Greeley and Hansen & Village of Orland Park ________ *Initial*

Continued on next page

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 07/01/09

Job #: 1224-00 Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

JJH Equipment				
Description of Material or Equipment	Units	Price/unit	Quant.	Cost
60 Ton Crane	Hour	62.50	1	62.50
		-	1	-
		-		-
		-		-
		-		-
		-		-
			Equipment Subtotal:	**$ 62.50**

Subcontractors	
Sub Name and Description of of work	Cost
Meccon	21,610.52
Subcontractors Subtotal:	**$ 21,610.52**

Extra Work Totals							
Labor Subtotal from page 1:		$	1,959.35	*Equipment Subtotal from above*		$	62.50
Labor OH&P	15%	$	293.90	Equipment OH&P	15%	$	9.38
Labor total		**$**	**2,253.25**	**Equipment total**		**$**	**71.88**
Material Subtotal from page 1:		$	215.83	*Subcontract Subtotal from above*		$	21,610.52
Material OH&P	15%	$	32.37	JJH OH&P	5%	$	1,080.53
Material total		**$**	**248.20**	**Subcontract total**		**$**	**22,691.05**
				Subtotal		$	25,264.37
				JJH Bond	1%	$	252.64
				Total		**$**	**25,517.01**

Joseph J. Henderson & Son, Inc.
(sign & date:) ____________________ Date

____
(Print or Type name & Title)

Work Authorized by:
Greeley and Hansen & Village of Orland Park
(sign & date:) ____________________ Date

____
(Print or Type name & Title)

Gardner, Keith

From: Rowley, Frank L. [FLRowley@Meccon.com]
Sent: Thursday, April 16, 2009 1:07 PM
To: Vogt, Beth
Cc: Shirling, Jamie R.; Greenya, Michael F.
Subject: FW: Orland Park Res.
Attachments: SKMBT_60009041612470.pdf

Jamie/Beth,
Below is the quotation from Hanson on the rings, our previously sent price included $1,770.00 for each ring, the current price is $2,800.00 each, please adjust the total price to $18,998.00 to reflect the additional material cost. A revised cover letter is attached.

From: White, Danny (Grand Prairie) NA [mailto:Danny.White@hanson.biz]
Sent: Thursday, April 16, 2009 12:23 PM
To: Rowley, Frank L.
Cc: Jankowski, Thomas (Chicago)
Subject: RE: Orland Park Res.

Frank,

The price of the bell portion of the retainer ring assembly is $2800.00 each. I assume that you will still have the bolts, nuts, gasket and back ring available to make a complete retainer ring assembly. If this is not the case please let me know and we can get the price for an entire assembly.

Danny White
Manager Layout/Drafting

Office: 972-266-7504
Cell: 214-250-0239
Fax: 972-264-6236

From: Rowley, Frank L. [mailto:FLRowley@Meccon.com]
Sent: Thursday, April 16, 2009 9:26 AM
To: White, Danny (Grand Prairie) NA
Cc: Jankowski, Thomas (Chicago)
Subject: RE: Orland Park Res.

Thanks, the sooner the better and we can get this back on track. Thanks for the help

---

From: White, Danny (Grand Prairie) NA [mailto:Danny.White@hanson.biz]
Sent: Thursday, April 16, 2009 9:08 AM
To: Rowley, Frank L.
Cc: Jankowski, Thomas (Chicago)
Subject: RE: Orland Park Res.

Frank,

I will have a price for you this morning.

Danny White
Manager Layout/Drafting

Office: 972-266-7504
Cell: 214-250-0239

Fax: 972-264-6236

From: Rowley, Frank L. [mailto:FLRowley@Meccon.com]
Sent: Thursday, April 16, 2009 8:37 AM
To: White, Danny (Grand Prairie) NA
Cc: Jankowski, Thomas (Chicago)
Subject: FW: Orland Park Res.
Importance: High

Danny,
Can you please confirm that the the cost of the two replacement pieces we will need to purchase after we weld the two we currently have onto the existing wall pipe.

From: White, Danny (Grand Prairie) NA [mailto:Danny.White@hanson.biz]
Sent: Thursday, April 09, 2009 4:57 PM
To: Greenya, Michael F.
Cc: Ziemer, Donn C. (South Beloit) NA
Subject: RE: Orland Park Res.

Mickey,

You should not have a problem doing it by welding the bell to the existing flange as long as you weld on the interior as your drawing shows. Also since the joint rings are zinc metalized, it is recommended that the zinc is removed in the area to be welded. You will need to either line the bell with mortar after it's installed or paint the lining in the weld area with a zinc coating.

Danny White
Manager Layout/Drafting

Office: 972-266-7504
Cell: 214-250-0239
Fax: 972-264-6236

From: Greenya, Michael F. [mailto:MFGreenya@Meccon.com]
Sent: Thursday, April 09, 2009 3:42 PM
To: White, Danny (Grand Prairie) NA
Cc: Rowley, Frank L.; Deremiah, Rick (Dayton) NA; Ziemer, Donn C. (South Beloit) NA
Subject: RE: Orland Park Res.

Let me try this again with the sketch attached

From: White, Danny (Grand Prairie) NA [mailto:Danny.White@hanson.biz]
Sent: Wednesday, April 08, 2009 4:27 PM
To: Greenya, Michael F.
Cc: Deremiah, Rick (Dayton) NA; Ziemer, Donn C. (South Beloit) NA
Subject: RE: Orland Park Res.

Mickey,

After talking to Donn about what you have out there, I'd suggest cutting off an 18" or 24" section of the closure cylinder and use one of the follower ring bells to make a new piece. However since the O.D. of the closure cylinder is too small to butt against the existing flange we'd need to supply you with a ring (or hardway bar in Price Brothers terminology) to weld between the flange and the cylinder. I've attached a sketch to give you an idea of what I mean. We'd also need to supply another follower ring bell to use with the rest of the closure. Let me know if that looks like something you would want to do and we'll do an "official" drawing.

If you want, we can fabricate a new piece to mate to the existing flange or maybe to extend into the wall fitting with a plain end that's welded to the wall piece. Either option would take longer than field modifying the existing material.

Danny White
Manager Layout/Drafting

Office: 972-266-7504
Cell: 214-250-0239
Fax: 972-264-6236

From: Greenya, Michael F. [mailto:MFGreenya@Meccon.com]
Sent: Wednesday, April 01, 2009 3:19 PM
To: White, Danny (Grand Prairie) NA
Cc: Deremiah, Rick (Dayton) NA
Subject: Orland Park Res.

I am attaching the pictures of the existing wall fitting and sketch with the measurements(see page 5 of the wall sleeve info pdf). Please give me a call.
Thanks,
Mickey Greenya
Meccon Industries, Inc.
2703 Bernice Road
Lansing, IL 60438
Ph: 708-474-8300
Fax: 708-474-8310
E-Mail: mfgreenya@meccon.com

Meccon Industries, Inc.

2703 Bernice Road
P.O. Box 206
Lansing, IL 60438-0206
(708) 474-8300 Tel
(708) 474-8310 Fax
email: info@meccon.com
website: www.meccon.com

4/16/09

JJ Henderson & Son, Inc.
4288 Grand Ave
Gurnee, IL. 60031

Attn: Ms. Jamie Shirling

RE: Orland Park East Reservoir
Meccon Project #08-4454 rev #1

Dear Ms. Shrling,

Meccon Industries, Inc. herby submits the following change order request for installing two additional adapter rings to accept the Hanson 60" PCCP to the existing reservoir wall pipes. This price includes the work to date as detailed on the attached time and material tickets along with the not to exceed time and material pricing per the attached details. **Total Time and Material price NTE $18,988.00**

Meccon mobilized to install the south 60" PCCP connection on Monday April 6th, the east connection to the new wall sleeve was successful, this portion of the project was completed in 3hrs. Meccon then rigged the west 60" PCCP connection and lifted it into place, once in place and checked for both level and square it was secured with two 3 ton chain falls attached to a rigging beam on the east end of the cylinder and two rigging plates anchored into the existing reservoir wall. These two mechanisms were located at 9-oclock and 3-oclock, they were both operated simultaneously to ensure a straight pull into the existing wall sleeve, while a third man monitored the level and square status of the cylinder. This continued for 3hrs with several different attempts at adjustment to possibly make up for what was appearing to be an alignment issue, Meccon then removed all rigging and removed the cylinder, this allowed us to re check all dimensions and we then discovered that the existing wall pipe appeared to be "out of round". At this time we concluded the day, demobilized the crane and placed a service call to Hanson Pressure Pipe.

On Wednesday April 8th, Hanson Representitive, Don Ziemer met with Meccon at site and reconfirmed our findings from Monday afternoon. Don instructed us to wait for his engineering department to respond with a solution, this solution is attached via email, Meccon has requested a copy of such on Hanson letterhead and we will forward as soon as it arrives here.

Sincerely,

Frank L. Rowley
Project Manager -MII

C:\Documents and Settings\flr.CAMELOT\Local Settings\Temporary Internet Files\OLK5FB\08-4454 Reservoir Connection Change Order.doc

Meccon Industries, Inc.

2703 BERNICE ROAD
P.O. BOX 206
LANSING, ILLINOIS 60438-0206
Telephone (708) 474-8300

Meccon CO#6
Total $21,610.52

LABOR and MATERIAL VOUCHER

044776

Date 04/06/09

☒ DAY SHIFT

☐ NIGHT SHIFT

☐ PREMIUM TIME ONLY

M.I.I. JOB NO. 08-4454 CLIENT ORDER NO.

CUSTOMER JJH

JOB NAME Orland Park East Reservoir LOCATION Orland Park

DESCRIPTION OF WORK PERFORMED Installed East-South Wall 60" PCCP connection to new reservoir West-South 60" PCCP connection was unable to be made due to fitment issues.

	LABOR, MATERIALS* AND EQUIPMENT RENTAL	HOURS WORKED			ACCOUNTING DEPARTMENT USE			
QTY.	DESCRIPTION	REG.	1½	DBLE	REG. RATE	PREMIUM RATE	UNIT RATE	TOTAL AMOUNT
1	Plumber GF - Luke Fagan	4			84 76			339 04
2	Plumber	4			81 83			654 64
	Imperial Crane lost time; 1/2 of						2110 00	2110 00
	Total Day Charge							

*List M.I.I. Purchase Order for all Material

TOTAL 3103 68

CHARGES CORRECT AS STATED

Meccon Industries, Inc.

CUSTOMER'S APPROVAL

Customer's Representative

FORM NO 701

CUSTOMER'S COPY

Meccon Industries, Inc.

2703 BERNICE ROAD
P.O. BOX 206
LANSING, ILLINOIS 60438-0206
Telephone (708) 474-8300

LABOR and MATERIAL VOUCHER

044777

Date 04/08/09

☒ DAY SHIFT
☐ NIGHT SHIFT
☐ PREMIUM TIME ONLY

M.I.I. JOB NO. 08-4454

CLIENT ORDER NO.

CUSTOMER JJH

JOB NAME Orland East Reservoir

LOCATION Orland Park

DESCRIPTION OF WORK PERFORMED Met with Hanson Field Service Rep - Don Ziemer to review problem at South connection to exist reservoir.

	LABOR, MATERIALS* AND EQUIPMENT RENTAL	HOURS WORKED			ACCOUNTING DEPARTMENT USE							
QTY.	DESCRIPTION	REG.	1½	DBLE.	REG. RATE		PREMIUM RATE		UNIT RATE		TOTAL AMOUNT	
1	Mickey Greenya - Plumber PM	2			90	27					180	54
1	Frank Rowley - Project PM	2			92	34					184	68
1	Luke Fagan - Plumber GF	2			84	76					169	52
										TOTAL	534	74

*List M.I.I. Purchase Order for all Material

CHARGES CORRECT AS STATED

Meccon Industries, Inc.

CUSTOMER'S APPROVAL

Customer's Representative

FORM NO. 701

CUSTOMER'S COPY

Meccon Industries, Inc.

2703 BERNICE ROAD
P.O. BOX 206
LANSING, ILLINOIS 60438-0206
Telephone (708) 474-8300

LABOR and MATERIAL VOUCHER

044778

Date 04/15/09

☒ DAY SHIFT
☐ NIGHT SHIFT
☐ PREMIUM TIME ONLY

M.I.I. JOB NO. 08-4454 CLIENT ORDER NO.

CUSTOMER JJH

JOB NAME Orland East Reservoir LOCATION Orland Park

DESCRIPTION OF WORK PERFORMED Provide dimensional data per request of Greeley & Hanson

	LABOR, MATERIALS* AND EQUIPMENT RENTAL	HOURS WORKED			ACCOUNTING DEPARTMENT USE			
QTY.	DESCRIPTION	REG.	1½	DBLE.	REG. RATE	PREMIUM RATE	UNIT RATE	TOTAL AMOUNT
1	Plumber GF - Luke Fagan	3			84 76			254 28

*List M.I.I. Purchase Order for all Material

TOTAL 254 28

CHARGES CORRECT AS STATED

Meccon Industries, Inc.

CUSTOMER'S APPROVAL

Customer's Representative

FORM NO. 701

CUSTOMER'S COPY

Meccon Industries, Inc.

2703 BERNICE ROAD
P.O. BOX 206
LANSING, ILLINOIS 60438-0206
Telephone (708) 474-8300

LABOR and MATERIAL VOUCHER

042092

Date 4/28/09 (Tues)

☒ DAY SHIFT

☐ NIGHT SHIFT

☐ PREMIUM TIME ONLY

M.I.I. JOB NO. 08-4454 CLIENT ORDER NO. ______

CUSTOMER JJH

JOB NAME Orland Park Reservoir LOCATION Orland Park

DESCRIPTION OF WORK PERFORMED Finish Weld-out on North 60" Adaptor Flange Install South Flange Begin Weldout

	LABOR, MATERIALS* AND EQUIPMENT RENTAL	HOURS WORKED			ACCOUNTING DEPARTMENT USE			
QTY.	DESCRIPTION	REG.	1½	DBLE.	REG. RATE	PREMIUM RATE	UNIT RATE	TOTAL AMOUNT
	PF AGF Dave Dunlap	8			89 41			715 28
	PF Ron Ortega	8			82 09			656 72
	Puller Luke Fagan	4			84 76			339 04
1	Service Truck # 1238	8	}					
1	P/u Truck # 1645	8	}		W/C	on site		
2	Gas Drive Welding Machines	8	}					

*List M.I.I. Purchase Order for all Material

TOTAL 1711 04

CHARGES CORRECT AS STATED

Meccon Industries, Inc.

CUSTOMER'S APPROVAL

Customer's Representative

FORM NO 701

CUSTOMER'S COPY

Meccon Industries, Inc.

2703 BERNICE ROAD
P.O. BOX 206
LANSING, ILLINOIS 60438-0206
Telephone (708) 474-8300

LABOR and MATERIAL VOUCHER

039499

Date 4/29/09 (wed)

☒ DAY SHIFT
☐ NIGHT SHIFT
☐ PREMIUM TIME ONLY

M.I.I. JOB NO. 08 - 4454 CLIENT ORDER NO.

CUSTOMER JJH

JOB NAME Orland Park Reservoir LOCATION Orland Park

DESCRIPTION OF WORK PERFORMED Finish Weld out of South 60" Adaptor Flange Demobilize Tools

	LABOR, MATERIALS* AND EQUIPMENT RENTAL	HOURS WORKED			ACCOUNTING DEPARTMENT USE			
QTY.	DESCRIPTION	REG.	1½	DBLE.	REG. RATE	PREMIUM RATE	UNIT RATE	TOTAL AMOUNT
	PFAGF Dave Daly	8			89 41			715 28
	PF Ray Ortega	8			82 09			656 72
	Plumber Luke Fagan	4			84 76			339 04
1	Service Truck # 1238	8						
1	P/U Truck # 1645	8			NC	on Site		
2	Gas Drive Welding Machine	8						

*List M.I.I. Purchase Order for all Material

TOTAL 1711 04

CHARGES CORRECT AS STATED

Meccon Industries, Inc.

CUSTOMER'S APPROVAL

Customer's Representative

FORM NO. 701

CUSTOMER'S COPY

Meccon Industries, Inc.

2703 BERNICE ROAD
P.O. BOX 206
LANSING, ILLINOIS 60438-0206
Telephone (708) 474-8300

LABOR and MATERIAL VOUCHER

042091

Date 4/27/09 (Mon)

☒ DAY SHIFT

☐ NIGHT SHIFT

☐ PREMIUM TIME ONLY

M.I.I. JOB NO. 08-4454 CLIENT ORDER NO. ____

CUSTOMER JJH

JOB NAME Orland Park Resivoir LOCATION Orland Park

DESCRIPTION OF WORK PERFORMED Install 60" Adapter Flange
Begin Weld-out, Mobilize Tools

	LABOR, MATERIALS* AND EQUIPMENT RENTAL	HOURS WORKED			ACCOUNTING DEPARTMENT USE			
QTY.	DESCRIPTION	REG.	1½	DBLE.	REG. RATE	PREMIUM RATE	UNIT RATE	TOTAL AMOUNT
	AGF Dave Dunlap	8			89.41			715.28
	PF Ron Ortega	8			82.09			656.72
	Plumber Luke Fagan	8			84.76			678.08
	Plumber Dean Veranda	8						
	Plumber Damian Veranda	8						
1	Service Truck # 1238	8						
1	P/U Truck # 1645	8						
2	Gas Drive Welders	8				NC onsite		
1	50 lbs 3/16" 6010# Weld Rod							
2	Cans Paint							
20 gal	Fuel Welding Machines							
1	Teamster Guido Colarrolo	4			58.61			234.44
1	PFA Grey Senase	4			62.20			248.80

*List M.I.I. Purchase Order for all Material

TOTAL 2533.24

CHARGES CORRECT AS STATED

Meccon Industries, Inc.

CUSTOMER'S APPROVAL

Customer's Representative

FORM NO. 701

CUSTOMER'S COPY

IMPERIAL CRANE SERVICES, INC.
RENTAL SERVICES • SALES • **24 HOUR SERVICE**
www.imperialcrane.com

REMIT TO:
7500 West Imperial Drive, Bridgeview, IL 60455-2395
Phone: 708-598-2300 • Fax: 708-598-2313

3200

Meccon Industries, Inc.
2703 Bernice Road
Lansing, IL 60438

Invoice	**92864**
Invoice Date:	Monday, May 04, 2009
Customer:	M0125
Job No:	C-66561
Job Site:	Orland Park Resovoir 15500 Thistlewood Orland Park, IL

#6216? FLK

08-4454

Salesperson: Bill Tierney
Terms: Net 30 Days
Customer P.O. No:

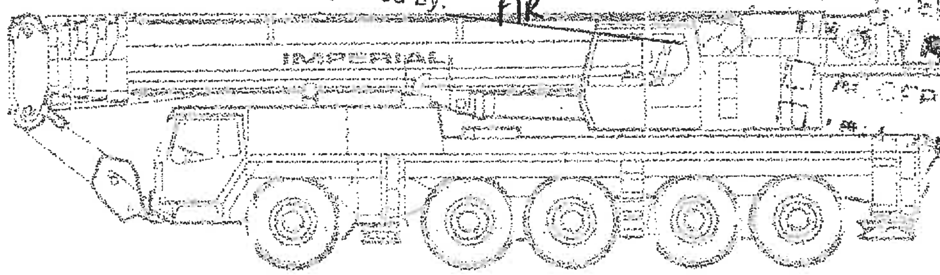
Date	Description	Unit No	Qty Unit Meas	Rate	Extension
5/4/2009	120 Ton Truck Crane Hourly Rent	189	8.00 Hour(s)	$390.00	$3,120.00
	120 Ton Truck Crane Hourly Rent Overtime charge for early start 6am - 7am, OT hours 3:30pm - 5:30pm and work through lunch.		3.50 Hour(s)	$555.00	$1,942.50
	Permits (Travel)		1.00 Each	$400.00	$400.00
	Freight Round Trip		1 00 Each	$700.00	$700.00
				Total Invoice:	**$6,162.50**

Thank you for your business.

RECEIVED
MAY 18 2009
MECCON INDUSTRIES, INC.

DATE ENTERED
MAY 20 2009
Accounting Dept.
Approved by: PJR

Sub-Contract Permit
WAIVER
☐ BACK-SITE
☐ [illegible]
INSURANCE
ACCEPTANCE
ACCEPTANCE



1½% Interest On The Outstanding Balance After 30 Days

INVOICE

Remit To:
P.O. Box 730498 DALLAS TX 75373-0498

Hanson

Ship To:
2009-0151 LANSING IL
2703 BERNICE ROAD
60" BELL CLOSURE RING

Bill To:
MECCON INDUSTRIES
2703 BERNICE ROAD
LANSING IL 60438-0206
United States

DATE ENTERED
MAY 29 2009

Accounting Dept.
Approved by: FIR

Invoice Date	Page Number
15-MAY-09	1 of 1
Invoice Number	
10227059	
Sales Contract	Customer Number
10121330	10006816
Customer Order	
117870	

Date	Plant	BOL No	Description	Qty	Unit	Unit price	Extended Price
14-MAY-09	599	390804	MISC				
			60" ECP STD FR CLOSURE RINGS (NO FOLLOWER RINGS)(JOB #08-4454)	2	EACH	2,800.00	5,600.00
			STRUCTURE TOTAL				5,600.00
			MATERIAL SUB-TOTAL				5,600.00

1

☐ TAXABLE
☑ EXEMPT
F.O.B.
☐ DELIVERED
☑ SHIPPING POINT
FIR

Term: NET 30 DAYS

Total Qty		Sales Tax:	
	2		.00

Take Discount of	IF PAID ON OR BEFORE		AMOUNT DUE
	MO	DAY	
.00	06	14	5,600.00

Documentation Item No. 3

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 07/01/09

Job #: 1224-00 Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

NOTIFICATION

Person Directing or Notified of Work: Beth Vogt Date Notified:

Method of Notification: E-mail

Reason for Change (in detail): Modify Hatches and Fill Line per e-mails from Beth at Greeley and Hansen

Description of Work: Install Bilco hatches, fill line and pump,

Photographs Taken? Yes No

LABOR

Phase	Date	Name	Trade	Hours	OT Hours	Cost
98/3-101	July - Aug	District Carpenter (JRM)	CARP	18.0		$ 1,356.47
00/3-171	March 09	District Carpenter (JRM)	CARP	9.0		$ 678.24
		District Carpenter (JRM)	CARP	19.0		$ 1,431.83
	July 2010	District Carpenter (JRM)	CARP	8.0		$ 602.88
		District Laborer (JRM)	LAB	8.0		$ 525.60
Rates good 6/1/09 to 5/31/10					***Labor Subtotal:***	**$ 4,595.01**

Materials

Description of Material or Equipment	Units	Price	Quant.	Cost
Ladder	ea	1,475.00	1	1,475.00
Saf-T-Climb Assembly	set	1,683.35	1	1,683.35
Hatches	ls	6,635.23	1	6,635.23
McMaster-Carr Pump Stand	ea	122.39	1	122.39
Roof Hatch Flashing	ea	587.50	2	1,175.00
Neenah R-6665-1PH Frame/MH Cover	ea	785.20	2	1,570.40
Concrete/Rebar	CY	86.33	16	1,381.28
Drydon - Watson Marlow Pump	ea	5,417.00	1	5,417.00
Foam Insulation 250 -1" and 2"	ls	230.00	1	230.00
			Material Subtotal:	**$ 19,689.65**

See page two for Equipment, and Subcontractor charges.

JJ Henderson ________ *Initial*

Greeley and Hansen & Village of Orland Park ________ *Initial*

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 07/01/09

Job #: 1224-00 Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

JJH Equipment

Description of Material or Equipment	Units	Price/unit	Quant.	Cost
		-		-
		-		-
		-		-
		-		-
		-		-
		-		-
			Equipment Subtotal:	$ -

Subcontractors

Sub Name and Description of of work	Cost
Meccon	10,026.00
Electrical - Sharlen	9,200.00
JAC Masonry	3,158.00
Subcontractors Subtotal:	**$ 22,384.00**

Extra Work Totals

Labor Subtotal from page 1:		$	4,595.01	*Equipment Subtotal from above*		$	-
Labor OH&P	15%	$	689.25	Equipment OH&P	5%	$	-
Labor total		$	**5,284.26**	**Equipment total**		$	-
Material Subtotal from page 1:		$	19,689.65	*Subcontract Subtotal from above*		$	22,384.00
Material OH&P	15%	$	2,953.45	JJH OH&P	5%	$	1,119.20
Material total		$	**22,643.10**	**Subcontract total**		$	**23,503.20**
				Subtotal		$	51,430.56
				JJH Bond	1%	$	514.31
				Total		**$**	**51,944.87**

Joseph J. Henderson & Son, Inc.
(sign & date:) ______________________ Date
____
(Print or Type name & Title)

Work Authorized by:
Greeley and Hansen & Village of Orland Park
(sign & date:) ______________________ Date
____
(Print or Type name & Title)

SECTION 04300

MASONRY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Face brick

1.2 SUBMITTALS

A. General: Provide all submittals, including the following, as specified in Division 1.

B. Samples: Submit a sample of face brick to match brick on Main Pumping Station. Review sample with the OWNER.

1.3 DELIVERY, STORAGE, AND HANDLING

A. General: Deliver, store, and handle all products and materials as specified in Division 1 and as follows:

B. Masonry units: Handle masonry units in a manner to prevent undue breakage or chipping. Unload face brick, and concrete masonry units with brick clamps. Store all masonry units on platforms under shelter or in any other approved manner to protect these materials from soil and weather.

C. Rejection: Bricks and that are warped, cracked or of inferior quality will be rejected. Remove them from the Work and do not offer them again for inspection.

D. Cement and Lime: Deliver cement, lime and any other accessory materials in their original, unbroken packages or containers with the manufacturer's label thereon and store clear off the ground in weathertight sheds.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable manufacturers are listed below. Other manufacturers of equivalent products may be submitted.

1. Face Brick: The Belden Brick Company, Match Existing Brick

B. Face Brick: Provide face brick conforming to ASTM C 216 Grade SW Type FBS to match existing brick.

C. Cleaning Solutions: Use nonacidic clean water and soap powders which are not harmful to masonry work or adjacent materials.

PART 3 EXECUTION

3.1 INSTALLATION

A. General: Install brick in accordance with the manufacturer's recommendations and approved shop drawings and as specified in Division 1.

B. Environmental Conditions: Maintain materials and surrounding air temperature to minimum 50 degrees F prior to, during, and 72 hours after completion of masonry work. Do not erect masonry when the ambient temperature is below 32 degrees F with a rising or falling temperature, or when there is a probability of such a condition existing within 48 hours, unless special provisions are made for heating the materials and protecting the Work from freezing. Work will not be permitted with or on frozen materials. Use of masonry units having a film of frost on their surfaces will not be permitted.

C. Protection: Properly protect surfaces of masonry not being worked on at all times. When rain or snow is imminent and the Work is discontinued, cover the tops of exposed masonry walls and similar surfaces with a strong waterproof membrane, well secured in place.

D. Coursing: Carry masonry walls up level and plumb all around. Do not carry up one section of the walls in advance of the others, unless specifically approved.

1. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
2. Lay concrete masonry units in running bond. Course one unit and one mortar joint to equal 8 inches. Form concave mortar joints.

E. Placing and Bonding: Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.

1. Do not butter corners of joints or excessively furrow mortar joints.
2. Remove excess mortar as Work progresses.
3. Interlock intersections and external corners. Splice horizontal reinforcing at intersections and corners with a 6-inch overlap of side rods.

4. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove the mortar and replace it with new mortar.

5. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

F. Brickwork: Construct as follows:

1. Lay brickwork in common bond, unless indicated otherwise.

2. Fill all joints between bricks completely with mortar.

3. Form bed joints of a thick layer of mortar smoothed or furrowed lightly.

4. Form head joints by applying, to the brick to be laid, a full coat of mortar on the entire end, or on the entire side, as the case requires, and then shoving the mortar-covered end or side of the brick tightly against the brick laid previously.

5. Lay closure brick with a bed joint and with head joints, and place the brick carefully without disturbing the brick previously laid.

6. Test clay or shale brick daily on the job, prior to laying, to determine if they will require wetting.

7. Buttering the corners of brick and then throwing mortar or scrappings into the empty joints will not be permitted.

8. Do not use overburned or underburned, warped, spalled, cracked or broken brick where exposed.

9. Do not allow dry or butt joints.

G. Cleaning: Clean masonry work as follows:

1. Remove excess mortar and mortar smears.

2. Replace defective mortar. Match adjacent work.

3. Wash concrete masonry units with clean water and soap powder using fiber brushes.

4. Clean brickwork with 1 part commercial grade muriatic acid and 9 parts water. Clean areas not exceeding 10 to 20 square feet at a time. Soak the area to be cleaned with water, then scrub with the acid solution and rinse

with clean water. Use fiber brushes to apply the acid solution and for washing the brickwork. Do not allow the acid solution to come in contact with metalwork. Keep the brickwork below the area being cleaned wet during the cleaning process.

5. Use nonmetallic tools in cleaning operations.

H. Protection of Finished Work: Provide protective boards at exposed external corners which may be damaged by construction activities, without damaging completed Work.

END OF SECTION

SECTION 07620

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Requirements for furnishing and installing metal flashing, counterflashing, metal reglets and roof expansion joints covers, together with all accessories necessary for a complete installation.

1.2 REFERENCES

A. Codes and standards referred to in this Section are:

1. SMACNA - Architectural Sheet Metal Manual
2. NRCA - Roofing and Waterproofing Manual

1.3 DELIVERY, STORAGE AND HANDLING

A. General: Deliver, store and handle all products and materials as specified in Division 1 and as follows:

B. Stack preformed and prefinished material to prevent twisting, bending, or abrasion, and to provide ventilation.

C. Separation: Prevent contact with materials during storage which may cause discoloration, staining, or damage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable manufacturers are listed below. Other manufacturers of equivalent products may be submitted.

1. Sheet Metal
    a. Viromet by Follansbee Steel

2.2 MATERIALS

A. Provide .015-inch fully annealed Type 304 stainless steel sheet metal, conforming to ASTM A 167, coated with (ZT) and as manufactured for building construction.

2.3 ACCESSORIES

A. Provide accessories as follows:

1. Unless shown otherwise, cleats of 26-gauge (.018-inch) zinc and tin alloy coated Type 304 stainless steel
2. Zinc/tin or pure tin solder of top quality as recommended by the sheet metal manufacturer
3. Plastic cement meeting the requirements of ASTM D 2822, Type 1
4. Asphalt-saturated felt weighing 15 pounds per 100 square feet conforming to the requirements of ASTM D 226

PART 3 EXECUTION

3.1 PREPARATION

A. Prepare surfaces to which sheet metal will be applied which are even, smooth, sound, thoroughly clean and dry, and free from all defects that might affect the application. Cover all concrete surfaces which are shown to receive metal covering with two plies of asphalt-saturated felt.

3.2 INSTALLATION

A. General: Install flashing and trim in accordance with the manufacturer's recommendations and approved shop drawings and as specified in Division 1.

B. Install all sheet metal flashings in accordance with the manufacture's recommendations and approved shop drawings and as specified in Division 1. Make ample provisions for expansion and contraction for a watertight installation.

C. Accessories: Hem exposed edges of all flashings edges, folded back on themselves at outer edges not less than 1/2-inch to provide stiffening. Provide as required all accessories or other items essential to the completeness of the sheet metal installation, though not specifically shown or specified, to assure a watertight installation.

D. Seams: Lock all seams, except loose locked seams, and mallet flat and solder for their entire length. Flatten before soldering is done and finish 1-inch wide, unless otherwise specified. Fold and flatten longitudinal seams in the direction of water flow. Provide loose lock seams that are loose, flat locked seams, malleted flat, and finished not less than 1-inch wide, and completely fill with an approved plastic cement.

E. Joints: Solder metal joints watertight for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.

F. Soldering: Solder slowly with well heated sheet metal to heat the seams thoroughly and fill them completely with solder. Solder in strict compliance with the manufacturer's recommendations.

G. Sealing: Seal metal joints watertight.

H. Interfacing: Where sheet metal touches nonferrous metals, paint both surfaces with a heavy coating of an approved bituminous compound paint thinned to brushing consistency.

I. Coordination: Perform all cutting, fitting, drilling, and other operations in connection with sheet metal required to accommodate the work of other trades performed by craftsmen skilled in sheet metal work.

J. Manufacturer's Recommendations: Install sheet metal flashing and trim in accordance with the recommendations of the sheet metal manufacturer and SMACNA and NRCA manual recommendations.

3.3 CLEANING AND PAINTING

A. Clean all sheet metal after soldering. Wash with an approved neutralizer and rinse with water to remove flux and acid.

END OF SECTION

(NO TEXT FOR THIS PAGE)

SECTION 07724

ACCESS HATCHES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Shop-fabricated access hatches with integral support curb and operating hardware.

B. Related Work Specified in Other Sections Includes, But is Not Limited to, the Following:

  1. Section 05500 - Metal Fabrications

1.2 SUBMITTALS

A. General: Provide all submittals, including the following, as specified in Division 1.

B. Installation Instructions: Submit the manufacturer's installation instructions, including special installation criteria and interface with adjacent components.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable manufacturers are listed below. Other manufacturers of equivalent products may be submitted.

  1. Roof Hatches: The Bilco Company - Type NB-50C (30 x 54)

2.2 ROOF HATCHES

A. Material: Provide access hatches constructed of 3/16-inch aluminum, with all hardware of 316 stainless steel. Provide hatches with fully welded corner joints on cover and curb.

B. Size: Provide access hatches with a clear opening of 30 inches by 54 inches and as shown. Length denotes hinge side.

C. Integral Aluminum Curb: Provide hatches fabricated from 3/16-inch aluminum with 1-inch rigid fiberboard insulation, a 3-1/2-inch flange with 7/16-inch holes for mounting, and 11 gauge aluminum integral cap flashing to receive flashings. Manufacturer the hatches to a 12-inch height.

D. Aluminum Cover: Provide 3/16-inch aluminum cover with 3” overlapping flange, 1-inch fiberglass insulation sandwiched by 18-gauge aluminum interior liner, and continuous EPDM gasket bonded to the cover to provide weathertight seal. Provide cover that supports a minimum of a 40 psf live load with a maximum deflection of 1/150th of the span. Provide cover with a keyed cylinder, deadbolt type lock for keyed exterior access and turn knob operation from inside the hatches. Provide the lock with a gasketed, threaded deck plate.

E. Indicator Switches: Provide each hatch with an indicator switch. Provide Honeywell BZE6-2RQ Series E6 type indicator switches with top plunger actuators, 1NC 1NO SPDT Snap Action. The indicator switches will be wired into the pump station alarm system.

F. Hardware: Provide hardware as follows:

1. Compression spring operator and shock absorbers. Provide springs with an electrocoated acrylic finish.
2. Manual pull handle for interior and exterior operation
3. Hold open arm with vinyl covered grip handle for easy release
4. Heavy-duty pintle type hinges
5. Provide all hardware of 316 stainless steel.

2.3 FABRICATION

A. Fabricate components free of visual distortion or defects. Weld corners and joints. Fit components for weathertight assembly.

PART 3 EXECUTION

3.1 INSTALLATION

A. General: Install all access hatches in accordance with manufacturer's recommendations and approved shop drawings and as specified in Division 1.

B. Coordination: Coordinate with installation of related flashings for weathertight installation.

C. Finishing: Apply bituminous paint on surfaces of units in contact with cementitious materials or dissimilar metals as specified in Section 09900.

END OF SECTION

SECTION 11318

SAMPLING PUMP

PART 1 GENERAL

1.1 SUMMARY

A. Sampling Pump: Furnish one positive displacement, peristaltic type pump, utilizing flexible tubing and spring loaded roller or track. Provide pumps with motors, local controls, and all appurtenances necessary for a complete installation. Locate the equipment in the Pumping Station lower level.

B. Related Work Specified in Other Sections Includes:

1. Section 09900 - Painting
2. Section 15061 - Sampling Piping and Accessories

1.2 REFERENCES

A. Codes and standards referred to in this Section are:

1. Hydraulic Institute

1.3 SYSTEM DESCRIPTION FOR SAMPLING PUMP

A. General: Provide pump consisting of a fixed track with hinged guard door or cover with safety interlock switch, screw down or ratchet type tube retainer mechanism, spring loaded or gear driven roller rotor assembly with guide pins and integral variable speed drive. The magnetic interlock switch will render the drive inoperable when opened. Meet the requirements of NSF standards for potable water service for items in contact with the pumped fluid.

B. Operating Requirements: Furnish and install pump capable of pumping 50 gph at 220 rpm. Supply pumps capable of developing a continuous discharge pressure of 10 psig.

C. Fluid Character: Provide pump and appurtenances suitable in all respects and construction for sampling potable water.

1.4 SUBMITTALS

A. General: Provide all submittals, including the following, as specified in Division 1.

B. CONTRACTOR's Drawings: Submit working drawings, including arrangement and erection drawings of the equipment and control equipment.

C. Quality Control Submittals:

1. Manufacturer's certified performance and material records as required, including pump performance curve, parts list and cross section drawings.

2. For all materials in contact with the pumped fluid, provide certification of capability for use with potable water based on NSF standards.

D. Operation and Maintenance: Submit an operation and maintenance manuals for the pump.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle pumps and materials as specified in Division 1.

1.6 SPARE PARTS

A. Furnish the following spare parts for the metering pumps:

1. One roll of 10 feet of NSF approved tubing having a wall thickness of 2.4 mm and an ID of 9.6 mm.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable manufacturers are listed below.

1. Watson-Marlow/Bredel Inc. Model No. 520S/R2
2. Masterflex

2.2 SAMPLE PUMP CONSTRUCTION

A. Equip the rotor assembly with 316 stainless steel compression rollers. Provide pumps arranged so that one roller will be fully engaged with the tubing providing complete compression at all times to prevent back flow or siphoning. Provide pumps where the pumping action is created by the compression of the pump hose and its subsequent return to original shape causing a vacuum effect to draw the fluid into the suction side of the hose. Provide a factory set hose compression.

B. Secure the pumphead to the drive via self locating screws.

C. Flow through the hose will be in the direction of the rotor rotation which can be reversed.

D. Construct pump in which the process fluid will only be in contact with the inside of the pump tubing. Provide pump tubing that is NSF approved and suitable for use in peristaltic pumping service. Provide tubing having a wall thickness of 2.4 mm and an ID of 9.6 mm.

E. Design the pump with the tubing in contact with the inside diameter of the track (housing) and being held in place on the suction and discharge by a hand adjustable clamp mechanism. Tube clamps requiring tools are not acceptable. The tubing will be replaceable with no disassembly of the pumphead and without the use of tools.

F. Provide pumps capable of self priming when completely dry with a suction lift capability of up to 20 feet of water. Pumps must be capable of running dry without damaging effects to the pump or hose.

G. Provide pumps that use no check valves or diaphragms and do not utilize any dynamic seals in contact with the pumpage.

H. Construct the track (housing) of PPS/Ryton or of cast Aluminum coated with Trimite Polyester.

I. Provide pumps that require no special tools for regular maintenance.

2.3 DRIVE

A. Provide drives rated for continuous 24 hours operation at ambient temperature to 40 degrees C (104 degrees F).

B. Provide pump drive of the close coupled and self aligning type, requiring no flexible couplings.

C. Drive speed must be infinitely variable throughout the complete range.

D. Control drive speed, pumping direction, and starting via liquid tight controls mounted on the front panel.

E. Design on/off contact to be functional in either manual or analog mode.

F. Locate manual or analog mode selectable via keypad or position rotary selector switches on front panel.

G. Provide pump having non-maintained maximum speed switch for purpose of priming.

H. Select voltage between 100-120 v, 60 Hz, 1-phase via 2 position slide type switch recessed to protect from incidental contact. Provide standard 120 v type power cord with 3 prong plug and twenty feet in length routed through liquid tight cord clamp.

I. Provide a brushless permanent magnet DC drive motor with integral gearbox.

J. Provide IP31 rated drive enclosure.

K. Provide an ABS molded drive enclosure or coat the enclosure as follows:

1. Top and bottom casing - Trimite Polyester powder, electrostatically applied and baked.

2. Front and rear panels - Trimite Polyurethane coating, spray applied and baked.

2.4 ACCESSORIES

A. Fiberglass stand: Provide a fiberglass wall-mounted stand on which to install the sample pump. Design the stand such that the pump is located a minimum of 3'-0" from the floor. Arrange the wall mounted stand with suitable bracing located below the stand. Affix the stand and bracing to the pump station wall using suitably sized expansion anchors. Provide a stand with horizontal surface on which to locate the pump that exceeds the plan dimensions of the pump by six (6) inches in both length and width.

2.5 OPERATION, MONITORING AND CONTROL

A. General: Provide the following items integral to each pump.

1. LED display of rpm

2. Manual speed control via front panel single turn potentiometer.

3. Manual control of start, stop, direction and priming.

2.6 SOURCE QUALITY CONTROL

A. Provide drive and pumphead with one year warranty from date of shipment and covering the drive and pumphead assemblies for manufacturing defects on non-consumable components.

PART 3 EXECUTION

3.1 INSTALLATION

A. Arrange the pumping equipment as shown and suitable for installation in the spaces as shown without appreciable revision of the piping. Locate piping connections to preclude any appreciable change in the arrangement of the lines.

3.2 FIELD QUALITY CONTROL

A. Field Tests: After installation of the pumping units and all appurtenances, subject the pumping unit to a field running test under actual operating conditions.

3.3 CLEANING

A. Clean the pump exterior prior to turning over to the OWNER.

END OF SECTION

(NO TEXT FOR THIS PAGE)

SECTION 15061

SAMPLING PIPING AND ACCESSORIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Requirements for furnishing and installing all small piping, tubing, and accessories for a complete sampling system installation.

B. Related Work Specified in Other Sections Includes, But is Not Limited to, the Following:

   1. Section 11318 – Sampling Pump

1.2 REFERENCES

A. Codes and standards referred to in this Section are:

   1. American National Standard Institute (ANSI)
   2. American Society of Mechanical Engineers (ASME)
   3. American Society for Testing and Materials (ASTM)
   4. American Water Works Association (AWWA)
   5. American Welding Society (AWS)

1.3 SUBMITTALS

A. General: Provide all submittals, including the following, as specified in Division 1.

B. Provide submittals for all piping, valves and other appurtenances. Include in the submittals shop drawings, manufacturer's data and certifications, installation instructions, assembly drawings, electrical connection diagrams, operating characteristics and dimensions.

C. Submit the following manufacturer's certificates:

   1. Furnish certificates to verify that all materials in contact with potable water have NSF Standard 61 approval.

1.4 QUALITY ASSURANCE

A. Furnish all valves of the same type from the same manufacturer. Provide parts that are interchangeable for all valves of the same type and size.

1.5 DELIVERY, STORAGE AND HANDLING

A. General: Deliver, store and handle all products as specified in Division 1 and as follows.

1. Take extreme care in loading and unloading the pipe, fittings.

2. Under no condition is the pipe to be dropped, bumped, dragged, pushed or moved in any way which will cause damage to the pipe, lining or coating.

3. If any piping or fittings are damaged in the process of delivery, storing, handling, or laying, replace or repair such piping or fittings as approved at no additional cost to the OWNER.

4. Deliver piping from the factory in bagged, capped and sealed condition. Maintain such condition for storage of piping until the piping is installed.

5. Deliver and store fittings that are capped, bagged in polyethylene bags and heat sealed. Maintain such condition for storage of fittings until such time that the fittings are installed.

PART 2 PRODUCT

2.1 MANUFACTURERS

A. Acceptable manufacturers are listed below. Other manufacturers of equivalent products may be submitted.

1. Flexible Sampling Tubing
    a. Tygothane Pressure Tubing (Manufactured by Norton Performance Plastics, Akron, OH)

2.2 MATERIALS

A. Stainless Steel Pipe and Fittings

1. Stainless Steel Pipe: The sampling pipe shall be ASTM A312, TP316L, Schedule 80, seamless.

2. Fittings: Provide fittings of Type 316L stainless steel per ASTM A SA479 or ASTM-SA182-F316, threaded or screwed. Seal fittings with Teflon tape or joint compound bearing NSF certification for use with potable water.

3. Stainless steel bolts, washers nuts and hardware: Provide items of 316 stainless steel.

B. Flexible Sampling Tubing: Provide an over braided reinforced flexible tubing system suitable of for use with potable water in accordance with NSF standard 61.

1. Provide Tygothane Pressure Tubing as manufactured by Norton Performance Plastics and supplied by Cole-Parmer or equal.

2. Install the flexible tubing with no intermediate joints.

3. Transition Fittings: Provide tubing to stainless steel transition fittings, Type 316.SS Cam Lever couplings (Items A and C) as manufactured by Sani-tech, Inc. Lafayette, NJ, or equal.

PART 3 EXECUTION

3.1 INSTALLATION

A. General: Install in accordance with the following:

1. The dimensions shown on the Contract Drawings for the locations of pipe lines have been established with the intent that there will be no interferences.

2. Install all piping in such a manner that it may be easily removed for maintenance and repair. Provide an adequate number of unions in sampling pipe runs to facilitate dismantling or removal of pipeline sections without disturbing adjacent branch or connecting lines.

3. Install all pipe lines straight and true in alignment grade, and location indicated, designated, or required, and in a workmanlike manner.

4. Adequately brace and block, tie or support the pipe and fittings for satisfactory installation. Make ample provisions for flexibility in all pipelines.

5. Provide Type 316L stainless steel metal shapes, plates, and bars used for shims meeting ASTM A276-91A.

6. Inspect pipe joints for leakage prior to burial.

B. Comply with the following for all threaded joints:

1. Assemble all threaded joints using NSF 61 approved lubricant. Use “Gimme the Green Stuff!” by Jomar Seal.

2. Apply the lubricant to male threads only.

3. Where pipe lengths are cut, properly ream the edges to the full diameter of the pipe and thoroughly clean of all chips.

4. Clean inside of threaded pipe of lubricant prior to assembly.

C. Conform with the following for welding of the pipes:

   1. In accordance with latest editions of Section IX, ASME Boiler and Pressure Vessel Code and the American National Standard Code for Pressure Pipe, ANSI B31.2 and B31.3, as applicable.

D. Provide all unions in accordance with:

   1. Install adjacent to threaded devices and in all locations required to permit easy removal of the devices and piping.

   2. The use of running threads or right and left hand couplings instead of unions will not be permitted.

E. Comply with the following for all hangers and supports for pipes:

   1. Support all piping in an approved manner to prevent damage or the loosening of joints.

   2. Make all pipe hangers, support and accessories of Type 316 stainless steel, and of the type and size as approved by the Construction Contract Administrator for the particular application.

   3. The distance between supports for horizontal piping, unless otherwise specified, shall not exceed 10 feet.

   4. Provide lateral supports for the vertical runs of piping and the distance between these supports shall be as shown and shall not exceed 5 feet.

3.2 CLEANING

A. Cleaning: Swab and flush with clean water all process and potable water pipelines.

B. Leakage: Test pipes at the pressures specified in Section 02516 - Leaking Tests.

3.3 DISINFECTION

A. Disinfect all potable water pipelines in accordance with Section 02512 - Disinfection.

END OF SECTION

From:	Vogt, Beth
Sent:	Tuesday, April 28, 2009 10:30 AM
To:	'Shirling, Jamie R.'; 'Al Brcak'
Cc:	Johnson, Kenneth; 'John Ingram'; David, Ray; Linde, Roger; Mike Mahoney
Subject:	RE: More Questions on Openings - Orland Park
Attachments:	14601-S2.pdf; SD003.pdf; Neenah Casting 6665-1PH.pdf

Jamie,

The revisions to Drawing S2 that are bubbled answers the locations questions and SD03 gives the orientation.

To be clear:

1. WILL THE NEW CASTING IN "C" BE PLACED AT THE SAME LOCATION AS THE 36" DIA. ONE SHOWN NOW? THE CENTER LINE WILL BE 9'-3" FROM EACH COL.LINE AND PLACED TO CLEAR THE WALL BELOW
   Answer: Yes the new casting is in the same location as the original 36" diameter casting was going to be 9'3" from each column line. See revised drawing S2. Yes, the opening, which is actually 26" x 29" clear access needs to clear the wall below.

2. WHERE WILL THE OTHER CASTING IN "P" BE LOCATED?
   Answer: The new casting in P is 8'-8.5" from each column line and needs to clear the wall below. See revised drawing S2.

3. WE WILL DELETE THE TWO LIFT-OUT SLABS IN "B" AND "V".
   Answer: Yes the two 5'-0" removable slabs in B and V are being eliminated. The only removable slab remaining is in slab O.

4. WHICH WAY DOES THE LONG SIDE OF THE NEW CASTINGS GO? THE INSIDE DIMENSIONS ARE 30" x 27".
   Answer: The short side of the casting is parallel to the outside wall of the reservoir. The actual clear dimensions of the access opening are actually 26 x 29. This is shown in drawing SD03 in the section 2/SD03 where the 29" dimension is perpendicular to the outside wall. Thus, for the casting in slab C, the short side is east-west running and for slab P the short side is north-south running.

I have attached the revised drawings S2, SD03 and the casting cut sheet to this email. Let me know if you have further questions. It is great news that the castings will be coming soon and that the top slabs work is proceeding.

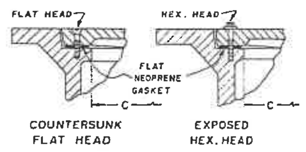
Beth Vogt
Greeley and Hansen

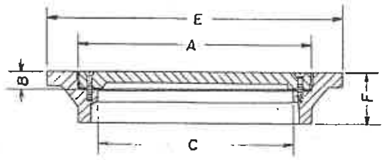
From: Shirling, Jamie R. [mailto:JamieS@jjhenderson.com]
Sent: Tuesday, April 28, 2009 9:21 AM
To: Vogt, Beth
Subject: More Questions on Openings - Orland Park

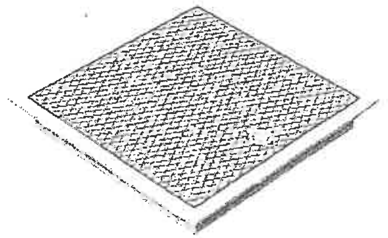
R-6665-0 to R-6665-1 Series

Manhole Frame, Bolted/Gasketed Lid

Light Duty







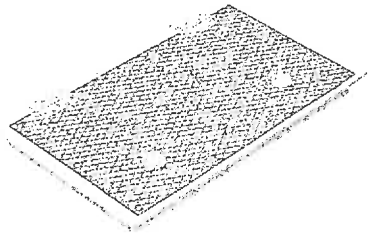
Illustrating R-6665-0NP

Square and rectangular sizes in this series furnished standard with countersunk stainless steel flat head cap screws, flat neoprene gasket, Type G lift handle and, when so indicated, Type R stainless steel butt hinge.

All units available in cast aluminum or bronze for spark proof application.

Units are shipped assembled with gasket glued to frame.

The specific location and number of hinges, handles and pickholes on these units may vary depending on the size and shape of the lids, and may not be exactly as illustrated. If the location and number of hinges, handles or pickholes is critical on your particular project, please specify requirements.



Illustrating R-6665-1KH

Catalog No. Not Hinged	Catalog No. Steel Butt Hinge	A	B	C	E	F	No. of Bolts
		Dimensions in inches					
	Square						
R-6665-0AP	R-6665-0AH	12 x 12	3/4	10 x 10	18 1/2 x 18 1/2	4	4
R-6665-0CP	R-6665-0CH	13 x 13	5/8	12 x 12	15 x 15	3	4
R-6665-0DP	R-6665-0DH	15 x 15	3/4	13 x 13	19 x 19	4	4
R-6665-0FP	R-6665-0FH	18 1/2 x 18 1/2	3/4	17 x 17	23 x 23	3	4
R-6665-0GP	R-6665-0GH	19 3/4 x 19 3/4	3/4	17 1/2 x 17 1/2	24 x 24	4	8
R-6665-0HP	R-6665-0HH	21 1/2 x 21 1/2	3/4	18 1/2 x 18 1/2	24 1/2 x 24 1/2	4	8
R-6665-0JP	R-6665-0JH	23 1/2 x 23 1/2	3/4	20 7/8 x 20 7/8	28 1/2 x 28 1/2	4	8
R-6665-0KP	R-6665-0KH	25 1/2 x 25 1/2	3/4	23 x 23	30 x 30	4	8
R-6665-0MP	R-6665-0MH	30 x 30	3/4	27 x 27	34 x 34	4	8
R-6665-0NP	R-6665-0NH	32 x 32	3/4	29 x 29	36 x 36	4	8
	Rectangular						
R-6665-1A1P	R-6665-1A1H	14 x 19	3/4	11 x 16	18 1/4 x 23 3/8	4	4
R-6665-1BP	R-6665-1BH	14 x 26	3/4	11 x 23	18 x 30	4	6
R-6665-1CP	R-6665-1CH	18 x 32	3/4	15 x 29	20 x 34	4	6
R-6665-1DP	R-6665-1DH	19 5/8 x 49 5/8	3/4	17 x 47	22 x 52	4	12
R-6665-1EP	R-6665-1EH	21 1/2 x 24 1/2	3/4	19 x 22	26 x 29	6	8
R-6665-1F3P *	R-6665-1F3H *	24 1/2 x 55 1/2	3/4	19 x 29	30 x 62	4	12
R-6665-1FP	R-6665-1FH	22 x 32	3/4	22 x 54	26 x 36	5 1/4	10
R-6665-1HP	R-6665-1HH	26 x 32	3/4	23 x 29	30 x 36	4	8
R-6665-1JP	R-6665-1JH	26 x 38	3/4	23 x 35	30 x 42	4	10
R-6665-1KP	R-6665-1KH	26 x 44	3/4	22 x 40	30 x 48	4	10
R-6665-1LP	R-6665-1LH	25 1/2 x 49 1/2	3/4	23 x 47	30 x 54	4	12
R-6665-1NP	R-6665-1NH	25 1/2 x 61 1/2	3/4	23 x 59	31 x 67	6	12
R-6665-1PP	R-6665-1PH	29 x 32	3/4	26 x 29	34 x 37	4	8
R-6665-1TP	R-6665-1TH	31 5/8 x 37 5/8	3/4	29 x 35	37 x 43	4	12
R-6665-1UP	R-6665-1UH	32 x 43 3/4	3/4	29 x 41	37 x 47 1/2	4	12
R-6665-1V1P	R-6665-1V1H	31 5/8 x 73	3/4	29 x 47	36 x 78	4	18
R-6665-1VP	R-6665-1VH	32 x 50	3/4	29 x 71	36 x 54	4	14

* Frame in sections bolted at corners.

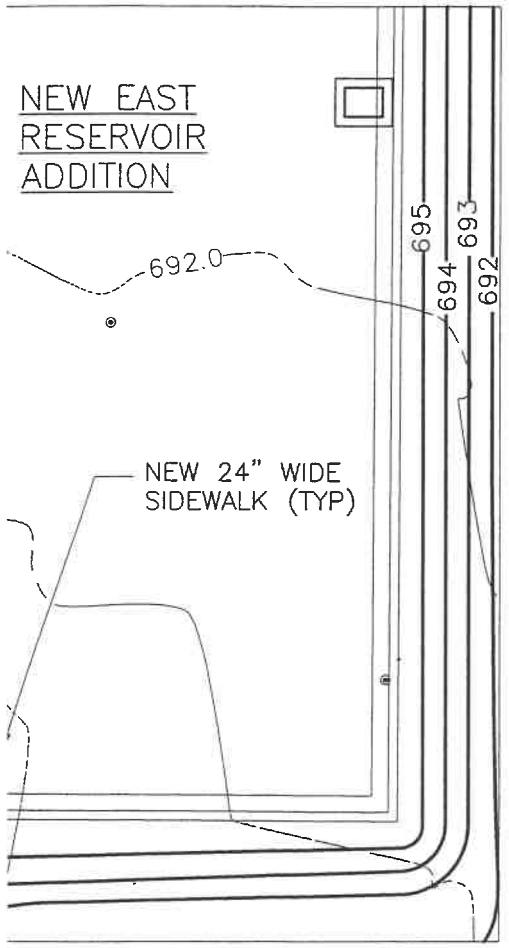
IR HATCHES

VILLAGE OF ORLAND PARK, ILLINOIS
EAST RESERVOIR ADDITION

SUPPLEMENTARY
DRAWING SD01
DATE: JUNE 2009

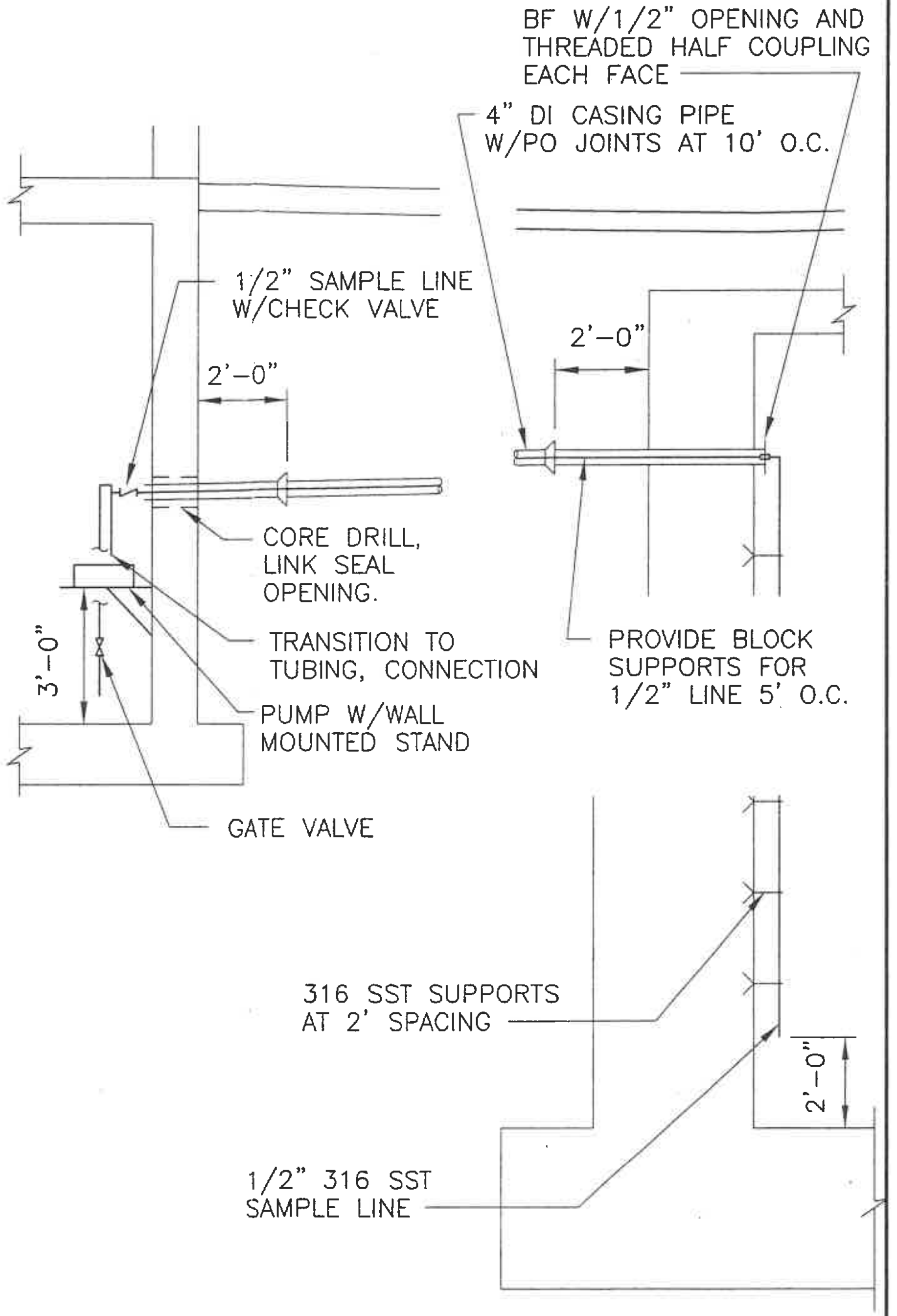
REFERENCE DRAWING G2

SHEET 1 OF 1



ING SITE PLAN

I0'



ITH XHHW-2 WIRE WITH COPPER CONDUCTORS.

INSIDE THE PUMP STATION. ROUTE
PANEL IN PUMP STATION BASEMENT.
EACH HATCH (QTY 2)

SAMPLE LINE DETAIL

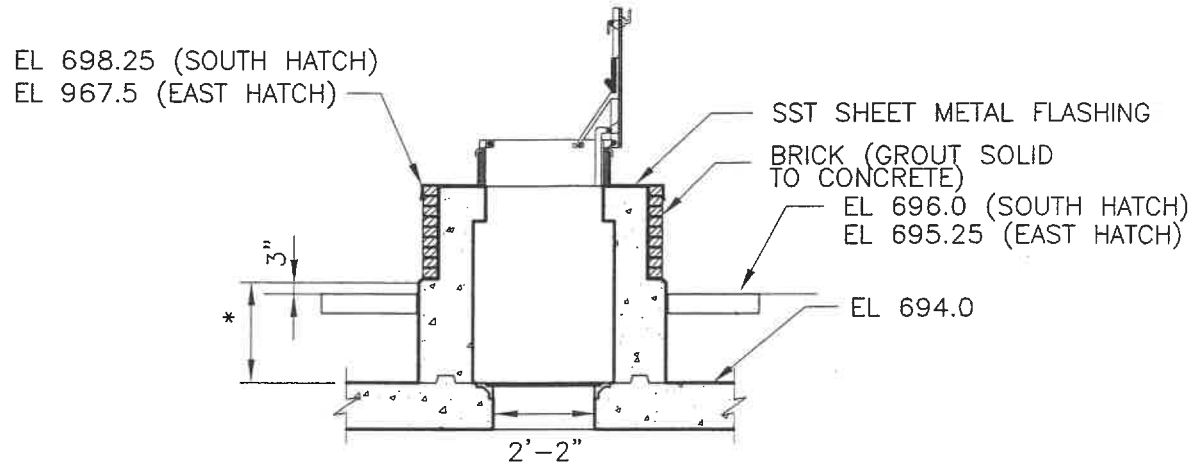
SCALE: 1/4"=1'-0"

H DETAILS

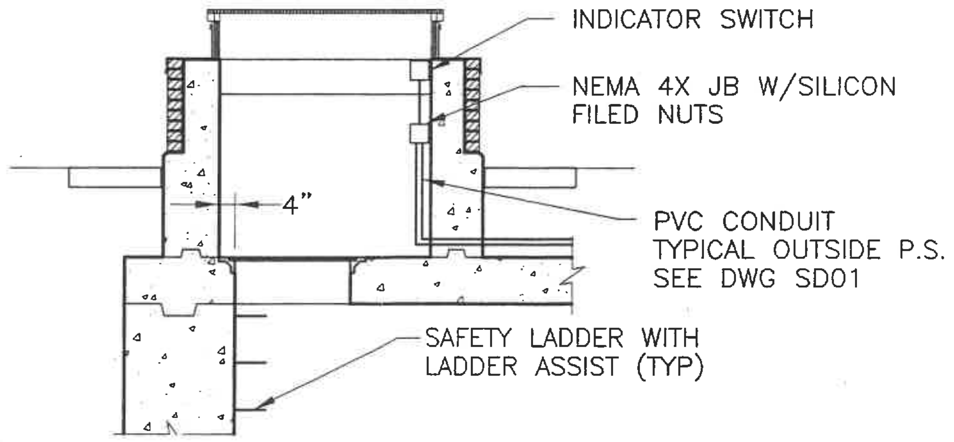
VILLAGE OF ORLAND PARK, ILLINOIS
EAST RESERVOIR ADDITION

SUPPLEMENTARY
DRAWING SD02
DATE: JUNE 2009

REFERENCE DRAWING G2
SHEET 1 OF 1



SECTION 1/SD02



SECTION 2/SD02

SECTION 04050

MASONRY MORTAR AND GROUT

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Cement, sand, aggregate admixtures and water for use in masonry mortar and grout.

1.2 REFERENCES

A. Codes and standards referred to in this Section are:

1. ASTM C 91 - Masonry Cement
2. ASTM C 144 - Aggregate for Masonry Mortar
3. ASTM C 150 - Portland Cement
4. ASTM C 207 - Hydrated Lime for Masonry Purposes
5. ASTM C 270 - Mortar for Unit Masonry
6. ASTM C 231 - Air Content of Freshly Mixed Concrete
7. ASTM C 404 - Aggregate for Masonry Grout
8. ASTM C 476 - Grout for Masonry
9. ASTM C 780 - Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
10. ASTM C 1019 - Sampling and Testing Grout
11. Brick Institute of America Research Report No. 15
12. ACI 530.1/ASCE 6-92 - Specifications for Masonry Structures

1.3 SUBMITTALS

A. Provide all submittals as specified in Division 1.

1.4 DELIVERY, STORAGE AND HANDLING

A. General: Deliver, store and handle all mortar and grout materials as recommended by the manufacturers and as specified in Division 1 (and as follows:)

PART 2 PRODUCTS

2.1 CEMENT

A. Provide cement that is a domestic product from an approved source. Provide standard Portland cement meeting the requirements of ASTM C 150 Type I or Type II.

2.2 AGGREGATE

A. General: Provide fine aggregate for mortar that is natural sharp sand meeting the requirements of ASTM 144.

B. Fine Aggregate: Provide fine aggregate for masonry grout that is natural sand meeting the requirements of ASTM C 404 Size No. 2.

C. Coarse Aggregate: Provide coarse aggregate for masonry grout that is crushed stone meeting the requirements of ASTM C 404 Size No. 8.

2.3 HYDRATED LIME

A. Provide hydrated lime meeting the requirements of ASTM C 207.

2.4 WATER

A. Provide clean water furnished from approved sources to mix mortar and grout. Use water that does not contain deleterious amounts of acids, alkalies or organic materials.

PART 3 EXECUTION

3.1 MEASUREMENT AND MIXING

A. Measurement of Materials: Measure materials for mortar and grout by either volume or weight such that the specified proportions can be controlled and accurately maintained. Measurement by shovel will not be accepted.

B. Mixing Mortar and Grout: Mix all cementitious materials and aggregate for at least 3 minutes, and not more than 5 minutes, in a mechanical batch mixer, with a sufficient amount of water to produce a workable consistency.

C. Retempering: Retemper mortars that have stiffened, because of evaporation of water, by adding water as frequently as needed to restore the required consistency. Place mortar and grout in final position within 2-1/2 hours after initial mixing.

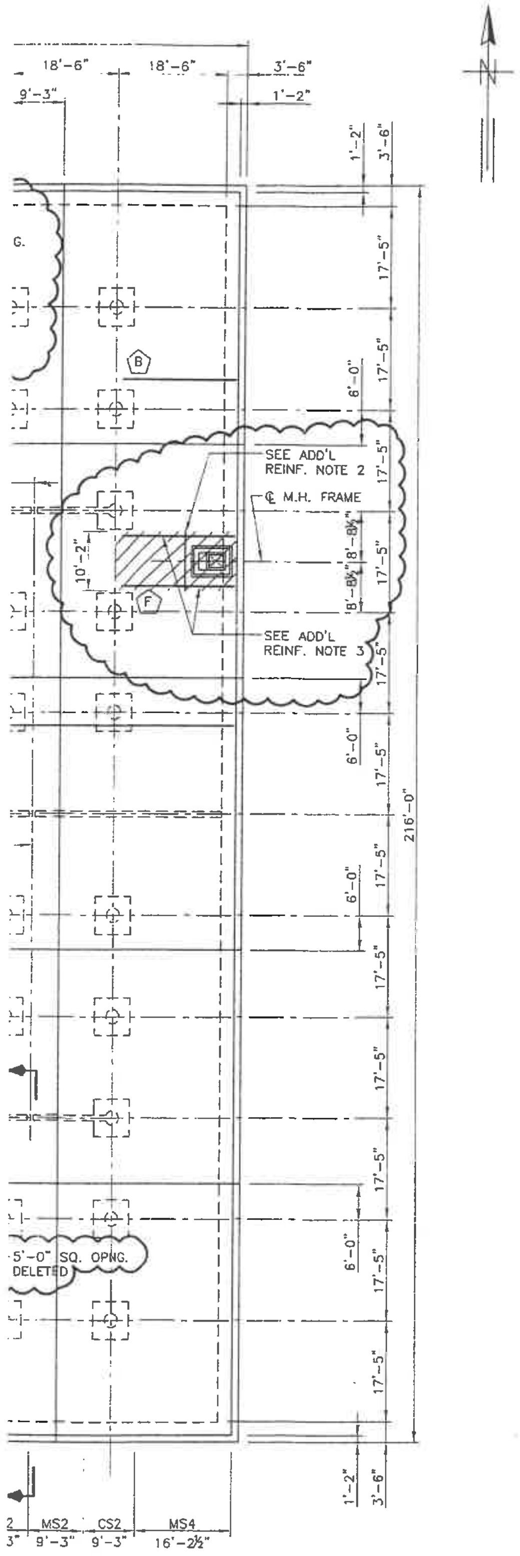
D. Proportions:

1. Masonry Mortar: Mix masonry mortar meeting the requirements of ASTM C 270 Type N with volume proportions of 1 part of Portland cement, 1 part hydrated lime and 6 parts of sand measured in a damp loose condition.

2. Masonry Grout: Mix masonry grout meeting the requirements of ASTM C 476 with volume proportions of 1 part Portland cement, 0.10 parts hydrated lime and 3 parts fine aggregate measured in a damp loose condition.

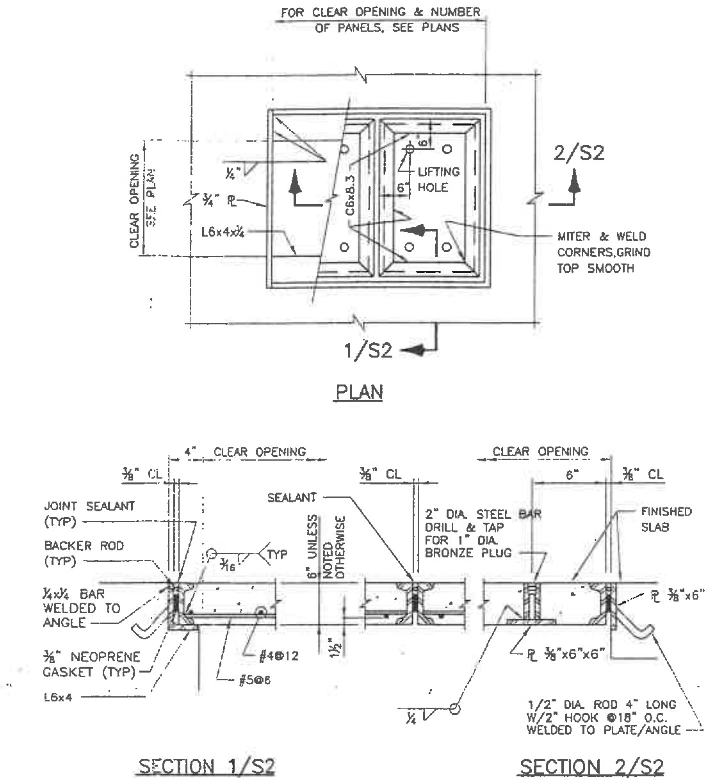
END OF SECTION

(NO TEXT FOR THIS PAGE)



ER 400 PSF.
RS.

NF. SCHEDULE.



NOTES:

1. ALL PLATES, CHANNELS, ANGLES, AND RODS TO BE ASTM A276 TYPE 304.
2. PROVIDE SEALANT SUITABLE FOR POTABLE WATER.

REMOVABLE CONCRETE SLAB DETAILS

ADD'L REINF. SCHEDULE

MARK	REINFORCING	LOCATION	REMARKS
A	#5@8x18'-0" (BOTTOM)	PERIMETER (N-S)	ALT. WITH MAIN REINF.
B	#5@8x19'-0" (BOTTOM)	PERIMETER (E-W)	ALT. WITH MAIN REINF.
C	#5@8 (TOP)	COLUMN STRIPS (CS1 & CS2)	ALT. WITH MAIN REINF.
D	#5@8x10'-0" (TOP)	OVER BAFFLE WALLS MIDDLE STRIPS (MS1, MS2, MS3 & MS4)	ALT. WITH MAIN REINF.
E	#5@8 (TOP AND BOTT.)	SOUTHWEST CORNER	ALT. WITH MAIN REINF.
F	#9@8x19'-0" (BOTTOM)	@ M.H. OPNGS.	IN PLACE OF B

ADD'L REINF. NOTES:

1. PROVIDE ADD'L REINF. AT ALL OPENINGS PER TYP. DET. 2/S5.
2. PROVIDE ADD'L 6-#6@8x10'-0" BOT BARS & ADD'L 4-#6@8x10'-0" TOP BARS – ALT W/ #6@8.
3. PROVIDE ADD'L 6-#9@8 BOT BARS & ADD'L 4-#6@8 TOP BARS – ALT W/ #6@8 – SEE SCHEDULE FOR ADD'L INFORMATION.

16"=1'-0"

VILLAGE OF ORLAND PARK, ILLINOIS
LAKE MICHIGAN WATER SUPPLY
EAST RESERVOIR ADDITION

STRUCTURAL

TOP PLAN

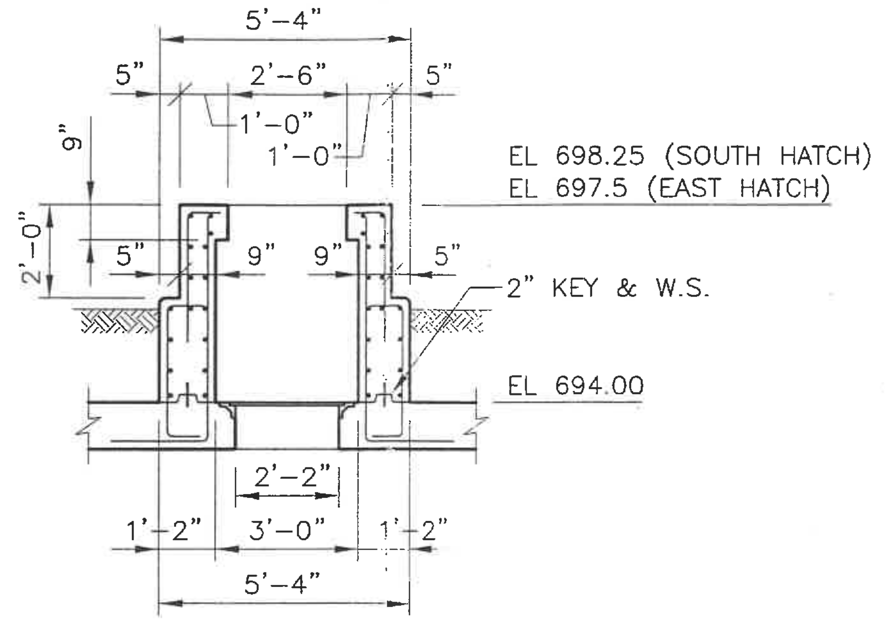
FILE NAME	14601-S2
DWG	S2
SHEET	6 OF 9
DATE	MARCH 2008 REV 0

'CH DETAILS

VILLAGE OF ORLAND PARK, ILLINOIS
EAST RESERVOIR ADDITION

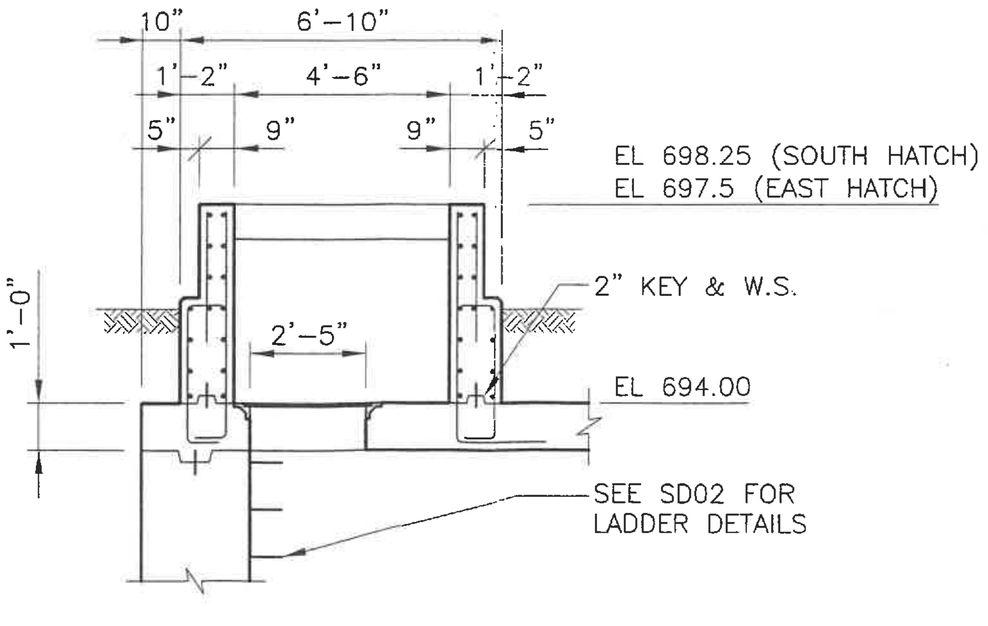
SUPPLEMENTARY
DRAWING SD03
DATE: FEBRUARY 2009

REFERENCE DRAWING S2 SHEET 1 OF 1



ALL REINF. #4@8 UNLESS NOTED

SECTION 1/SD03



ALL REINF. #4@8 UNLESS NOTED

SECTION 2/SD03

Documentation Item No. 4

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 08/25/10

Job #: 1224-00

Job Name: Orland Park Reservior Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

NOTIFICATION

Person Directing or Notified of Work: Beth Vogt

Date Notified: 03/25/09

Method of Notification: Verbal/

Reason for Change (in detail): New Sample Line included in new reservior

Description of Work: Lay and cut 9.5" holes in concrete gang form and install 4"DIP with flange and watersop ring.

Photographs Taken? **Yes** **No**

LABOR						
Phase	Date	Name	Trade	Hours	OT Hours	Cost
	04/01/09	Mahoney; Michael J.	CARP	3.0		$ 248.20
		Stephens; Jonathan W.	CARP	3.0		$ 226.08
		Purcell; Carl W.	CARP	3.0		$ 226.08
Rates good 6/1/09 to 5/31/10					***Labor Subtotal:***	$ **700.36**

Materials				
Description of Material or Equipment	Units	Price	Quant.	Cost
4" DIP Spool, cut to 5'0" and welded on Thrust ring	each	724.23	1	724.23
				-
				-
				-
				-
			Material Subtotal:	$ **724.23**

See page two for Equipment, and Subcontractor charges.

JJ Henderson ______ *Initial*

Greeley and Hansen & Village of Orland Park ______ *Initial*

Continued on next page

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 08/25/10

Job #: 1224-00

Job Name: Orland Park Reservior Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

JJH Equipment				
Description of Material or Equipment	Units	Price/unit	Quant.	Cost
		-		-
		-		-
		-		-
		-		-
		-		-
		-		-
			Equipment Subtotal:	$ -

Subcontractors	
Sub Name and Description of of work	Cost
Subcontractors Subtotal:	$ -

Extra Work Totals

Labor Subtotal from page 1:		$ 700.36	*Equipment Subtotal from above*		$	-
Labor OH&P	15%	$ 105.05	Equipment OH&P	15%	$	-
Labor total		**$ 805.41**	**Equipment total**		**$**	**-**
Material Subtotal from page 1:		$ 724.23	*Subcontract Subtotal from above*		$	-
Material OH&P	15%	$ 108.63	JJH OH&P	5%	$	-
Material total		**$ 832.86**	**Subcontract total**		**$**	**-**
			Subtotal		$	1,638.28
			JJH Bond	1%	$	16.38
			Total		**$**	**1,654.66**

Joseph J. Henderson & Son, Inc.
(sign & date:) ______________________ Date
William Marshalla, Director of Operations
(Print or Type name & Title)

Work Authorized by:
Greeley and Hansen & Village of Orland Park
(sign & date:) ______________________ Date
____
(Print or Type name & Title)

Shirling, Jamie R.

From: Vogt, Beth [bvogt@greeley-hansen.com]
Sent: Wednesday, March 25, 2009 8:58 PM
To: Shirling, Jamie R.; Frank Rowley; Mike Mahoney
Cc: Johnson, Kenneth; David, Ray; Linde, Roger; John Ingram
Subject: 4" DI Sample Tap Carrier Pipe Sketch
Attachments: DOC032509.pdf

Attached please find a sketch of the 4" DI Sample Tap Carrier Pipe. The first page of the sketch provides location for the line. It is to be approximately 4.5' south of the south wall of the existing reservoir running directly E-W from the pump station to the new east reservoir. The line CL EL should be approximately 691.0.

Based on information from Frank, he will get a 8 foot section of F x PE DI pipe and weld on a water collar. As he can't get it drill and tapped for studs in time to maintain schedule, the flange end will need to extend approximately 6" into the reservoir so that a tapped blind flange can be added later. Later the outside end of the pipe will be cut for a MJ joint within 2-3 feet of the exterior of the reservoir wall. It is my understanding that this can be done to stay on schedule for the Friday pour of the reservoir upper wall at slab E.

To use this approach, JJH will have to cut holes into the forms. I have discussed this with Mike and he is prepared to do it rather than waiting to get a tapped flange. I have indicated to Mike that the exact elevation can be varied to avoid the rebar grid.

Let me know if you have further questions. I will likely be at the site tomorrow to look at the 36" water main joints. A final time has not been confirmed for this meeting yet, but we are planning for around 2 pm.

Beth Vogt
Greeley and Hansen

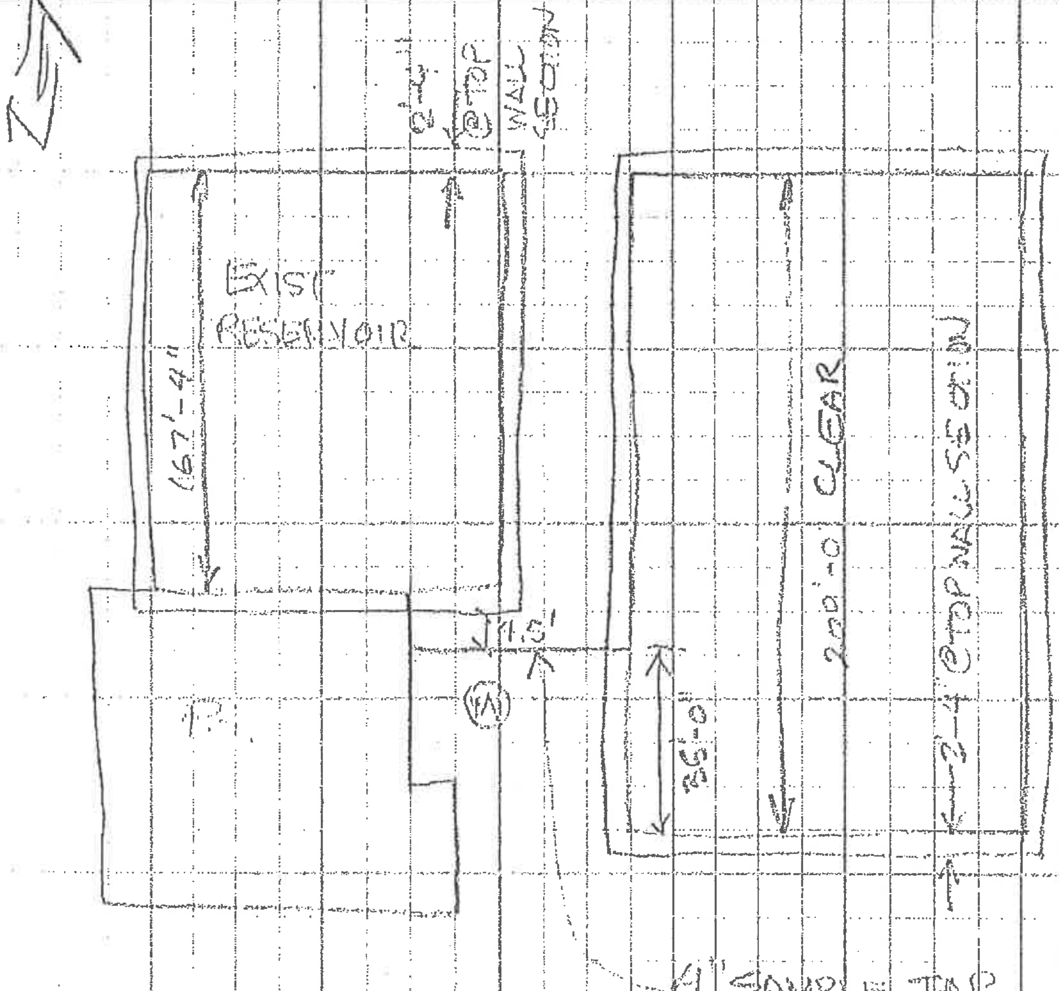
From: Chicago Scanner [mailto:chgoscanner@greeley-hansen.com]
Sent: Wed 3/25/2009 7:20 AM
To: Vogt, Beth
Subject: Scanned from RNP9DC749 03/25/2009 04:20

Scanned from RNP9DC749.
Date: 03/25/2009 04:20
Pages:2
Resolution:200x200 DPI

This is a scanned document from the Chicago Office scanner, Please do not reply.

GREELEY AND HANSEN

PROJECT East Reservoir Addition
SUBJECT Sample Pipe
PROJECT # 14603
CLIENT VOP
COMP BY BKV DATE 3/25/09 CDK BY ______ DATE ______
SHEET 1 OF 2



4" SAMPLE TAP CARRIER PIPE
@ CL EL 691.0±
@ RESERVOIR WALL

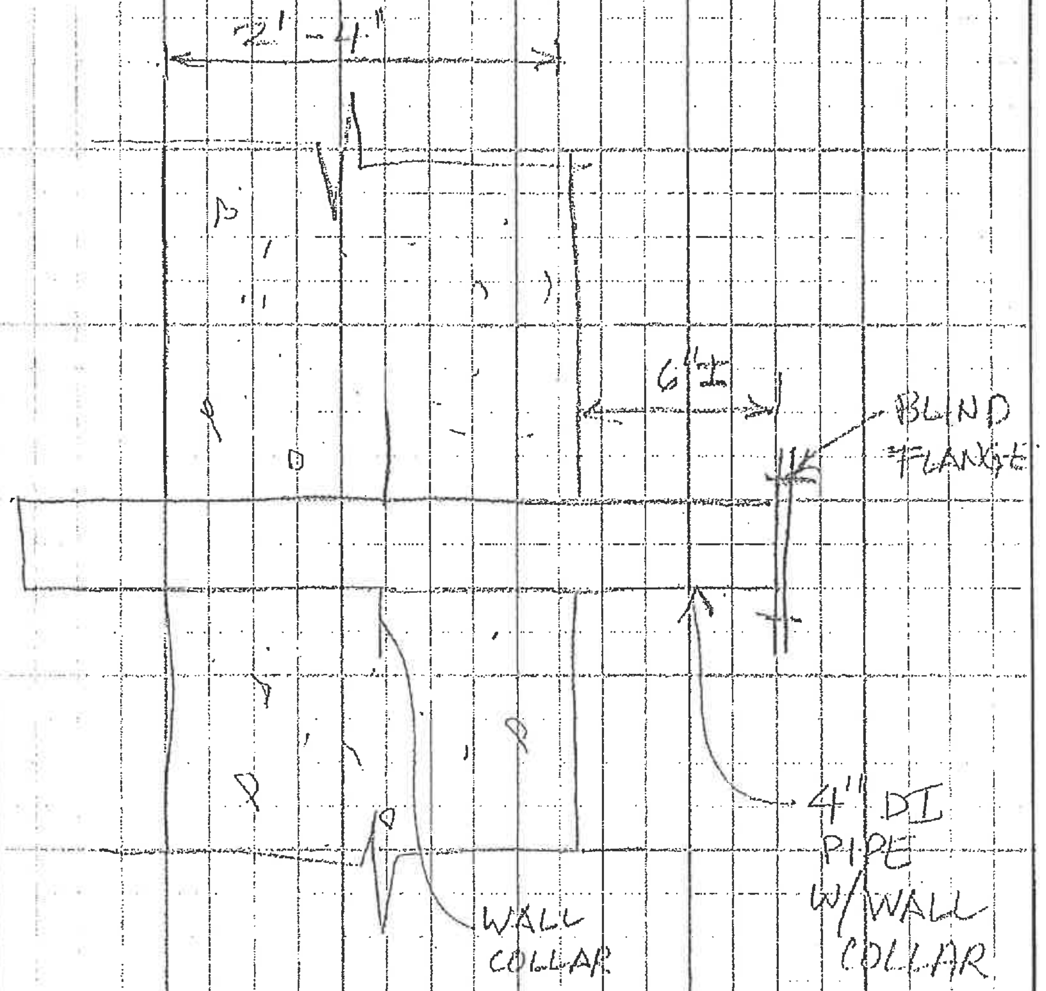
167'-4"
+ 2'-4"
+ 4'-6"
174'-2"

209
- 174'-2"
34'-10"

USE 35'

GREELEY AND HANSEN

PROJECT ERA
SUBJECT SAMPLE PIPE
PROJECT # 14603
CLIENT VOP
COMP BY BKV DATE 3/25/09 CDK BY ______ DATE ______
SHEET 2 OF 2



SECTION @ RESERVOIR WALL

N.T.S.

Gardner, Keith

From: Rowley, Frank L. [FLRowley@Meccon.com]
Sent: Thursday, April 23, 2009 10:59 AM
To: Shirling, Jamie R.; Vogt, Beth
Subject: Meccon change order 4" sample spool
Attachments: SKMBT_60009042310360.pdf

Attached are the back-up documents for the change order involving the new 4" sample spool. If additional work is requested associated with this sample line it will be tracked seperatly.

Meccon Industries, Inc.

2703 BERNICE ROAD
P.O. BOX 206
LANSING, ILLINOIS 60438-0206
Telephone (708) 474-8300

LABOR and MATERIAL VOUCHER

043096

Date 3-26-09

☐ DAY SHIFT
☐ NIGHT SHIFT
☐ PREMIUM TIME ONLY

M.I.I. JOB NO. 08-4454 CLIENT ORDER NO. ______

CUSTOMER ______

JOB NAME ______ LOCATION Fab Shop (Lansing)

DESCRIPTION OF WORK PERFORMED Weld Thrust Ring On 4" ø Ductile Iron Spool, Cut Spool To Length 5'-0" Face To End

	LABOR, MATERIALS* AND EQUIPMENT RENTAL	HOURS WORKED			ACCOUNTING DEPARTMENT USE			
QTY.	DESCRIPTION	REG.	1½	DBLE.	REG. RATE	PREMIUM RATE	UNIT RATE	TOTAL AMOUNT
1.	T. Slattery PF	3			82 09			246 27
1	Teamster	2			58 61			117 22
	Pick up Weld Rod							
	Deliver spool to Orland Park							
1	Frank Rowley - PM	1			92.34			92 34
	Meccon PO # 117866							244 00
	Cim Pipe & Supply						10%	24 40

*List M.I.I. Purchase Order for all Material

TOTAL 724.23

CHARGES CORRECT AS STATED

Ted Slattery
Meccon Industries, Inc.

CUSTOMER'S APPROVAL

______
Customer's Representative

FORM NO. 701

CUSTOMER'S COPY

MECCON INDUSTRIES, INC. - MATERIAL REQUISITION

This is ☑ Is Not ☐ an Order

P.O. № 117866

P.O. № 117866

Vendor #:
Vendor: Ctm Pipe
Ship To: Will Call
Delivery Contact: Keith

Date 3/26/09
Job No. 08-4454
Job Name O. E. R
Date Required at Job 3/26 or Sooner ☐ Not Before ☐
Vendor Payment Terms:
☑ Tax Exempt
☐ Taxable ____%
Cost Code: 41010

F.O.B.
☐ Delivered
☐ Shipping Point
☐ Other (specify) Will Call

Chg. Ord #
☐ Original Order
☑ Confirming Order
To: Keith
Date: 3/26/09

0 Copies of Submittals required within ____ days
____ Approval Required Before Shipment
✓ Approval Not Required

COST CODE	PAY ITEM	QTY.	U/M	DESCRIPTION	UNIT PRICE	TAX RATE
		1		PL of 4" DI FLG x PE	244.00	

Project Manager: FIR
Buyer: FIR

Special Instructions:

C & M Pipe & Supply Co., Inc.
19800 Stoney Island Ave.
Lynwood, IL 60411

Voice: 708-474-8650
Fax: 708-474-0660

INVOICE

Invoice Number: 133611
Invoice Date: Mar 26, 2009
Page: 1

Bill To:	Ship to:
Meccon Industries Inc. 2703 Bernice Road Lansing, IL 60438 985	WILL CALL / ORLAND PARK RESERVOIR

Customer ID	Customer PO	Payment Terms	
MEC	117866 / 08-4454	2% 30, Net 31 Days	
Sales Rep ID	**Shipping Method**	**Ship Date**	**Due Date**
	Cust. Pickup	3/26/09	4/26/09

Quantity	Item	Description	Unit Price	Amount
1.00	DIP-SPOOL-04X08	4in X 8ft DI SPOOL FLG X PE	244.00	244.00

☐ TAXABLE
☑ EXEMPT
F.O.B.
☐ DELIVERED
☐ SHIPPING POINT
FIR
WC

Accounting Dept.
Approved by: FR

Subtotal	244.00
Sales Tax	
Freight	
Total Invoice Amount	244.00
Payment/Credit Applied	
TOTAL	244.00

Check/Credit Memo No:

Documentation Item No. 5

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 09/25/09

Job #: 1224-00 Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

NOTIFICATION

Person Directing or Notified of Work: Beth Vogt Date Notified: 07/29/09

Method of Notification: E-mail

Reason for Change (in detail): Owner and Engineer requested pricing for caulking of existing cracks in original reservoir. Work consisted of 2 men for two 8 hour days each, interior and exterior, as well as 5 hours for 2 men set up (performed on 8-17) and 5 hours for two men for dismantling and loading equipment. 4 hours each for mob /demob of scaffolding for Operator/Lull.

Description of Work: Provide all labor, material and equipment necessary to seal those cracks specifically listed in Ray David's e-mail of 4-30-09.

Photographs Taken? Yes No

LABOR

Phase	Date	Name	Trade	Hours	OT Hours	Cost
1224-99, 3-102	to date	District Carpenter (SUP)	CARP	26.0		$ 2,151.10
		District Laborer (JRM)	LAB	26.0		$ 1,708.20
		Operator (class 1)	OPER	8.0		$ 677.04
Rates good 6/1/09 to 5/31/10					***Labor Subtotal:***	**$ 4,536.34**

Materials

Description of Material or Equipment	Units	Price	Quant.	Cost
Sikaflex 1a	ea	4.50	48	216.00
Sikaflex 1c	ea	9.85	36	354.60
Scaffolding	ls	319.79	1	319.79
Cement , Portland 94#	ea	8.10	3	24.30
				-
			Material Subtotal:	**$ 914.69**

See page two for Equipment, and Subcontractor charges.

JJ Henderson ____________ *Initial*

Greeley and Hansen & Village of Orland Park ____________ *Initial*

Continued on next page

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 09/25/09

Job #: 1224-00 Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

JJH Equipment				
Description of Material or Equipment	Units	Price/unit	Quant.	Cost
Skytrak / 600 Lull / 644D Lull	Hour	31.25	8	250.00
		-		-
		-		-
		-		-
		-		-
		-		-
			Equipment Subtotal:	**$ 250.00**

Subcontractors	
Sub Name and Description of of work	Cost
Subcontractors Subtotal:	$ -

Extra Work Totals

Labor Subtotal from page 1:		$ 4,536.34	*Equipment Subtotal from above*		$	250.00
Labor OH&P	15%	$ 680.45	Equipment OH&P	15%	$	37.50
Labor total		**$ 5,216.79**	**Equipment total**		$	287.50
Material Subtotal from page 1:		$ 914.69	*Subcontract Subtotal from above*		$	-
Material OH&P	15%	$ 137.20	JJH OH&P	5%	$	-
Material total		**$ 1,051.89**	**Subcontract total**		$	-
			Subtotal		$	6,556.18
			JJH Bond	1%	$	65.56
			Total		**$**	**6,621.74**

Joseph J. Henderson & Son, Inc.
(sign & date:) ______________________ Date
____
(Print or Type name & Title)

Work Authorized by:
Greeley and Hansen & Village of Orland Park
(sign & date:) ______________________ Date
____
(Print or Type name & Title)

Gardner, Keith

From: Vogt, Beth
Sent: Wednesday, July 29, 2009 5:08 PM
To: 'Shirling, Jamie R.'; Mike Mahoney
Cc: David, Ray; 'John Ingram'
Subject: Proposal for repair of cracks in the existing reservoir and form tie end painting
Attachments: Five Exterior Water Marks on East Side of Existing Reservoir.pdf; Crack A (Furthest S).jpg; Crack B.jpg; Crack C.jpg; Cracks D.jpg; Crack E.jpg; Crack F.jpg; Crack G (Furthest N).jpg; View of Roof of Northern Portion of Existing Reservoir.jpg; View of Roof of Southern Portion of Existing Reservoir (Looking S).jpg; WFLEXGEL2.pdf

Jamie,

Please provide a change order proposal to perform crack sealing on cracks having opening larger than 10 mil (0.01") in the existing reservoir using the Sikaflex -1a or a Hydrophilic Polyurethane Flexible Injection Grout such as the Wflexgel2, for which the information is attached. The email below and attached pictures identify the locations for the cracks to be repaired. Also, there are some form tie ends in the existing reservoir that are rusted. Please indicate the change order cost to , clean and paint these ends with a rust inhibitor paint.

Beth Vogt
Greeley and Hansen

From: David, Ray
Sent: Thu 4/30/2009 10:06 AM
To: Vogt, Beth; John Ingram (JIngram@orland-park.il.us)
Subject: OP ERA - Measurements of Cracks On East Side of Existing Reservoir

Good morning. Following John's walk-through of the south half of the east side of the existing reservoir last week, it was noted that there were some cracks seen on the east interior wall. John and I went outside to see if they matched the locations I had previously marked during the excavation phase of the project with a few looking like they did.

Since the marks have faded since then and were made at a higher elevation, I transposed those five marks on the exterior east wall of the existing reservoir at the site's current elevation. In addition, I went inside the reservoir and took note of any noticeable cracks or water marks. There were seven location I identified from the inside of the existing reservoir which I have labeled A (most southern) through G (most northern).

I have attached a few pictures of the east exterior of the existing reservoir as well as pictures of the cracks inside. Below are the rough measurements I took of the location of these cracks with those numbered 1 (most southern) through 5 (most northern) referring to exterior cracks and the lettered locations interior locations. All measurements are taken with respect to the exterior south edge of the reservoir at the current elevation (I added the wall thickness to the interior measurements I took).

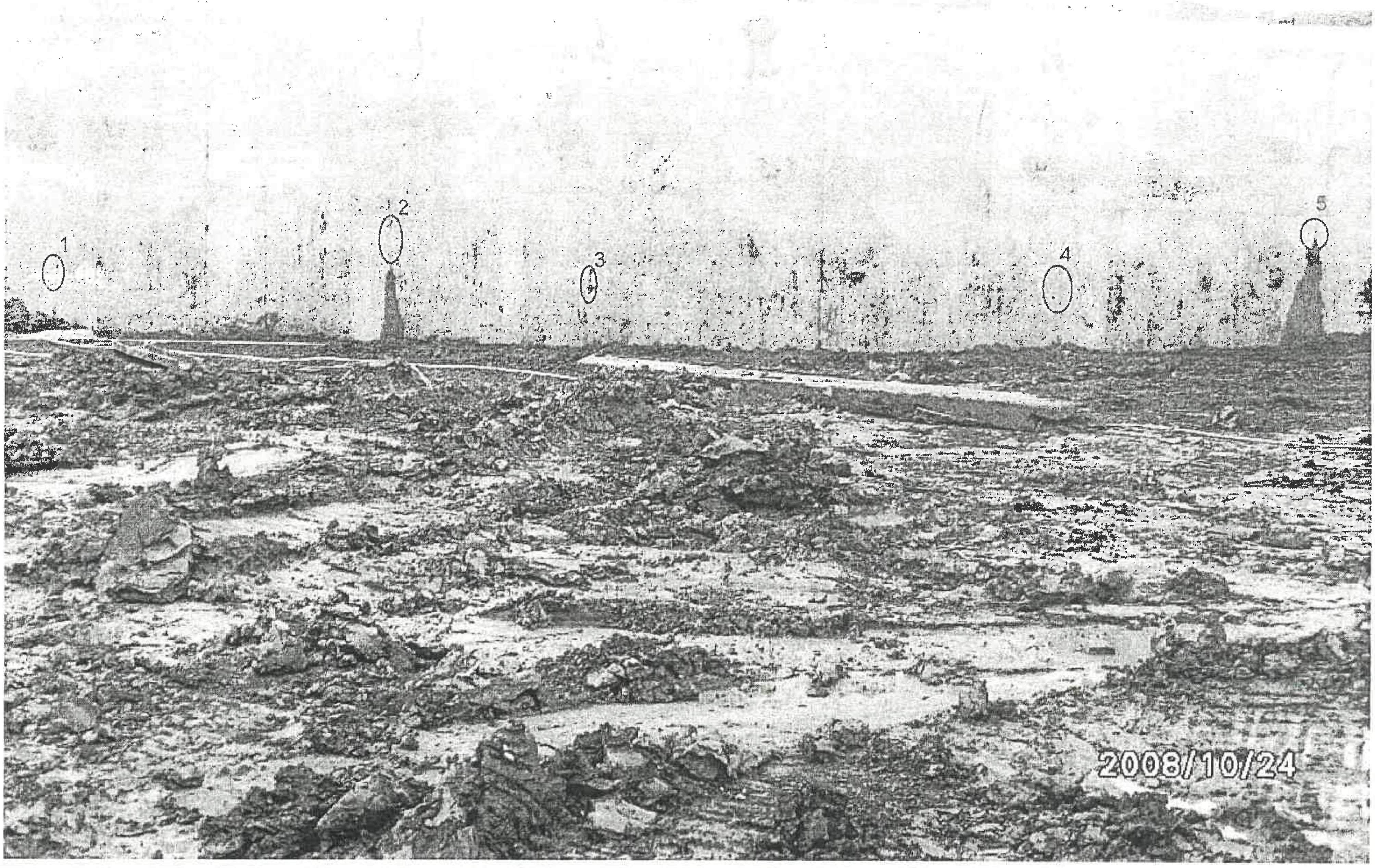
Exterior Measurements
1. 21'-10"
2. 40'-7"
3. 51'-8"
4. 78'-5"
5. 93'-5"

Interior Measurements
A. 21'-6"
B. 42'
C. 54'-3"
D. 67'-7"
E. 78'-1"

F. 81'-9"
G. 96'-11"

Based on these approximate measurements, it seems there are exterior and interior matches: 1 with A; 2 with B; 3 with C; 4 with either E or F; and 5 with G. I have also attached a few pictures showing a few water marks on the roof of the existing reservoir.

Thanks,
Ray David


1
2
3
4
5
2008/10/24

WEBAC Corp.
1669 E Wilshire Ave, Santa Ana, CA 92705
PH 714-662-4445 FAX 714-662-4446
Toll Free 1877-932-2293 www.webac.com

PRODUCT DATA SHEET

WEBAC Corp. FLEXGEL 2

HYDROPHILIC POLYURETHANE
FOAM - GEL
SINGLE COMPONENT

Approved for contact with potable water in accordance with NSF Standard 61 use level 15cm² / liter

TYPE OF MATERIAL

WEBAC FLEXGEL is a single component hydrophilic polyurethane grout. **Underwriter's Laboratories , Inc. has tested WEBAC Corp. Flexgel2 in accordance with NSF standard 61, and has approved this material for contact with potable water at a maximum use level of 15cm²/liter.**

The product cures to a closed cell foam or an elastomeric gel when it comes in contact with water. The product is capable of incorporating large amounts of water that are multiples of its own mass, thereby forming a gel. The cure time of the product is determined by the amount of water added and the temperature.

While reacting to a foam the material expands its volume. The cured material is flexible. Since water is a component of the cured product structure, the material can be effected by wet and dry cycles. The reacted material may shrink and swell as a result of the surrounding moisture content.

The capability of the cured product to swell and increase in volume due to water absorption is one of the important features that discriminate hydrophilic grouts from their hydrophobic counterparts.

WEBAC Flexgel is designed as a single component material. In certain applications an accelerator may be added to decrease gel-time.

RANGE OF APPLICATION

- **Stop water infiltration**
- **Sealing joints**
- **Sealing of pipe joints through commercial packer equipment for repairing leakages in sanitary and storm sewer pipes**
- **Pipe Intrusions**
- **Sewers, Manholes, Utility Boxes**
- **Tunnels, Dams**
- **Soil Stabilization**

PROCESSING

WEBAC FLEXGEL is cured upon reaction with water. Large quantities of water can be absorbed in the reaction mass, and the properties of the cured product are determined by the mix ratio.

Mixing WEBAC FLEXGEL with water at a 1:1 to 1:3 volume basis will result in a foam with good tear resistance.

In the range of 1:4 to 1:10 a gel is obtained. Lower water ratios result in a strong gel of a light cellular structure. The more water is added the gel gradually softens and the cellular appearance changes towards a monolithic structure. The gel time is about 100 seconds varying with temperature and water saturation.

Single component injection equipment may be used to achieve certain results. Hydrophilic grouts can absorb large amounts of water and simultaneous injection of water might be recommended in applications where gelling of the grout is desired. Two component equipment can may utilized to achieve a certain mixing ratio such as needed for commercial sewer repair. The grout can be applied much in the same manner as acrylamide grout with the advantage of having superior strength and safety features.

For 'curtain injection' behind below grade structures it is recommended to drill through the structure in a pattern that is determined by the physical properties of the soil. To create a standard pattern holes are drilled 50 cm (two feet) apart from each other in a horizontal line. The next step is to drill holes in a line 50 cm above the first line in the same fashion but staggered. Recommended packers are WEBAC 19-150 buttonhead type. Smaller packers like the 1/2" 13-60s type may be sufficiant in some lower volume applications

Injection should begin at the highest point. Each packer should be injected until material penetrates the surrounding drill holes (open packers). After injection is complete packers should be removed and drill holes be filled with a cementitious grout.

It is essential for all equipment that comes in contact with the grout to be dry. If reaction of the batch occurs while pumping, immediately shut down the machine and flush with a cleaner to avoid built up and clogging of the equipment.

Observe temperature and humidity of the environment, since both determine the pot-life of the batch.

MAINTENANCE OF EQUIPMENT

Remove all excess sealant and any smears. Tools and mixing equipment are best cleaned immediately after use. WEBAC provides R70 Pump Flush, a solvent free, nonflammable, nonhazardous cleaner. Xylol, Toluol, Acetone and M.E.K. can be used if not in conflict with regulations on jobsite. Circulate cleaner through pump for several minutes. Caution! Some cleaners are combustible.

PRECAUTION

While working with WEBAC materials safety goggles, gloves and safety clothing should be worn at all times. Also observe container labels, MSDS, and instructions in the WEBAC Product Catalog. In case one of the components comes in contact with the skin, wash thoroughly with soap and water. Adequate ventilation in volume and pattern should be provided in working area. Further protection: emergency showers and eyewash stations.

WEBAC Corp. FLEXGEL 2

WEBAC Corp.
1669 E Wilshire Ave, Santa Ana, CA 92705
PH 714-662-4445 FAX 714-662-4446
Toll Free 1877-932-2293 www.webac.com

WEBAC Corporation CONCRETE SOLUTIONS

PRODUCT DATA SHEET

WEBAC Corp. FLEXGEL 2

HYDROPHILIC POLYURETHANE FOAM - GEL

TECHNICAL DATA	FLEXGEL	
Appearance	Light Brown	
Color	Amber	
Solids	100%	ASTM D 1010
Density, g/ml	1.1	ASTM D 3574
Flash Point, C / F	>225	ASTM D 93-85
Viscosity, cps at 40C-25C	390-750	ASTM D 1638-74
Corrosiveness	Non-Corrossive	
Solubility in Water	Gelation	
Components	Polyurethane Resin	
Packaging	5 Gal 55 Gal	
Storage	Good storage stability for unopened containers at 15° - 30° C 58° - 85° F. Store indoors.	
Induction Time, 20C/68F	<30 sec	
Gel time, 25C/70F	approx. 100 sec	

Properties: Water Ratio	1:1	1:3	1:5	1:8	
Tenslie Strength, psi	430	261	165	150	ASTM D3574
Elongation, %	462	1140	>1250	>1250	
Die-C	49	52	43	43	
Physical Form	Foam	Foam	Gel	Gel	

Shrinkage	<10% ASTM D1042 variable with water content
Appearance	Light Brown Foam - Gel

Approved for contact with potable water in accordance with NSF Standard 61 use level 15cm^2 / liter

MEMBER INTERNATIONAL CONCRETE REPAIR INSTITUTE

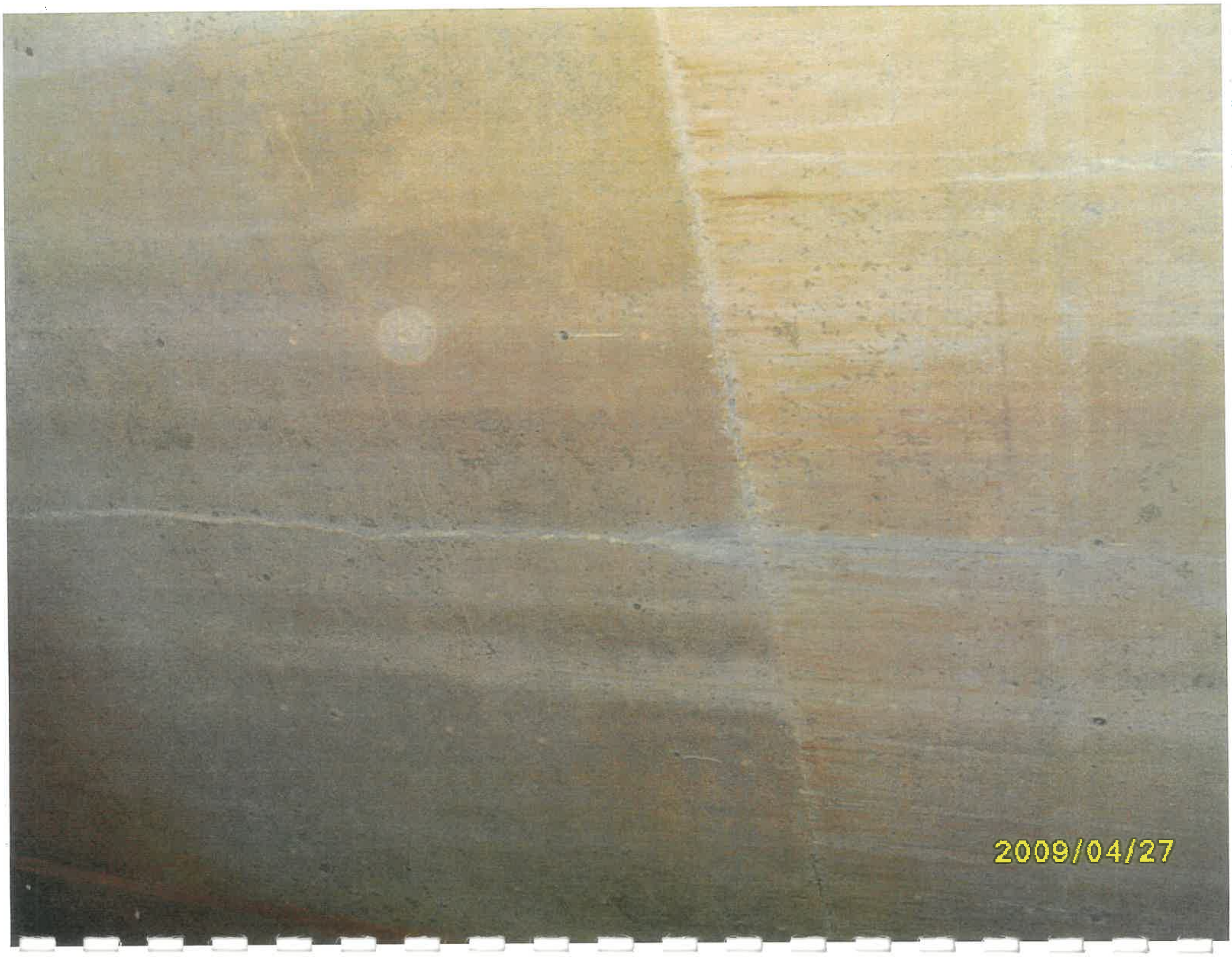
CLASSIFIED UL

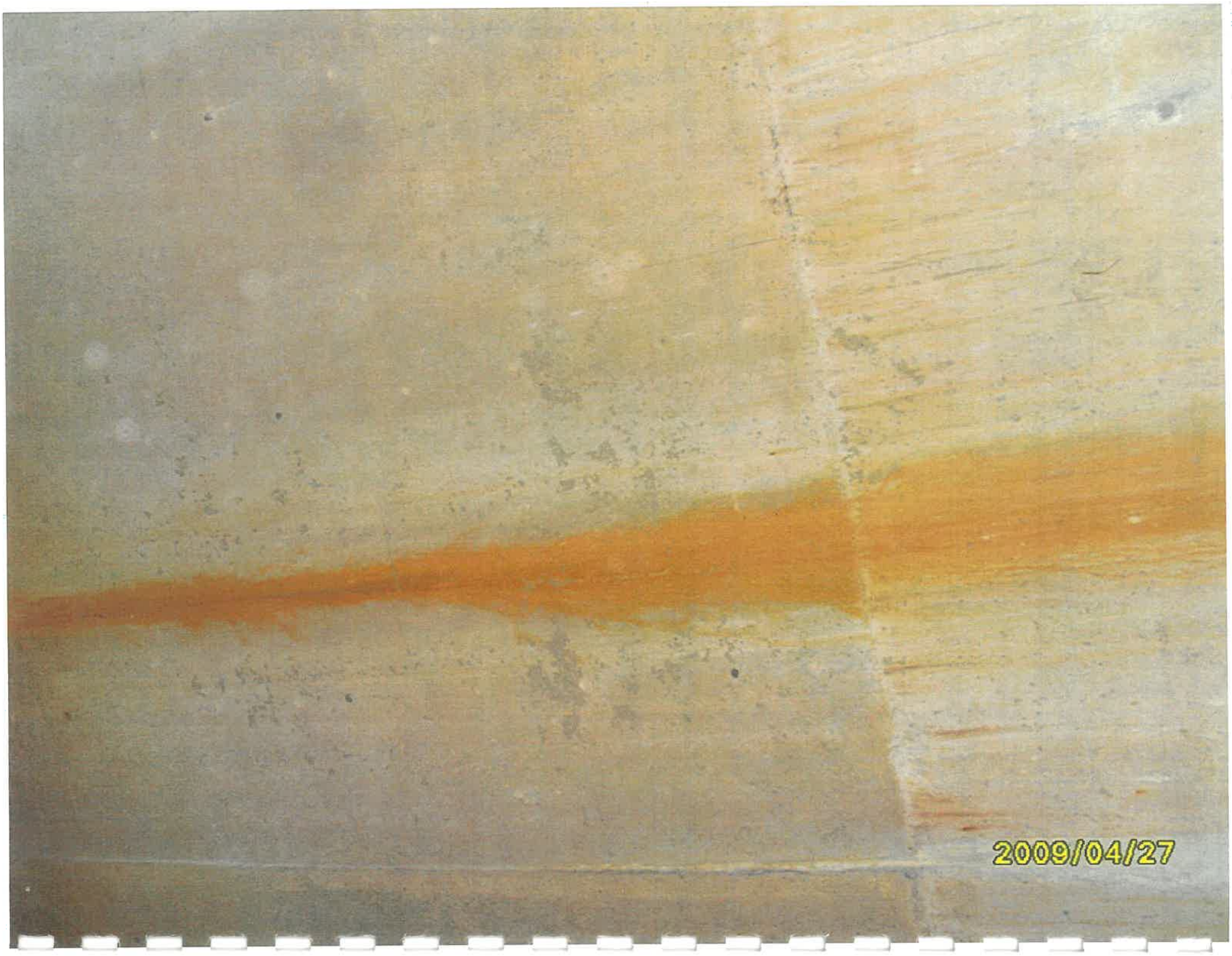
ANSI/NSF 61 9R55
When mixed with water
Max surface area 15cm^2/ Liter
Refer to PDS for mixing

PRODUCT WARRANTY: WEBAC AMERICA CORP. PRODUCTS ARE WARRANTED UNDER THE FOLLOWING POLICY:
ALL RECOMMENDATIONS, STATEMENTS AND TECHNICAL DATA HEREIN ARE BASED ON TESTS WE BELIEVE TO BE RELIABLE AND CORRECT, BUT ACCURACY AND COMPLETENESS OF SAID TESTS ARE NOT GUARANTEED AND ARE NOT TO BE CONSTRUED AS A WARRANTY EITHER EXPRESSED OR IMPLIED. USER SHALL RELY ON HIS OR HER OWN INFORMATION AND TESTS TO DETERMINE SUITABILITY OF THE PRODUCT FOR THE INTENDED USE AND USER ASSUMES ALL RISK AND LIABILITY RESULTING FROM HIS OR HER USE OF THE PRODUCT. SELLER'S AND MANUFACTURER'S SOLE RESPONSIBILITY SHALL BE TO REPLACE THAT PORTION OF THE PRODUCT OF THIS MANUFACTURER WHICH PROVES TO BE DEFECTIVE. NEITHER SELLER NOR MANUFACTURER SHALL BE LIABLE TO THE BUYER OR ANY THIRD PERSON FOR ANY INJURY, LOSS OR DAMAGE DIRECTLY OR INDIRECTLY RESULTING FROM USE OF OR INABILITY TO USE THE PRODUCT. RECOMMENDATIONS AND STATEMENTS OTHER THAN THOSE CONTAINED IN A WRITTEN AGREEMENT SIGNED BY AN OFFICER OF THE MANUFACTURER SHALL NOT BE BINDING UPON THE MANUFACTURER OR SELLER.
WAC2001-04-WFLEXGEL2

2009/04/29

2009/04/27


2009/04/27

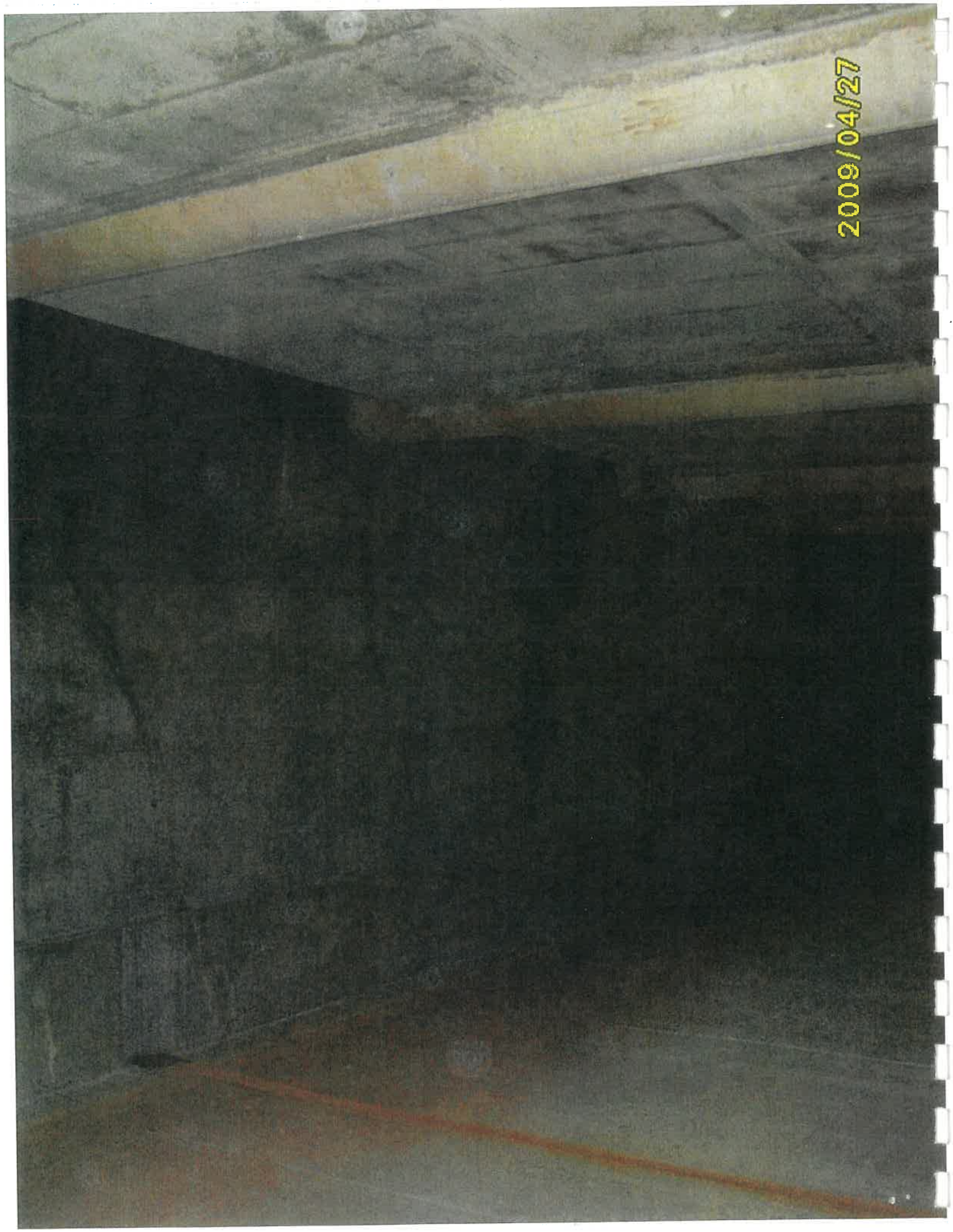

2009/04/27


2009/04/27

2009/04/27


2009/04/27

2009/04/27


2009/04/27

R&J CONSTRUCTION SUPPLY CO., INC.
AIR FASTENING SYSTEMS
SALES • RENTALS • SERVICE

Please Remit to:
30 W 180 Butterfield Rd.
Warrenville, Illinois 60555
630-393-9020

INVOICE

PAGE 1

D.W.C. is not Insurance

Damage Waiver Charge is of rental charges.

Damage Waiver 8%

Damage Waiver: By his initials hereon or by separate written confirmation, lessee agrees to pay additional daily rental as set forth below or, if not set forth, then as posted in Lessor's office; and, in return therefor lessor agrees to waive certain claims for damage to rental item(s), as specified on the back of this contract.

Invoice No.: 854158
Inv. Date: 08/31/09
Cust. No.: 32900

Bill To: JOSEPH J. HENDERSON & SON
4288 GRAND AVENUE
GURNEE, IL 60031-0009

Ship To: ORLAND PARK

Ship Date 08/27/09
Due Date 09/30/09
Terms NET 30 DAYS
Order: 853580
P.O. No.:MIKE
Clerk: LH
Salesperson: TOM ROHRICH - SALESMAN

Item No.	Description	Qty Ord	Qty Inv	Unit Price	Total Price
432297	SIKAFLEX 1C SL 30 OZ.	36	36	9.85	354.60
SIKAFLX1ALMST-	SIKAFLEX 1A LIMESTONE 10OZ	24	24	4.50	108.00

RECEIVED
SEP 4 2009
JOSEPH J HENDERSON & SON, INC.
GENERAL CONTRACTOR

PAYMENT SUMMARY

Please Read Before signing: Contract Agreement on Reverse Side.

Please Notify Your Insurance Broker of Physical Damage Coverage.

(1) know your rates. (2) You are Charged for Time Out, not time used.
(3) Rates are based on an 8 hour day, 40 hour week, 160 hour month. Any usage in excess of this amount will be charged at an appropriate rate.
(4) Equipment must be returned clean. Customer responsible for care, safety, and security of equipment. (5) If mechanical failure occurs - please call immediately.
(6) A Service Charge of 1 1/2% per month will be charged on all accounts 30 days Past due (18% per year). (7) Tires and batteries are responsibility of customer. (8) Fuel charge on return of equipment.

Payments:	0.00
Balance Due:	462.60

X________________________

PLEASE PAY FROM THIS INVOICE. 1 1/2% PER MONTH ON UNPAID BALANCE OVER 30 DAYS.

CONTRACT TOTALS

Sales:	462.60
Discount:	0.00
Sales Tax 8.50%	0.00
Rental:	0.00
D. W.:	0.00
Total:	462.60

CUSTOMER COPY

R&J CONSTRUCTION SUPPLY CO., INC.
AIR FASTENING SYSTEMS
SALES • RENTALS • SERVICE

Please Remit to:
30 W 180 Butterfield Rd.
Warrenville, Illinois 60555
630-393-9020

INVOICE
PAGE 1

D.W.C. is not Insurance

Damage Waiver Charge is of rental charges. 3%

Damage Waiver

Damage Waiver: By his initials hereon or by separate written confirmation, lessee agrees to pay additional daily rental as set forth below or, if not set forth, then as posted in Lessor's office: and, in return therefor lessor agrees to waive certain claims for damage to rental item(s), as specified on the back of this contract.

Invoice No.: . . . 854159
Inv. Date: 08/31/09
Cust. No.: 32900

Bill
To: JOSEPH J. HENDERSON & SON
4288 GRAND AVENUE
GURNEE, IL 60031-0000

Ship
To: ORLAND PARK WWTP
DEL BY TOM

Ship Date 08/28/09
Due Date 09/30/09
Terms NET 30 DAYS
Order: 853395
P.O. No.:MIKE
Clerk: LH
Salesperson: TOM ROHRICH - SALESMAN

Item No.	Description	Qty Ord	Qty Inv	Unit Price	Total Price
COPLY94-ED5	CEMENT, PORTLAND 94#	3	3	8.10	24.30
SIKAFLX1ALMST-	SIKAFLEX 1A LIMESTONE 10OZ	24	24	4.50	108.00

RECEIVED
SEP 4 [illegible]
JOSEPH J HENDERSON & SON, INC.
GENERAL CONTRACTOR

PAYMENT SUMMARY

Please Read Before signing: Contract Agreement on Reverse Side.

Please Notify Your Insurance Broker of Physical Damage Coverage.

(1) know your rates. (2) You are Charged for Time Out, not time used.
(3) Rules are based on an 8 hour day, 40 hour week, 160 hour month. Any usage in excess of this amount will be charged at an appropriate rate.
(4) Equipment must be returned clean. Customer responsible for care, safety, and security of equipment. (5) If mechanical failure occurs - please call immediately.
(6) A Service Charge of 1 1/2% per month will be charged on all accounts 30 days Past due (18% per year). (7) Tires and batteries are responsibility of customer. (8) Fuel charge on return of equipment.

Payments:	0.00
Balance Due:	132.30

X ____________________

PLEASE PAY FROM THIS INVOICE. 1 1/2% PER MONTH ON UNPAID BALANCE OVER 30 DAYS.

CONTRACT TOTALS

Sales:	132.30
Discount:	0.00
Sales Tax 8.50%	0.00
Rental:	0.00
D. W.:	0.00
Total:	132.30

CUSTOMER COPY

RENTAL INVOICE

Customer No	Invoice Date	Invoice No
[illegible]630	31-AUG-09	61091697

RECEIVED
SEP 1 2009
JOSEPH J HENDERSON & SONS
GENERAL CONTRACTOR

Patent Construction Systems is a registered trade mark of Harsco Corporation

Page 1 of 3

Bill To Address:
J.J. HENDERSON
4288 GRAND AVENUE

GURNEE IL 60031

Ship To Address:

8800 Thistlewood Lane

ORLAND PARK 60462

[illegible]	Customer PO Number	Patent Order Number	Previous Invoice
	[illegible]	[illegible]	[illegible]

Item	Description	Qty	Daily Unit Rate	From	To	Rental Days	Total
Delivery Number: 41407180		Customer PO: QP9					
012CL4	CLIMBING LADDER 4'0"	6		12-AUG-09	31-AUG-09	20	
012CLB	CLIMBING LADDER BRACKET	10		12-AUG-09	31-AUG-09	20	
Q19 7	7'X10" STEEL PLANK	10		12 AUG 09	31 AUG 09	20	
QD7	7' DIAGONAL BRACE	16		12-AUG-09	31-AUG-09	20	
QH7	7' HORIZONTAL	32		12-AUG-09	31-AUG-09	20	
QL10	CASTER (ELECTROPLATED)	4		12-AUG-09	31-AUG-09	20	
QP6	6' 6" POST	4		12-AUG-09	31-AUG-09	20	
QP9	9' 9" POST	8		12-AUG-09	31-AUG-09	20	

This order has a site balance.

Invoice Due for Payment on/before: 10-SEP-09

RENTAL INVOICE

Customer No	Invoice Date	Invoice No
1041630	31-AUG-09	61091697

Patent Construction Systems is a registered trade mark of Harsco Corporation

Bill To Address:
J.J. HENDERSON
4288 GRAND AVENUE

GURNEE IL 60031

Ship To Address:

8800 Thistlewood Lane

ORLAND PARK 60462

RENTAL INVOICE

Customer No	Invoice Date	Invoice No
1041630	31-AUG-09	61091697

Patent Construction Systems is a registered trade mark of Harsco Corporation

Bill To Address:
J.J. HENDERSON
4288 GRAND AVENUE

GURNEE IL 60031

Ship To Address:

8800 Thistlewood Lane

ORLAND PARK 60462

		Invoice Total
		Currency USD Net 319.79 TAX 0.00 Amount 319.79

M = Minimum Rental Charges Applicable

INQUIRIES TO BRANCH:
Patent-Forming Concepts (Agent), 185 Industrial Drive, Gilberts, IL, 60136 Tel:(847) 426-4400, Fax:(847) 426-5164
PAYMENTS SHOULD BE SENT TO: Patent Construction Systems, 1766 Solutions Center, CHICAGO IL 60677-1007

Patent Construction Systems is part of Harsco Corporation Access Services Group.

Documentation Item No. 6

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 09/30/10

Job #: 1224-00 Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

NOTIFICATION			
Person Directing or Notified of Work:	Beth Vogt	Date Notified:	
Method of Notification:	Verbal		

Reason for Change (in detail): John Ingram gave verbal direction to proceed with additional paving.

Description of Work: Asphalt Paving of additional pathways

Photographs Taken? Yes No

LABOR

Phase	Date	Name	Trade	Hours	OT Hours	Cost
Rates good 6/1/09 to 5/31/10					***Labor Subtotal:***	$ -

Materials

Description of Material or Equipment	Units	Price	Quant.	Cost
				-
				-
				-
				-
				-
			Material Subtotal:	$ -

See page two for Equipment, and Subcontractor charges.

JJ Henderson ____________ *Initial*

Greeley and Hansen & Village of Orland Park ____________ *Initial*

Continued on next page

JOSEPH J. HENDERSON & SON, INC.
General Contractor ~ Design Builder
Established 1928

P.O. Box 9
Gurnee, IL 60031-0009
PH: 847-244-3222
FX: 847-244-9572

Extra Work Order

Date: 09/30/10

Job #: 1224-00

Job Name: Orland Park Reservoir Addition

Work Performed For: **Greeley and Hansen & Village of Orland Park**

JJH Equipment

Description of Material or Equipment	Units	Price/unit	Quant.	Cost
		-		-
		-		-
		-		-
		-		-
		-		-
		-		-
			Equipment Subtotal:	$ -

Subcontractors

Sub Name and Description of of work	Cost
Superior Paving	5,000.00
JJH	
Subcontractors Subtotal:	**$ 5,000.00**

Extra Work Totals

Labor Subtotal from page 1:		$	-	*Equipment Subtotal from above*		$	-
Labor OH&P	5%	$	-	Equipment OH&P	5%	$	-
Labor total		**$**	**-**	**Equipment total**		**$**	**-**
Material Subtotal from page 1:		$	-	*Subcontract Subtotal from above*		$	5,000.00
Material OH&P	5%	$	-	JJH OH&P	10%	$	500.00
Material total		**$**	**-**	**Subcontract total**		**$**	**5,500.00**
				Subtotal		$	5,500.00
				JJH Bond	1%	$	55.00
				Total		**$**	**5,555.00**

Joseph J. Henderson & Son, Inc.

(sign & date:) ______________________ Date

______________________ **(Print or Type name & Title)**

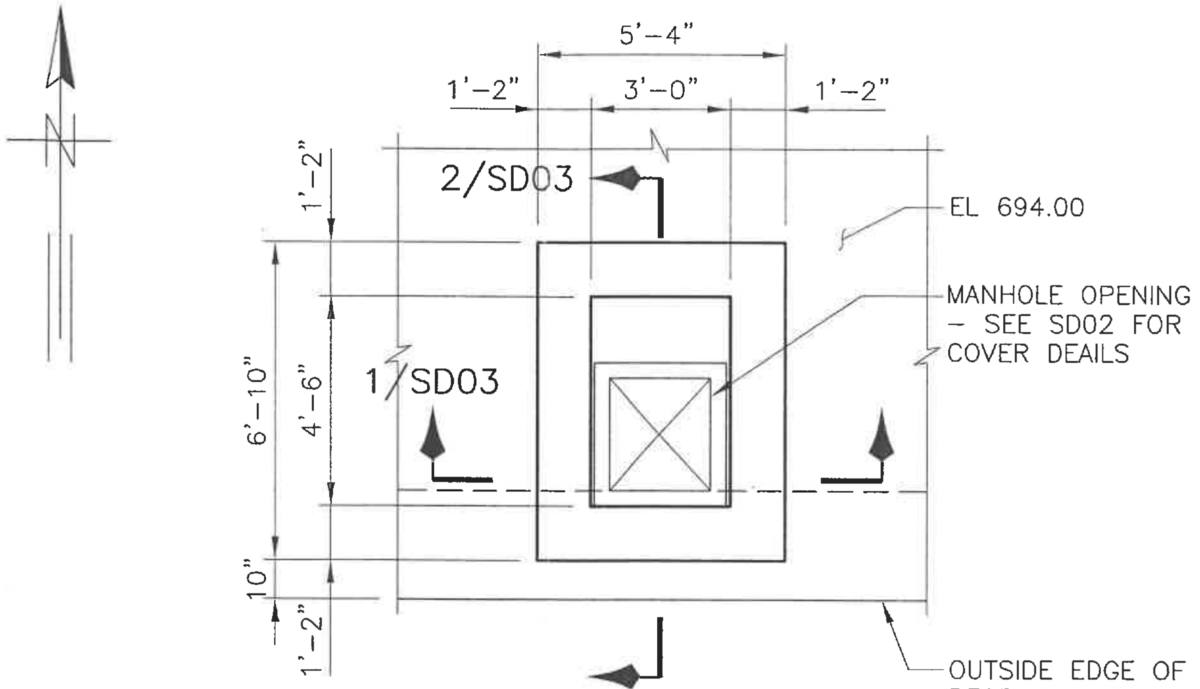
Work Authorized by:

Greeley and Hansen & Village of Orland Park

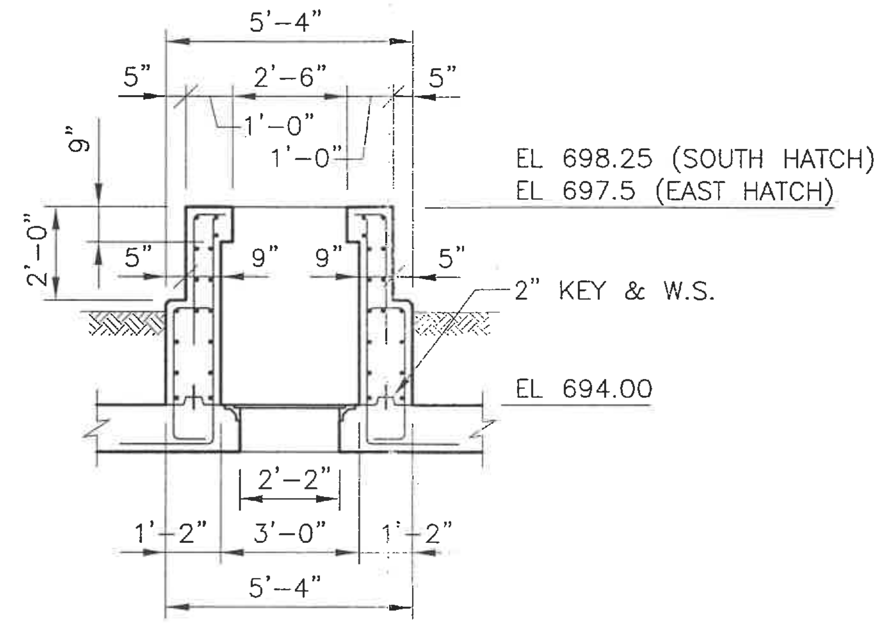
(sign & date:) ______________________ Date

______________________ **(Print or Type name & Title)**

GREELEY AND HANSEN 100 SOUTH WACKER DRIVE, SUITE 1400 CHICAGO, ILLINOIS 60606-4003	DESIGNED JG DRAWN JLR CHECKED RG	HATCH DETAILS	VILLAGE OF ORLAND PARK, ILLINOIS EAST RESERVOIR ADDITION	SUPPLEMENTARY DRAWING SD03 DATE: FEBRUARY 2009
			REFERENCE DRAWING S2	SHEET 1 OF 1

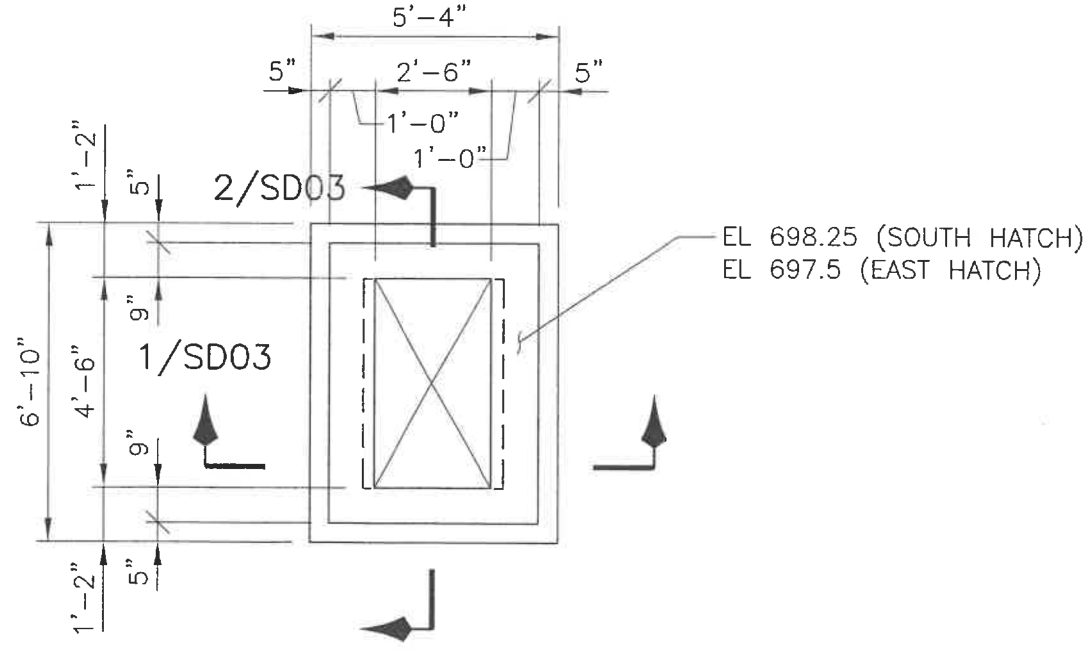


PLAN AT EL. 695

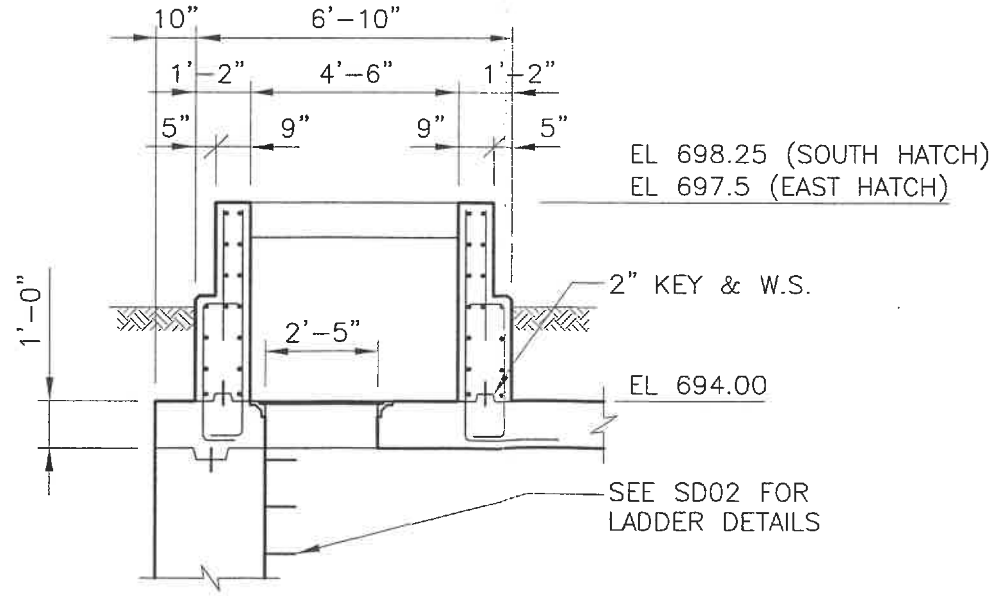


ALL REINF. #4@8 UNLESS NOTED

SECTION 1/SD03



TOP PLAN



ALL REINF. #4@8 UNLESS NOTED

SECTION 2/SD03

SOUTH ACCESS HATCH DETAIL

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

(EAST ACCESS HATCH SIMILAR, SEE SD01 FOR LOCATIONS AND ORIENTATION)

FILE: HATCH ALTS 1:1 03/04/09 16:49 GH-A

GREELEY AND HANSEN
100 SOUTH WACKER DRIVE, SUITE 1400
CHICAGO, ILLINOIS 60606-4003

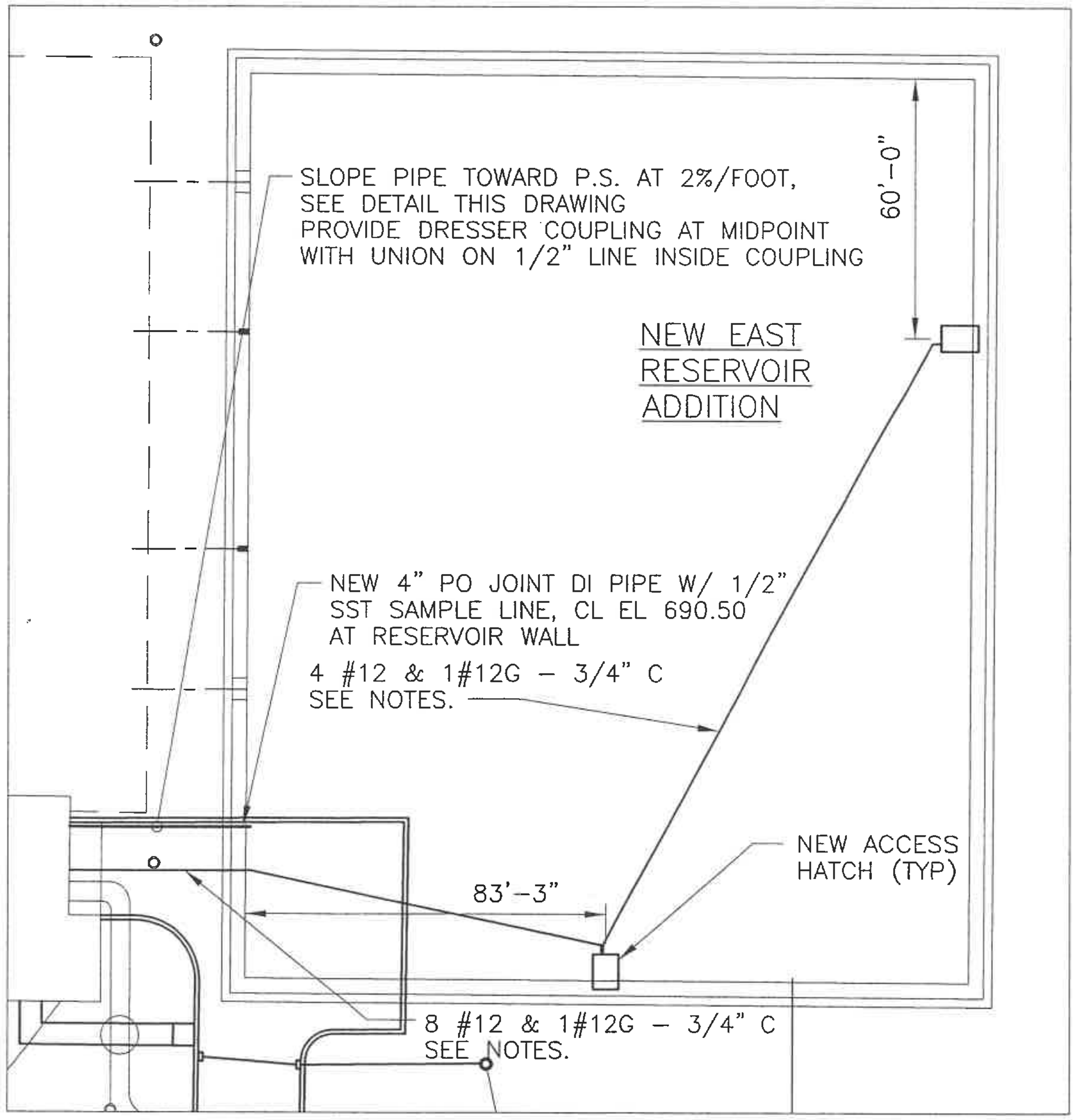
DESIGNED BKV
DRAWN BKV
CHECKED KVJ

RESERVOIR HATCHES

VILLAGE OF ORLAND PARK, ILLINOIS
EAST RESERVOIR ADDITION

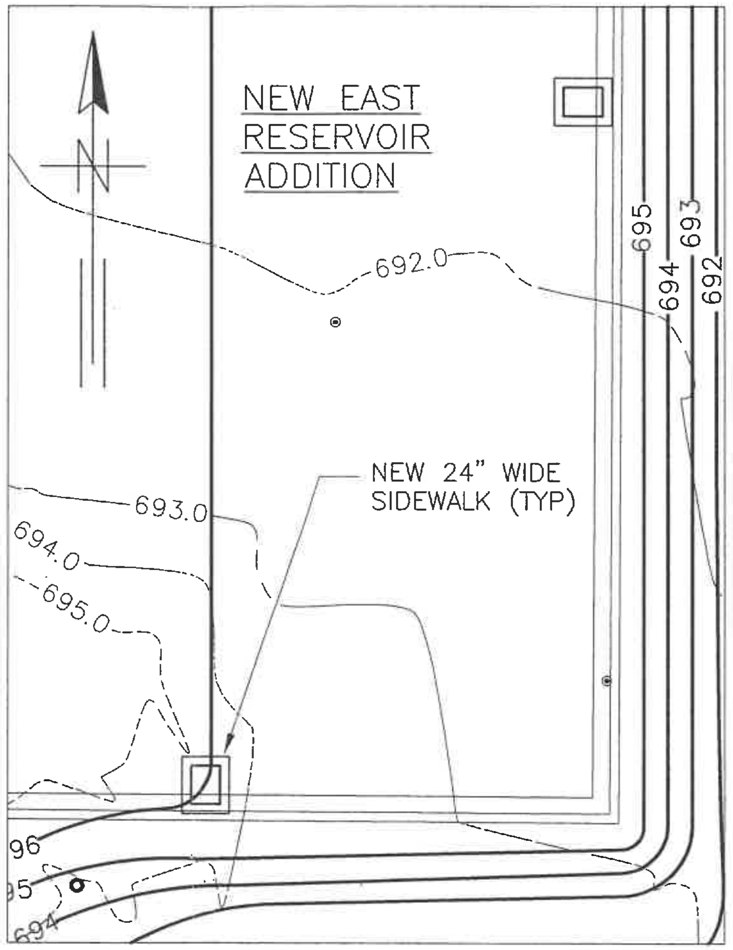
SUPPLEMENTARY
DRAWING SD01
DATE: JUNE 2009

REFERENCE DRAWING G2 SHEET 1 OF 1



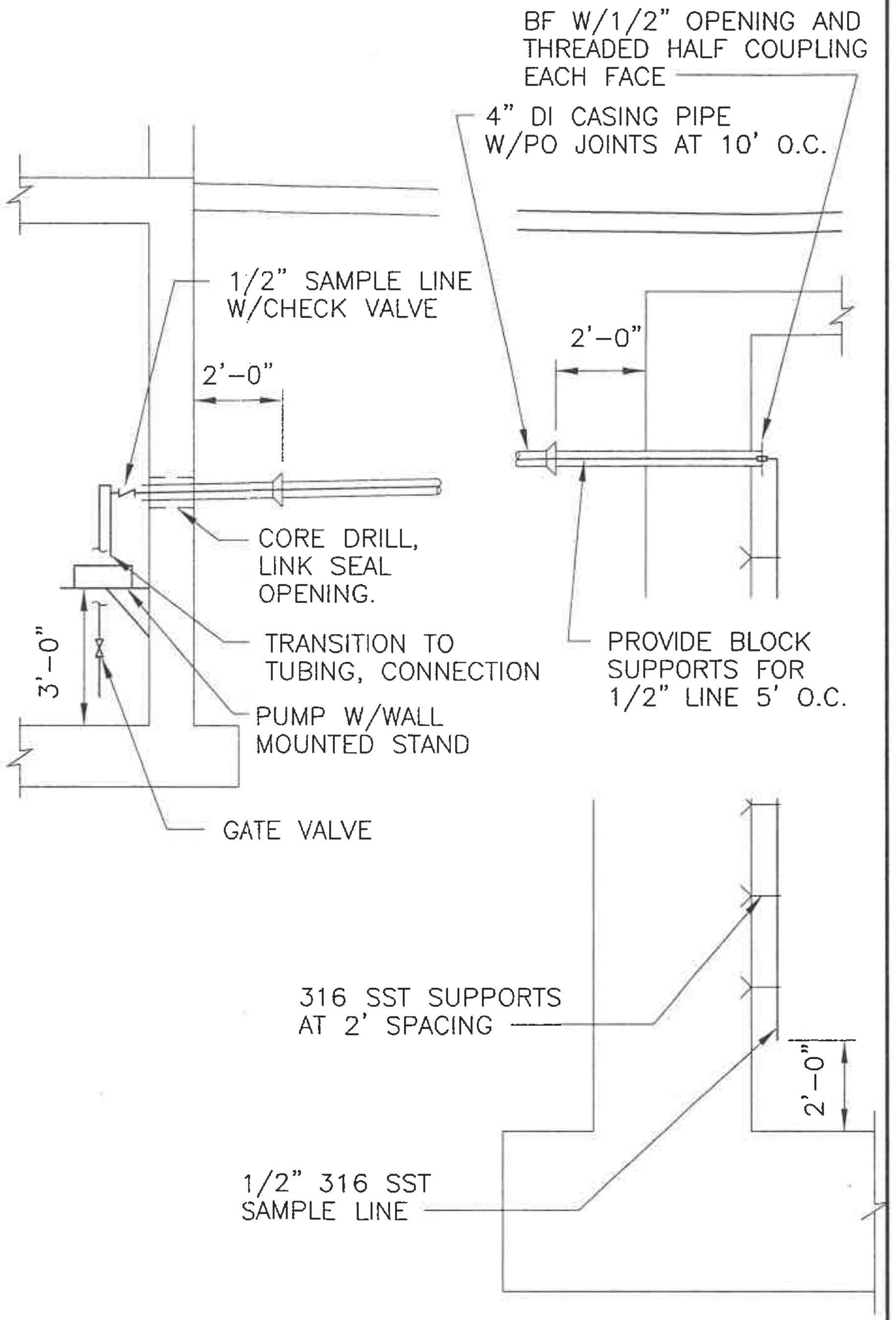
UTILITY SITE PLAN

SCALE: 1"=40'



GRADING SITE PLAN

SCALE: 1"=40'



SAMPLE LINE DETAIL

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

NOTES:

1. USE PVC CONDUIT OUTSIDE WITH XHHW-2 WIRE WITH COPPER CONDUCTORS.
2. PROVIDE RIGID STEEL CONDUIT INSIDE THE PUMP STATION. ROUTE TO EXISTING SECURITY SYSTEM PANEL IN PUMP STATION BASEMENT. PROVIDE SEPARATE ALARM FOR EACH HATCH (QTY 2)

FILE: K:\14603 - OP_EAST RESERVOIR CONSTRUCTION\21 CADD\21.12 FINAL IEPA\SD01 1:1 06/11/09 13:23 GH-F

0184-185
010G08X
FS:

GREELEY AND HANSEN
100 SOUTH WACKER DRIVE, SUITE 1400
CHICAGO, ILLINOIS 60606-4003

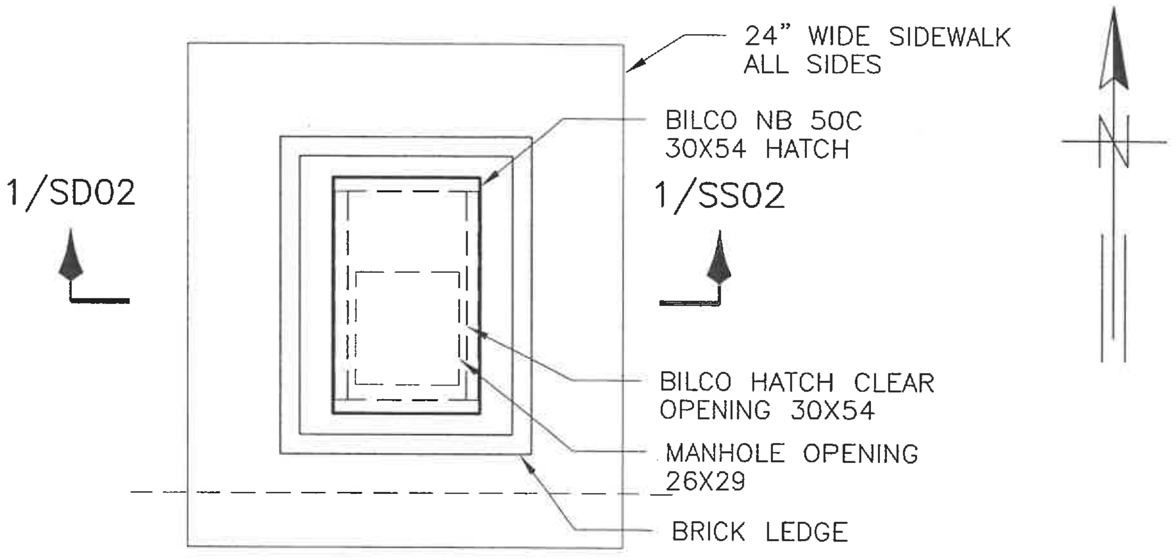
DESIGNED BKV
DRAWN BKV
CHECKED KVJ

HATCH DETAILS

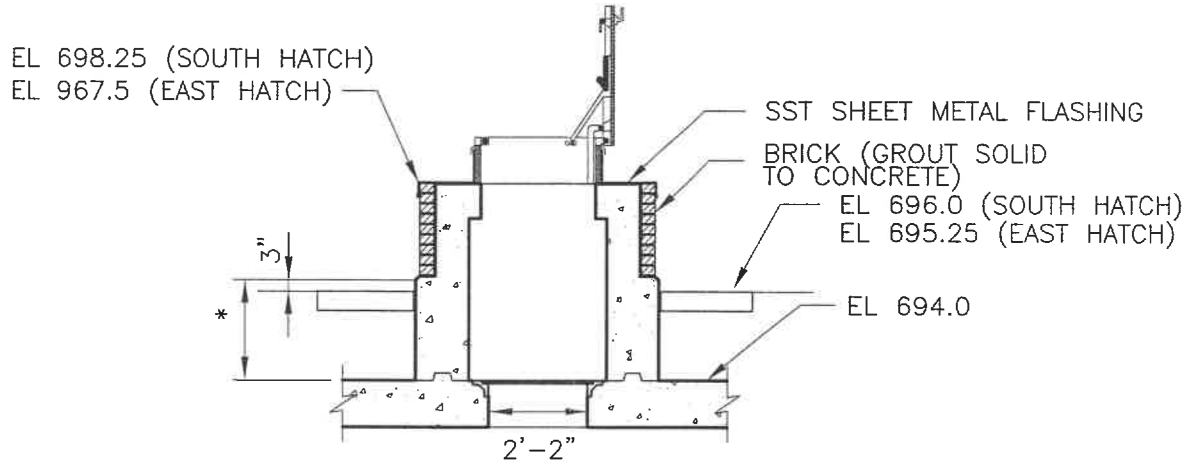
VILLAGE OF ORLAND PARK, ILLINOIS
EAST RESERVOIR ADDITION

SUPPLEMENTARY
DRAWING SD02
DATE: JUNE 2009

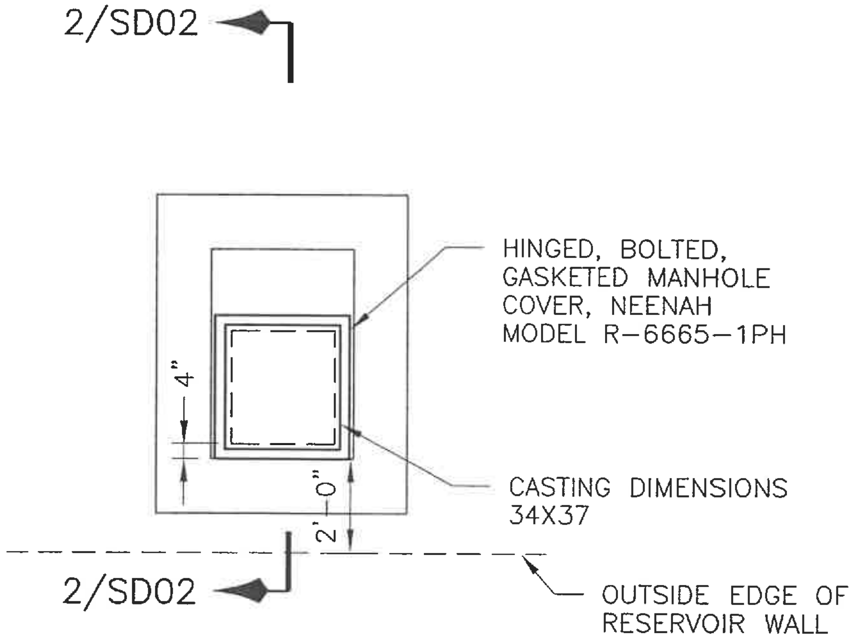
REFERENCE DRAWING G2
SHEET 1 OF 1



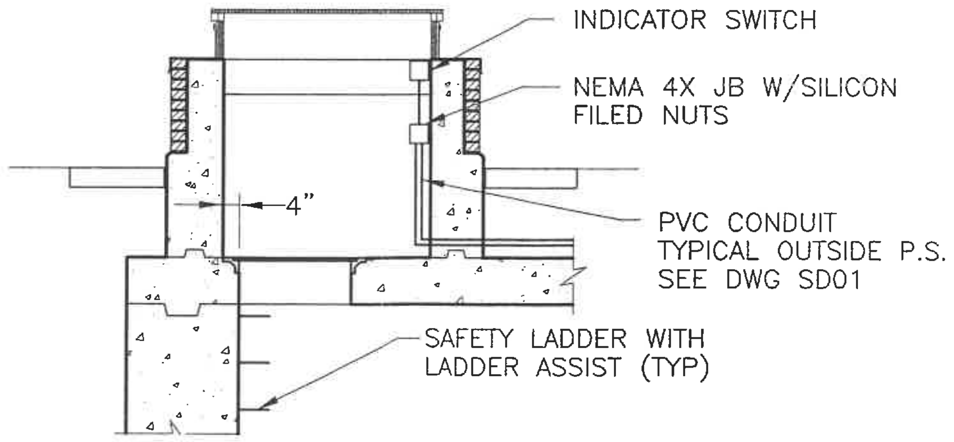
TOP PLAN



SECTION 1/SD02



PLAN AT EL. 695



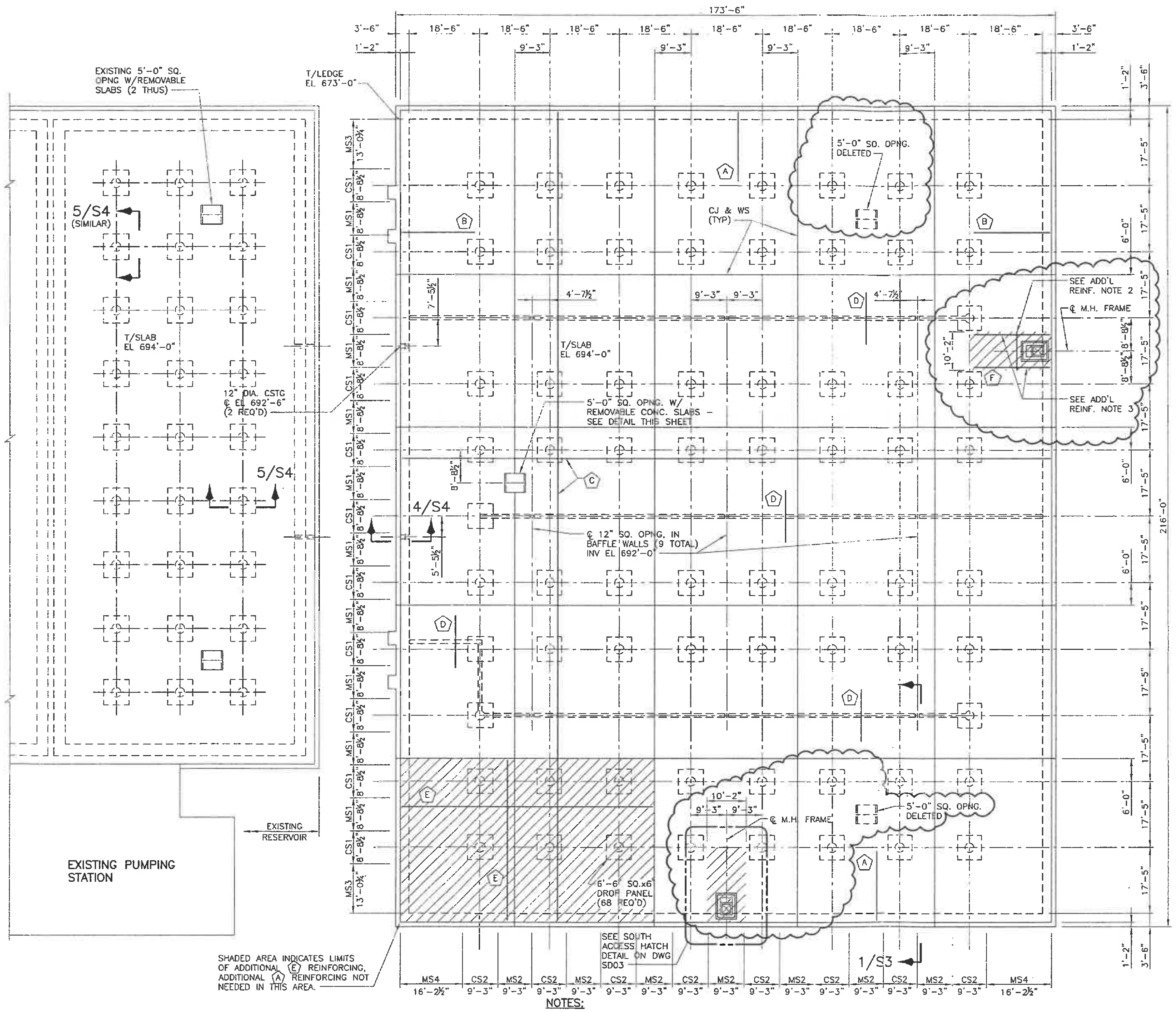
SECTION 2/SD02

SOUTH ACCESS HATCH

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

(EAST ACCESS HATCH SIMILAR, SEE SD01 FOR LOCATIONS AND ORIENTATIONS)

FILE: K:\14603 - OP_EAST RESERVOIR CONSTRUCTION\21 CADD\21.12 FINAL IEPA\SD02 1:1 06/11/09 12:56 GH-F
TOPO184-185
146010G08X
XREFS:



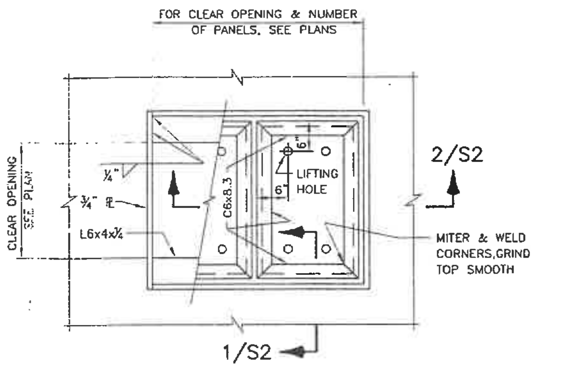
NOTES:

1. SEE SHEET S5 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. SLAB THICKNESS = 1'-0"
3. DESIGN LIVE LOAD = 250 PSF., PARKING LOT LOADING ON SOUTHWEST CORNER 400 PSF.
4. SLAB REINFORCING #6@8 T&B EACH WAY, PLACE N-S REINF. IN OUTER LAYERS.
5. MAX. DEPTH OF EARTH FILL ABOVE TOP SLAB = 3'-0"
6. CS1 & CS2 = INDICATES COLUMN STRIPS, FOR ADD'L REINF. SEE ADD'L REINF. SCHEDULE.
7. MS1, MS2, MS3 & MS4 = INDICATES MIDDLE STRIPS.

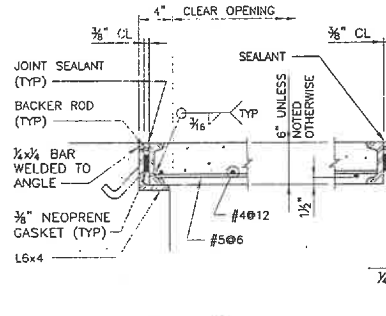
8. ⬠X = INDICATES ADDITIONAL REINFORCING, SEE ADD'L REINF. SCHEDULE.

TOP PLAN

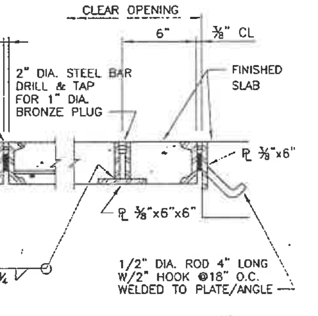
SCALE: 1/16" = 1'-0"



PLAN



SECTION 1/S2



SECTION 2/S2

NOTES:

1. ALL PLATES, CHANNELS, ANGLES, AND RODS TO BE ASTM A276 TYPE 304.
2. PROVIDE SEALANT SUITABLE FOR POTABLE WATER.

REMOVABLE CONCRETE SLAB DETAILS

ADD'L REINF. SCHEDULE

MARK	REINFORCING	LOCATION	REMARKS
⬠A	#5@8x18'-0" (BOTTOM)	PERIMETER (N-S)	ALT. WITH MAIN REINF.
⬠B	#5@8x19'-0" (BOTTOM)	PERIMETER (E-W)	ALT. WITH MAIN REINF.
⬠C	#5@8 (TOP)	COLUMN STRIPS (CS1 & CS2)	ALT. WITH MAIN REINF.
⬠D	#5@8x10'-0" (TOP)	OVER BAFFLE WALLS MIDDLE STRIPS (MS1, MS2, MS3 & MS4)	ALT. WITH MAIN REINF.
⬠E	#5@8 (TOP AND BOTT.)	SOUTHWEST CORNER	ALT. WITH MAIN REINF.
⬠F	#9@8x19'-0" (BOTTOM)	@ M.H. OPNGS.	IN PLACE OF ⬠B

ADD'L REINF. NOTES:

1. PROVIDE ADD'L REINF. AT ALL OPENINGS PER TYP. DET. 2/S5.
2. PROVIDE ADD'L 6-#6@8x10'-0" BOT BARS & ADD'L 4-#6@8x10'-0" TOP BARS – ALT W/ #6@8.
3. PROVIDE ADD'L 6-#9@8 BOT BARS & ADD'L 4-#6@8 TOP BARS – ALT W/ #6@8 – SEE SCHEDULE FOR ADD'L INFORMATION.

4/24/2009 10:23 AM
H:\JOBS\ORLAND PARK\14601-S2.DWG

KLEIN AND HOFFMAN, INC.
CONSULTING ENGINEERS
150 SOUTH WACKER DRIVE
CHICAGO, ILLINOIS 60606
PROJECT NO. 6587

GREELEY AND HANSEN LLC
100 SOUTH WACKER DRIVE, SUITE 1400
CHICAGO, ILLINOIS 60606-4003

DESIGNED JG
DRAWN JVT
CHECKED RPG

APPROVED

NO.	DATE	APPD	REVISION

SCALE
16 0 16 32 FT
1/16"=1'-0"

VILLAGE OF ORLAND PARK, ILLINOIS
LAKE MICHIGAN WATER SUPPLY
EAST RESERVOIR ADDITION

STRUCTURAL
TOP PLAN

FILE NAME 14601-S2
DWG S2
SHEET 6 OF 9
DATE MARCH 2008
REV 0