Town of Charlton
Minutes of Prindle Lake Dam Repair Committee (PLDRC) Meeting
July 17, 2013 @ 6:00 PM

Attendees:

- PLDRC:

Present:

BOS – Joseph Szafarowicz; CIT at LG – Arthur Breault; ALT - Bruce Hebert;
PLA – Paul Naso and Serafino DeFranco; ConCom - Mitch Dunn

Absent:

BOS- Rick Swensen; CIT at LG – Brett Locicero

- Additional:

Town Administrator - Robin Craver
ConCom Agent – Todd Girard

- Guest:

Department of Conservation and Recreation (DCR) -
William Salomaa – Director, Office of Dam Safety (ODS)

Lenard Engineering, Inc. (LEI) -
Scott Charpentier, P.E., Project Manager

1. RC informed all that past Selectman Peter Boria was replaced by Selectman Joseph Szafarowicz as a BOS member on the PLDRC. Peter Boria was the PLDRC Chair. Since a Committee Chair should be a member of the BOS, RC asked JS if he would accept that position for the evenings meeting. JS accepted.
2. In order to more quickly proceed to main agenda items, the formal committee vote to elect a Chair for the evenings meeting and the approval of past Minutes were to be addressed at a later time/meeting.
3. JS called the meeting to order at 6:10 PM.
4. RC referred to the Dam Safety Order requiring a Dam 6-month visual inspection on July 22, 2013. RC asked WS if the ODS would consider waiving that requirement in light of current dam repair project.
5. WS said that he would consider that request and suggested that RC submit that request in writing to the ODS. RC agreed to do so.
6. The balance of the meeting was devoted to the review by SC of the contractor's "Tentative Construction Schedule" dated 7/15/13 (see Attachment 1). During the review of the detailed construction items, WS discussed major items identified by ODS.
7. SC informed WS that he and Karen Fung are LEI's project resident engineers.
8. SC informed WS that Mr. Joe Spinelli is the contractor superintendent and provided the contractor's emergency contact list to meeting participants, (see Attachment 2).
9. SC described the contractor's means and methods submittal for toe buttress and water control work, (see Attachment 3) which addressed WS's concerns.

10. SC reported that RB&S requested that the lake be drawn down only one foot instead of two feet. WS stated that ODS will review that request; however, he did not think that it was a good idea. SC responded subsequently and said that it would be a two-foot draw down.
11. SC expects to receive and review the contractor's draw-down plan in the near future and submit it to ODS. SC stated that the Refill Plan would be submitted to ODS. WS stated that the Refill Plan should address the rate of rise of the lake; critical features performance of the toe drain system; spillway performance; monitoring and documenting downstream embankment seepage. In addition, LEI must provide ODS a report documenting these observations including any concerns noted.
12. Agreement was reached by all on the issues of concern by ODS and LEI.
13. WS highlighted both critical and non-critical items which ODS is requesting various levels of project oversight. The critical items will require Engineering oversight; and the non-critical items oversight could be provided by others such as those seated around the meeting table.
14. RC recommended that TG and SD could provide that additional oversight effort under guidance from SC.
15. SD stated that BH would also be available to assist.
16. WS and SC emphasized that it is important that only LEI is authorized to provide directions to the contractor. All agreed.
17. A major LEI oversight task is required for the toe buttress item. WS identified the major excavation at the toe of the dam as a critical item.
18. SC's current rough estimate for the additional oversight required by ODS is approximately 150 hours at $97.00 per hour for a total of $14,970.00. SC plans to review the construction schedule with the contractor, finalize the estimated LEI contract cost increase for the additional oversight, and submit a cost increase Change Order for approval in the near future.
19. WS stated that a completion report prepared by LEI and a Phase I Inspection is required before the ODS issues a Certificate of Compliance with the Dam Safety Permit.
20. The next meeting will be held on TBD. Its Agenda will include any PLDRC re-organization issues. Also, SC's revised request for an additional oversight change order.
21. The Meeting was adjourned at 7:00 PM.

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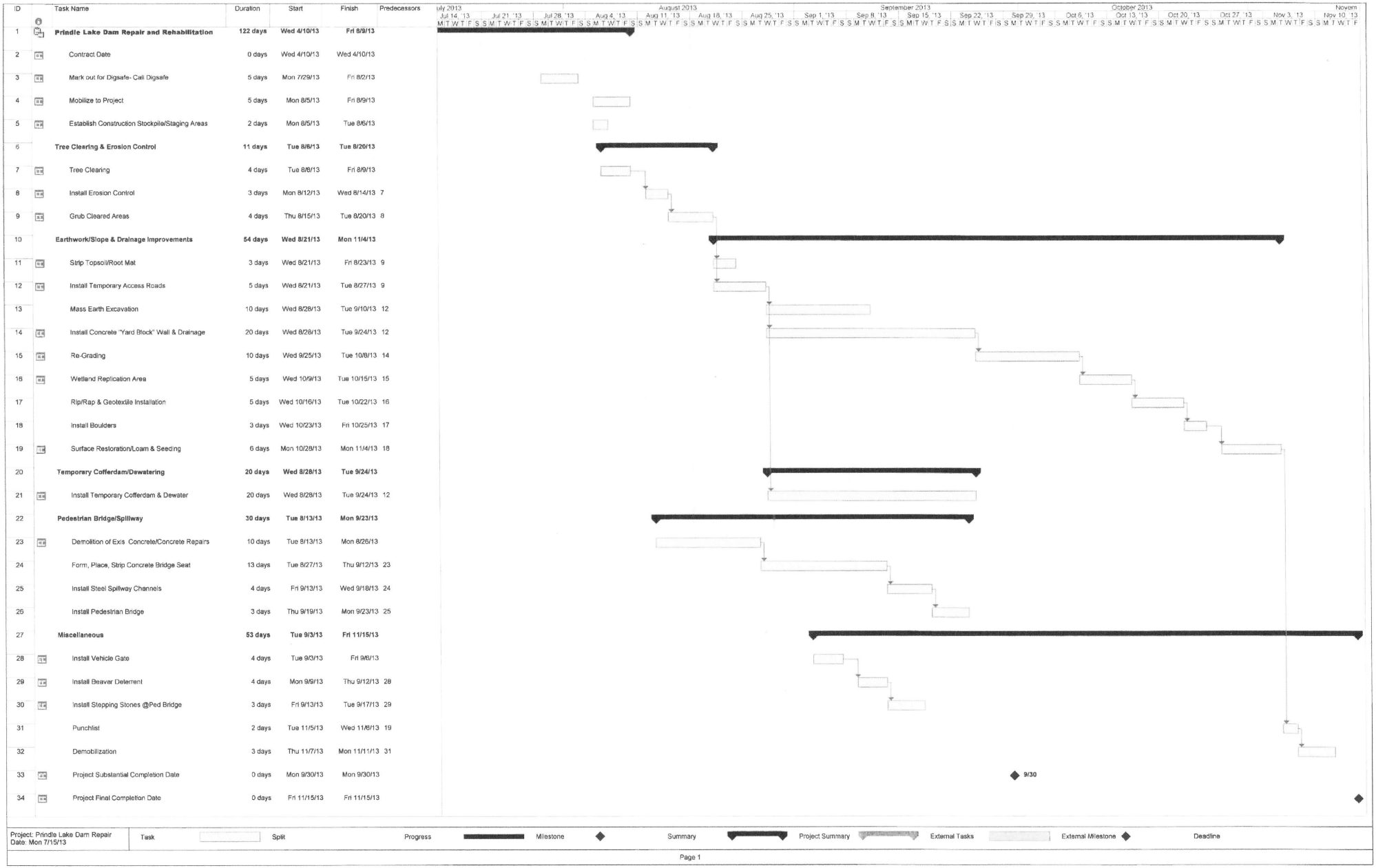
ATTACHMENTS

1. "Tentative Construction Schedule", dated 7/15/13
2. Contractor Emergency Contact List, dated July 11, 2013
3. Contractor Control of Water Submittal, dated July 2013

Submitted by:
Serafino DeFranco – Clerk, PLDRC

PLDRC Approved:

Joseph Szafarowicz	Date	Arthur Breault	Date
Rick Swensen	Date	Brett Locicero	Date
Serafino DeFranco	Date	Mitch Dunn	Date
Paul Naso	Date	Bruce Hebert	Date



ID	Task Name	Duration	Start	Finish	Predecessors
1	**Prindle Lake Dam Repair and Rehabilitation**	**122 days**	**Wed 4/10/13**	**Fri 8/9/13**	
2	Contract Date	0 days	Wed 4/10/13	Wed 4/10/13	
3	Mark out for Digsafe- Call Digsafe	5 days	Mon 7/29/13	Fri 8/2/13	
4	Mobilize to Project	5 days	Mon 8/5/13	Fri 8/9/13	
5	Establish Construction Stockpile/Staging Areas	2 days	Mon 8/5/13	Tue 8/6/13	
6	**Tree Clearing & Erosion Control**	**11 days**	**Tue 8/6/13**	**Tue 8/20/13**	
7	Tree Clearing	4 days	Tue 8/6/13	Fri 8/9/13	
8	Install Erosion Control	3 days	Mon 8/12/13	Wed 8/14/13	7
9	Grub Cleared Areas	4 days	Thu 8/15/13	Tue 8/20/13	8
10	**Earthwork/Slope & Drainage Improvements**	**54 days**	**Wed 8/21/13**	**Mon 11/4/13**	
11	Strip Topsoil/Root Mat	3 days	Wed 8/21/13	Fri 8/23/13	9
12	Install Temporary Access Roads	5 days	Wed 8/21/13	Tue 8/27/13	9
13	Mass Earth Excavation	10 days	Wed 8/28/13	Tue 9/10/13	12
14	Install Concrete "Yard Block" Wall & Drainage	20 days	Wed 8/28/13	Tue 9/24/13	12
15	Re-Grading	10 days	Wed 9/25/13	Tue 10/8/13	14
16	Wetland Replication Area	5 days	Wed 10/9/13	Tue 10/15/13	15
17	Rip/Rap & Geotextile Installation	5 days	Wed 10/16/13	Tue 10/22/13	16
18	Install Boulders	3 days	Wed 10/23/13	Fri 10/25/13	17
19	Surface Restoration/Loam & Seeding	6 days	Mon 10/28/13	Mon 11/4/13	18
20	**Temporary Cofferdam/Dewatering**	**20 days**	**Wed 8/28/13**	**Tue 9/24/13**	
21	Install Temporary Cofferdam & Dewater	20 days	Wed 8/28/13	Tue 9/24/13	12
22	**Pedestrian Bridge/Spillway**	**30 days**	**Tue 8/13/13**	**Mon 9/23/13**	
23	Demolition of Exis Concrete/Concrete Repairs	10 days	Tue 8/13/13	Mon 8/26/13	
24	Form, Place, Strip Concrete Bridge Seat	13 days	Tue 8/27/13	Thu 9/12/13	23
25	Install Steel Spillway Channels	4 days	Fri 9/13/13	Wed 9/18/13	24
26	Install Pedestrian Bridge	3 days	Thu 9/19/13	Mon 9/23/13	25
27	**Miscellaneous**	**53 days**	**Tue 9/3/13**	**Fri 11/15/13**	
28	Install Vehicle Gate	4 days	Tue 9/3/13	Fri 9/6/13	
29	Install Beaver Deterrent	4 days	Mon 9/9/13	Thu 9/12/13	28
30	Install Stepping Stones @Ped Bridge	3 days	Fri 9/13/13	Tue 9/17/13	29
31	Punchlist	2 days	Tue 11/5/13	Wed 11/6/13	19
32	Demobilization	3 days	Thu 11/7/13	Mon 11/11/13	31
33	Project Substantial Completion Date	0 days	Mon 9/30/13	Mon 9/30/13	
34	Project Final Completion Date	0 days	Fri 11/15/13	Fri 11/15/13	

R. BATES & SONS, INC.
General Contractors since 1919
153 Clinton Rd., Sterling, MA 01564
Phone: (978) 563-1390 Fax: (978) 563-1393

July 11, 2013

Mr. Scott Charpentier
Senior Associate
Lenard Engineering, Inc.
19 Midstate Drive, Suite 200
Auburn, MA 01501

Re: Prindle Lake Dam Repair Project
Charlton, MA

Dear Mr. Charpentier,

R. Bates and Sons Inc. is providing the following 24 Hour/Emergency Contact information for the above referenced project:

Name	Title	Cell Phone	Office Phone
Mark Pelletier	President	508-826-2784	978-563-1390
Joseph Spinelli	General Superintendent	774-245-1010	978-563-1390
Tom Maimone	Project Manager	508-981-8752	978-563-1390

If you should have any further questions, please do not hesitate to contact our office.

Very Truly Yours,

Tom Maimone
Project Manager
R. Bates & Sons, Inc.

Cc: Mark Pelletier (R. Bates)

☐ Reviewed
☐ Rejected
☒ Approved

☐ Furnish as Corrected
☐ Revise and Resubmit
☐ Submit Specified Item

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all Work in a safe and satisfactory manner.

Lenard Engineering, Inc.
Civil, Environmental and Hydrogeological Consultants
Date 07/15/2013
By

STRUCTURAL CALCULATIONS

for

PRINDLE LAKE DAM
REPAIR AND REHABILITATION
CHARLTON, MA

CONTROL OF WATER SUBMITTAL

Prepared for:
R. BATES & SONS, Inc.
153 Clinton Rd
Sterling, MA 01564

July 2013

COMMONWEALTH OF MASSACHUSETTS
PAUL D. MOYER
STRUCTURAL
NO. 34257
REGISTERED
PROFESSIONAL ENGINEER
7/12/2013

Prepared by:
Gill Engineering
200 Highland Avenue
Needham, MA 02494

GILL
ENGINEERING

Control of Water Submittal

For:
Prindle Lake Dam Rehab
Charlton, MA

From:
R. BATES & SONS, INC.
153 Clinton Rd., Sterling, MA 01564
Phone: (978) 563-1390 Fax: (978) 563-1393

Proposed Design of Water Control System
An 8" PVC siphon will be utilized to lower the water to two feet below the spillway. In the event the siphon is inadequate, a larger pipe will be utilized.

Sequence of Operation
Once the pond has been lowered, excavation at the toe of the dam will commence with a CAT 345 excavator and use of a trench box. As the excavation to grade progresses we will seal any water infiltration with sandbags as it becomes evident. Once excavated to grade, gravel will be placed and compacted as required, concrete blocks will be placed as shown on the plans, and crushed stone and 4" PVC drain pipe will be installed. Once this is completed we will backfill the area of work, slide the trench box down, and repeat the process.

The dimensions of the trench box intended for use are as follows:
Length: 22' Height: 7'6"

A road plate of 1" thickness and suitable length and height will be utilized on the advancing end of the trench box where the blocks are not being placed. As the trench box is moved it will maintain a 2' overlap with the last blocks placed in combination with sandbags to fill in the gap between the blocks and the walls of the trench box as shown on the attached drawings.

Maintenance, Supervision, and Contingency Plan for the Water Control System
In the event of heavy rain during non-work hours, a crew will be available to mobilize and backfill any areas of erosion created by a rain event within a 2 hour window. In relation to this, at all times there will be a sufficient volume of material on site to backfill any erosion caused by any anticipated rain event. The weather for the area will be monitored daily by the site superintendent.

Additional safety measures during the construction process will include having an additional volume of material on site which will exceed any excavation as well as not leaving any excavations open overnight.

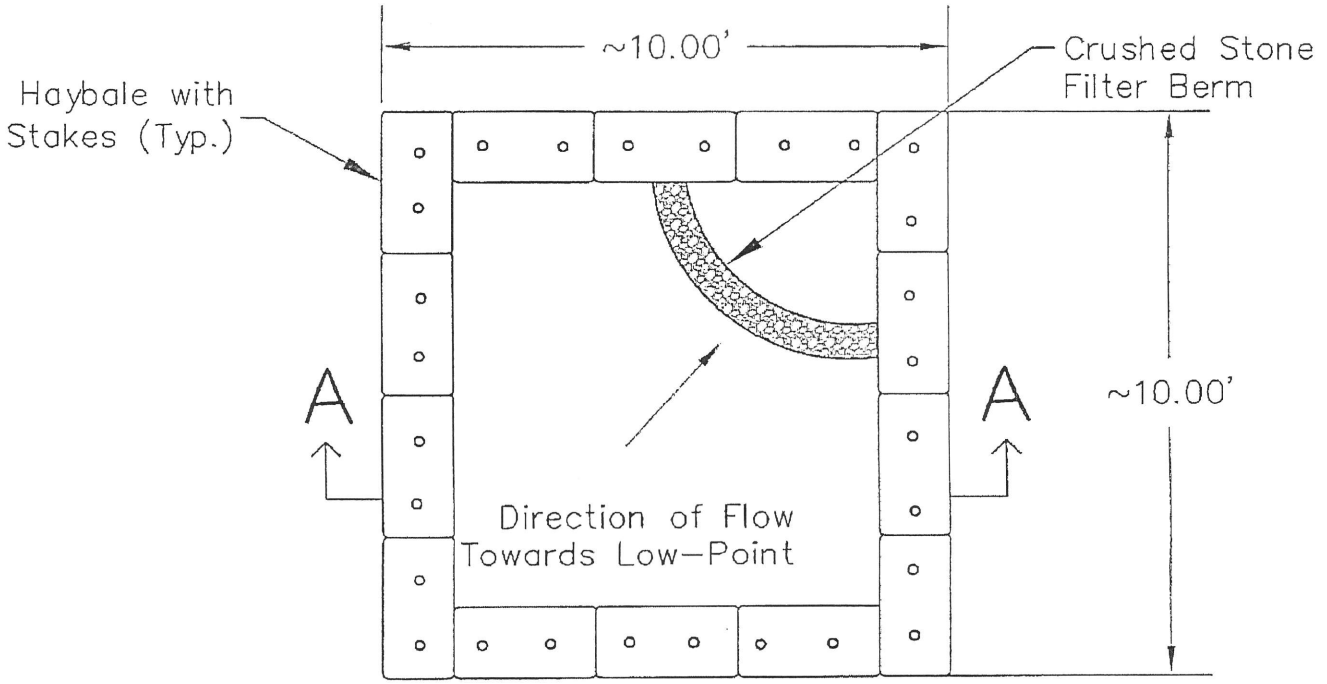
Discharge Points and Settling Basins
Water will be discharged into the settlement basins as shown on the attached plans. Pumps will only be utilized during working hours to minimize the risk of a "piping" condition through the dam. Pumping volumes will be monitored constantly throughout the excavation/backfilling duration to further ensure no increase in flow through the dam structure occurs.

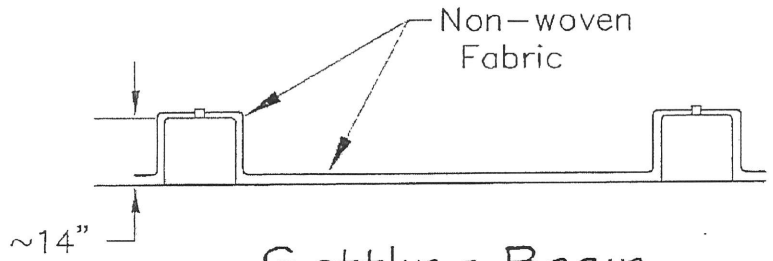
Design for maintenance of water levels and dry excavation conditions
In order to maintain dry excavation conditions we will utilize a sump placed approximately two fleet below the bottom of the excavation at the downstream corner of the advancing end. A 2" electrical pump will be placed in the sump and backfilled with 3" stone as shown attached to allow work in the dry. This will only be used on an as needed basis. A back-up pump will be available.

Sequence of Operation for maintenance of water levels and dry excavation conditions
In the event the water is encountered within the trench box cofferdam the system described above will be utilized in one corner of the cofferdam and utilize the 2" electric pump to ensure work is done in the dry. As we move our trench box for each phase the sump will be moved as needed.

Scheduling requirements with regard to Sedimentation Control
Construction will take place during the low flow months of August and September.

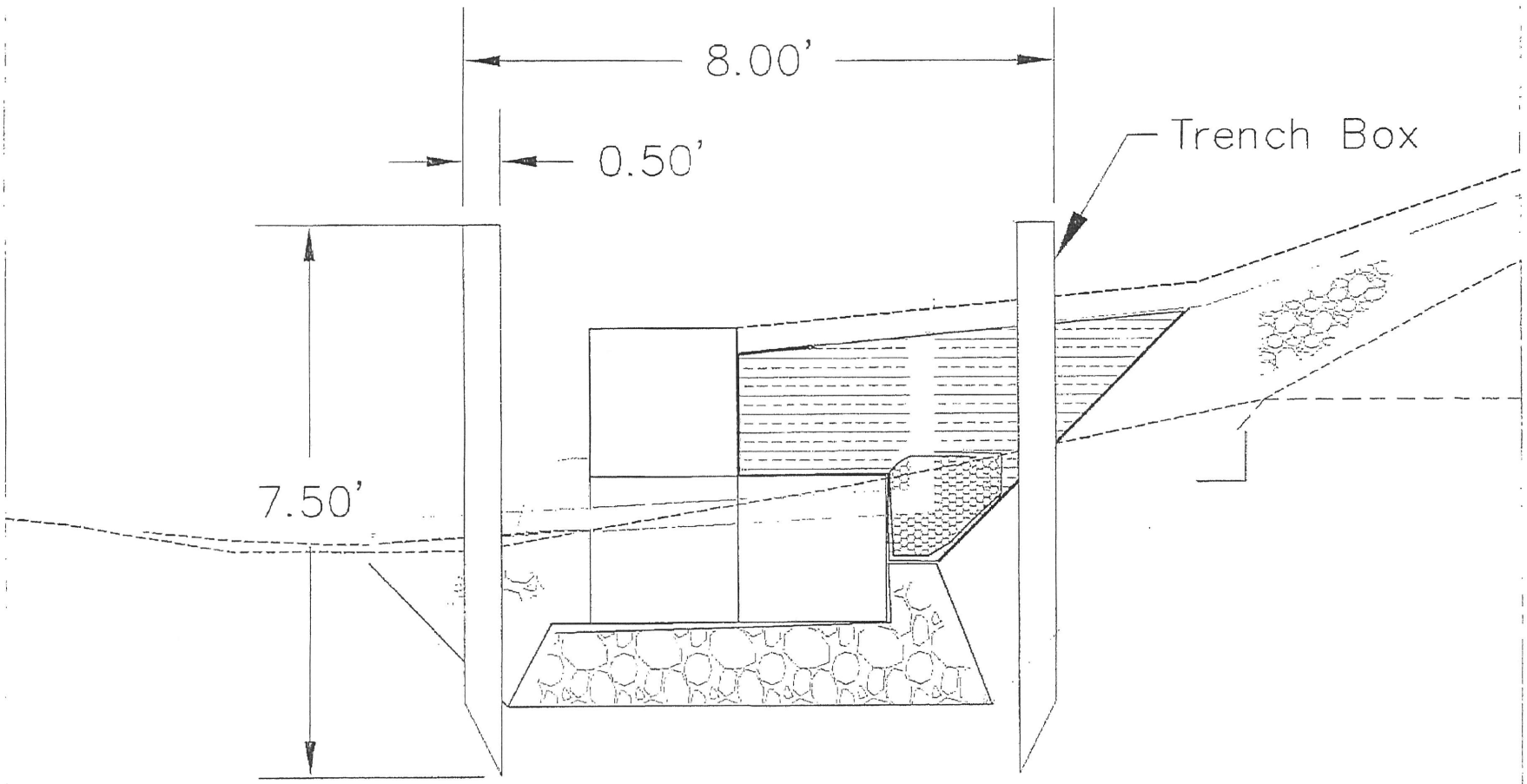
Means and methods of maintaining a base flow in the downstream channel
By lowering the water to two feet below the spillway we do not expect there to be a flow in the downstream channel, therefore no flow maintenance will be required.





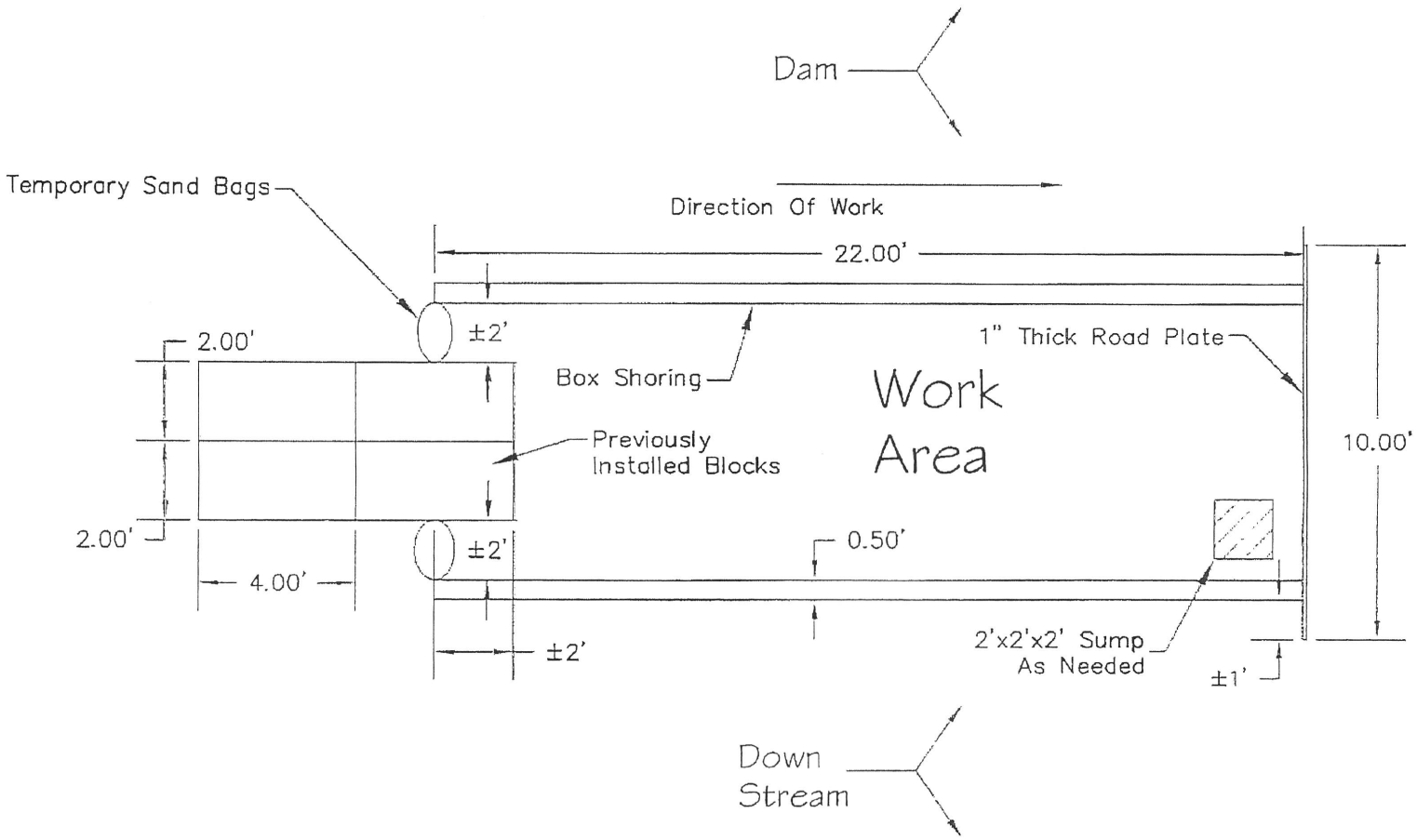
Settling Basin

Scale: 1" = 3'



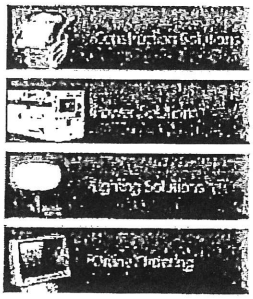
Temporary Cofferdam Section

Scale: 1" = 2'



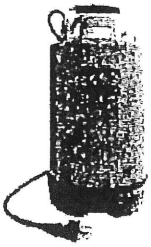
Temporary Cofferdam Plan View

Scale: 1" = 4'



ST2037

2 Inch Discharge, 115V 1Ø, 1.0 HP, 73 GPM, 37' Total Head



This lightweight, compact submersible centrifugal pump is ideal for moving water in multiple confined and open area applications. This is a powerful, versatile, low maintenance pump that is perfect for a wide range of operations supporting Contractors, Service Utilities, Municipalities, and Homeowners. Further, the ST2037 incorporates a rugged cast aluminum housing, internal thermal overload protection, dual shaft seals, sealed ball bearings impeller and molded 25' Power Cable with strain relief.

- **1.0HP, 115V/9.8A, 1Ø, UL & CUL Listed Electric Motor.**
- **Built-in Overload Protection.**
- **2" (NPT) Female Discharge Port.**
- **Reliable double mechanical oil-filled seals.**
- **Cast iron/steel motor casing serves as heat conductor.**
- **Pumps Liquid Up To 120° F.**
- **25' of molded power cord w/strain relief**
- **Dewaters Flat Surfaces Up To 1/2" Levels.**

Documentation

ST-2037-47-47B-38P-40T-rev-3-manual

ST-2037-47-38P-40T-rev-0-french-manual

Related Media

Pump Selection Handbook

Electric Submersible Pumps Brochure

Canada - Electric Submersible Pumps Brochure

Related Products

SS233
ST2038P
ST2047
ST3020BCUL
ST3050D
ST4125G
ST6125G
YELLSUB

Go Back

Unit Specifications

Impeller Type		Neoprene Rubber over Cast-Iron
Impeller Disc Size	2 in	50 mm
Total Head	37 ft	11.3 m
Water Capacity	73 gpm	276 lpm
Max. Solid Intake	0 in	0 mm

Electrical Specifications

Power	1 HP	0.75 kW
Phase		Single
Voltage		115 V
Starting Amperage		34.5 A
Running Amperage		6.9 A
Cable Length	50 ft	15.2 m

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Dimensions & Weights

Pump Diameter	7.4 in	188 mm
Overall Height	15.4 in	391 mm