Forest Lake Dam
2020 Inspection Report

Ela Township Highway Department
23605 N. Echo Lake Road
Lake Zurich, Illinois 60047

Prepared by:
Gewalt Hamilton Associates, Inc.
625 Forest Edge Drive
Vernon Hills, Illinois 60061
Tel. (847) 478-9700
Fax: (847) 478-9701

October 9, 2020

FOREST LAKE DAM INSPECTION REPORT
ELA TOWNSHIP HIGHWAY DEPARTMENT

CONTENTS

Dam Inspection Report

Name of Dam Forest Lake Dam **Dam ID No.** 00638

Permit Number 19162 **Class of Dam** One- Small size, High Hazard Potential

Location SE 1/4 **Section** 10 **Township** 43N **Range** 10E

Owner Ela Township 847-438-2371
Name **Telephone Number (Day)**

23605 N. Echo Lake Road 847-438-2371
Street **Telephone Number (Night)**

Lake Zurich, IL 60047 **County** Lake
City **Zip Code**

Type of Dam Earth Embankment

Type of Spillway Drop Inlet

Date(s) Inspected September 30,2020

Weather When Inspected Sunny

Temperature When Inspected 57 deg. F

Pool Elevation When Inspected 793.1

Tailwater Elevation When Inspected 784.90

Inspection Personnel:

Name	Title
Daniel J. Strahan, P.E., CFM	
Andrew Forster	Highway Commissioner

Professional Engineer's Seal

SUMMARY OF MAINTENANCE DONE AND/OR

REPAIRS MADE SINCE THE LAST INSPECTION

DATE OF PRESENT INSPECTION September 30, 2020

DATE OF LAST INSPECTION August 30, 2019

1. EARTH EMBANKMENT DAMS

Routine vegetation removal and trimming.

2. CONCRETE MASONRY DAMS

N/A

3. PRINCIPAL SPILLWAY

None

4. OUTLET WORKS

None

5. EMERGENCY SPILLWAY

Roadway resurfaced September 2020.

Earth Embankment

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Surface Cracks	NE		
Vertical and Horizontal Alignment of Crest *(Bituminous Roadway)*	GC		
Unusual Movement or Cracking At or Beyond Toe	NE		
Sloughing or Erosion of Embankment and Abutment Slopes	NE		
Upstream Face Slope Protection *(Rip Rap)*	GC		
Seepage	NE		
Filter and Filter Drains	NA		

Earth Embankment (Continued)

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Animal Damage	NE		
Embankment Drainage Ditches	NA		
Vegetative Cover	GC		*Recommend continued periodic removal/trimming of brush and trees on embankment and within 10' of revetment mattress*
Other (Name) *Revetment Mattress on Downstream Slope*	GC		*Small tear noted in wire cage of revetment mattress. Continue monitoring.*
Other			
Other			
Other			

Concrete or Masonry Dams

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Seepage	NA		
Structure to Abutment/Embankment Junctions	NA		
Water Passages	NA		
Foundation	NA		
Surface Cracks in Concrete Surfaces	NA		
Structural Cracking	NA		
Vertical and Horizontal Alignment	NA		

Concrete or Masonry Dams (Continued)

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Monolith Joints	NA		
Construction Joints	NA		
Spalling of Concrete	NA		
Filters, Drains, etc.	NA		
Riprap	NA		
Other (Name)	NA		

IF THE DAM IS GATED- Fill out the portion of the Principal Spillway Form related to Gated Spillways

Principal Spillway

Approach Channel

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Debris	NE		
Side Slope Stability	GC		
Slope Protection	GC		
Other (Name)			
Other			
Other			
Other			

Principal Spillway

Drop Inlet Spillway

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Erosion, Spalling, Cavitation	NE		
Structure to Embankment Junction	GC		
Drains	NA		
Seepage Around or Into Structure	OB	*Minor infiltration between bottom two sections of drop inlet; condition has not worsened since previous inspection.*	*Continued observation to ensure condition does not become worse.*
Surface Cracks	NE		
Structural Cracks	NE		

IF THE SPILLWAY IS GATED FILL OUT THE GATES SECTION

Principal Spillway (Continued)

Drop Inlet Spillway

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Alignment of Abutment Walls	NA		
Construction Joints	NA		
Filter and Filter Drains	NA		
Trash Racks	NA		
Bridge and Piers	NA		
Differential Settlement	NA		
Other (Name)			

IF THE SPILLWAY IS GATED FILL OUT THE GATES SECTION

Principal Spillway (Continued)

Conduit (36" RCP)

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Erosion, Spalling, Cavitation	NE		
Joint Separation	OB	*Minor 0.16' gap at bottom of outlet pipe end section; not visible at time of inspection.*	*Continue to monitor.*
Seepage Around or Into Conduit	NE		
Surface Cracks	NE		
Structural Cracks	NE		
Trash Racks	NE		
Differential Settlement	NE		
Alignment	GC		
Other (Name)			

IF THE SPILLWAY IS GATED FILL OUT THE GATES SECTION

Principal Spillway (Continued)

Chute

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Erosion, Spalling, Cavitation	NA		
Structure to Embankment Junction	NA		
Construction Joints	NA		
Expansion and Contraction Joints	NA		
Differential Settlement	NA		
Surface Cracks	NA		
Structural Cracks	NA		
Wall Alignment	NA		
Other (Name)			

IF THE SPILLWAY IS GATED FILL OUT THE GATES SECTION

Principal Spillway

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Gate Sill	NA		
Gate Seals	NA		
Gate and Frame	NA		
Operating Machinery	NA		
Emergency Operating Machinery	NA		
Other (Name)			
Other			

Outlet Works

If Separate from Principal Spillway Structure

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Erosion, Spalling, Cavitation	NA		
Joint Separation	NA		
Seepage Around or Into Conduit	NA		
Intake Structure	NA		
Outlet Structure	NA		
Outlet Channel	NA		
Riprap	NA		
Other (Name)			
Other			

Energy Dissipator

Principal Spillway Type: Rip Rap

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Erosion, Spalling, Cavitation	NE		
Structure to Embankment Junction	NA		
Construction Joints	NA		
Surface Cracks	NE		
Structural Cracks	NA		
Differential Alignment	NE		
Expansion and Contraction Joints	NA		

Energy Dissipator (Continued)

Principal Spillway

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Riprap	GC		
Outlet Channel	MM		
Debris	NE		
Other (Name)			
Other			
Other			
Other			

Emergency Spillway

Other: Name *Bituminous Roadway*

ITEM	CONDITION CODE	DEFICIENCIES	RECOMMENDED REMEDIAL MEASURES AND IMPLEMENTATION SCHEDULE
Erosion	NE		
Weeds, Logs, Other Obstructions	NE		
Side Slope Sloughing	NE		
Vegetation	NE		
Sedimentation	NE		
Riprap *(Revetment Mattress)*	GC		
Settlement of Crest	NE		
Downstream Channel	GC		
Other (Name)			

MILES DOWNSTREAM FROM DAM	DOWNSTREAM DEVELOPMENT												Loss of Life Potential			Economic Loss Potential		
	OCCUPIED HOMES	UNOCCUPIED HOMES	AGRICULTURAL BUILDINGS	INDUSTRIAL BUILDINGS	COMMERCIAL BUILDINGS	SCHOOLS	HOSPITALS	ROADS & BRIDGES	DAMS	OVERHEAD UTILITIES	OTHER DEVELOPMENT (Name)	OTHER DEVELOPMENT (Name)	NONE	1 TO 10	OVER 10	MINIMAL EXPECTED	APPRECIABLE EXPECTED	EXCESSIVE EXPECTED
0 to 1/4	12	0	0	0	0	0	0	0	0	0	*1	Golf Course	x			x		
1/4 to 1/2	0	0	0	0	0	0	0	1	0	0	0		x			x		
1/2 to 3/4	0	0	0	0	0	0	0	1	0	0	0		x			x		
3/4 to 1	0	0	0	0	0	0	0	1	0	0	0		x			x		
1 to 1-1/4	0	0	0	0	0	0	0	1	0	0	0		x			x		
1-1/4 to 1-1/2	0	0	0	0	0	0	0	0	0	0	0		x			x		
1-1/2 to 1-3/4	0	0	0	0	0	0	0	1	0	0	0		x			x		
1-3/4 to 2	0	0	0	0	0	0	0	2	0	0	0		x			x		
OVER 2	0												x			x		

*15 inch sanitary sewer located 4' above stream bed

The number of homes, buildings or other items in the floodplain downstream of the dam should be placed in the appropriate row and column to designate their location.

Note: Refers only to development within the downstream floodplain.

Owner's Maintenance Statement

I, Andrew Forster **, owner of** Forest Lake **dam,**

Dam Identification Number 00638 **, in** Lake **County,**

am maintaining the dam in accordance with the accepted maintenance plan which is a part of

Permit Number 19162 .

Mr. Andrew Forster represents the owner, Ela Township, as its elected Township Highway commissioner.

_____

Signature

_____

Date

Owner's Operation and Maintenance Statement

I, Andrew Forster **, owner of** Forest Lake **dam,**

Dam Identification Number 00638 **, in** Lake **County,**

have reviewed the operation and maintenance plan including the Emergency Action Plan (EAP),

which is part of Permit Number 19162 .

I ( ) have enclosed the appropriate revisions

( ) have determined that no revisions to the plan are necessary.

_____

Signature

_____

Date

Mr. Andrew Forster represents the owner, Ela Township, as its Township Highway Commissioner.

The Department of Natural Resources is requesting information that is necessary to accomplish the statutory purpose as outlined under the River, Lakes, and Streams Act 615 ILCS 5. Submittal of this information is REQUIRED. Failure to provide the required information could result in the initiation of non-compliance procedures as outlined in Section 3702.160 of the "Rules for Construction and Maintenance of Dams."

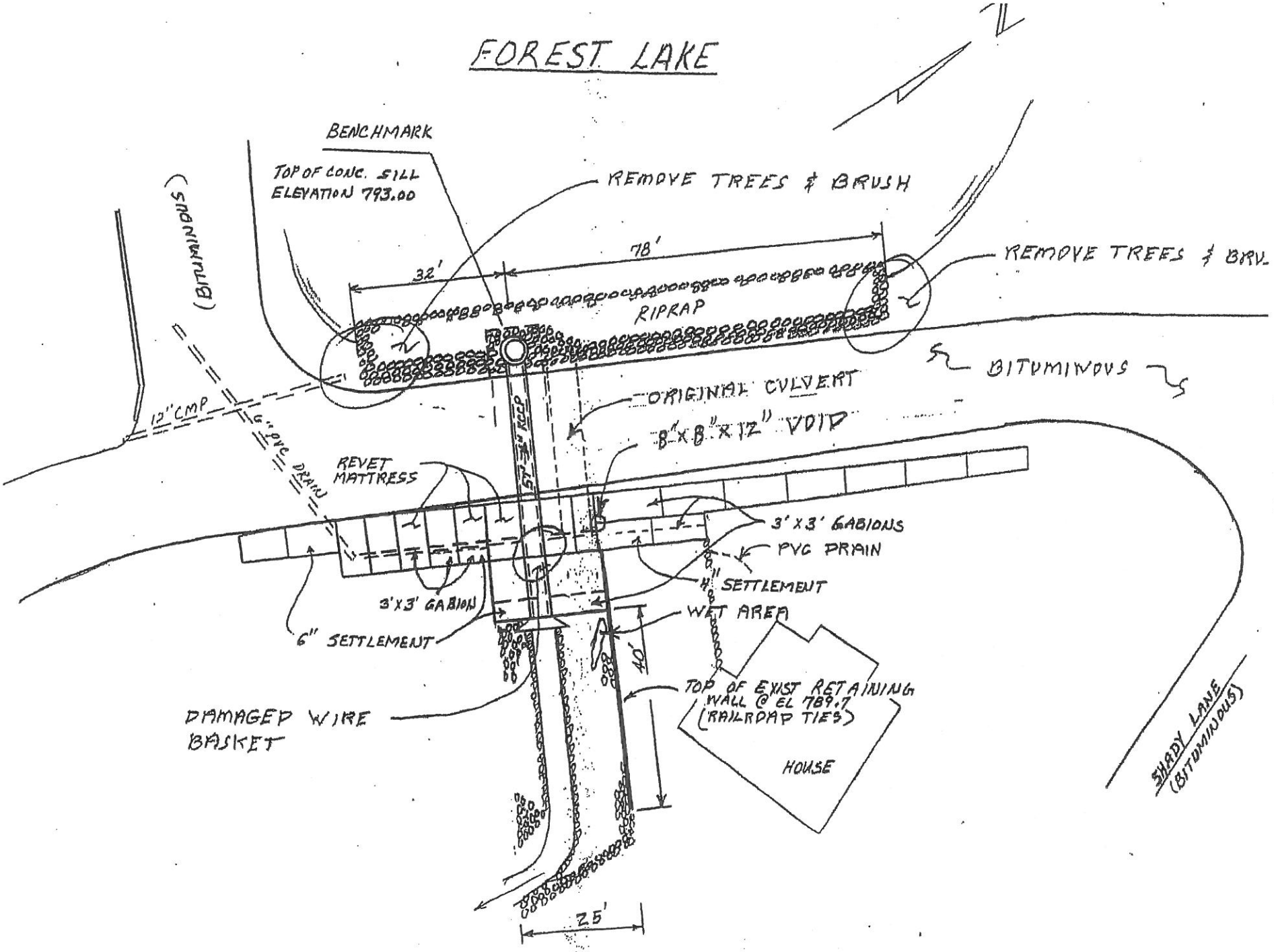
Drop Manhole Control Structure- 9/30/20

Control Structure- Water Level Approximately 1.5” Above Concrete Sill- 9/30/20

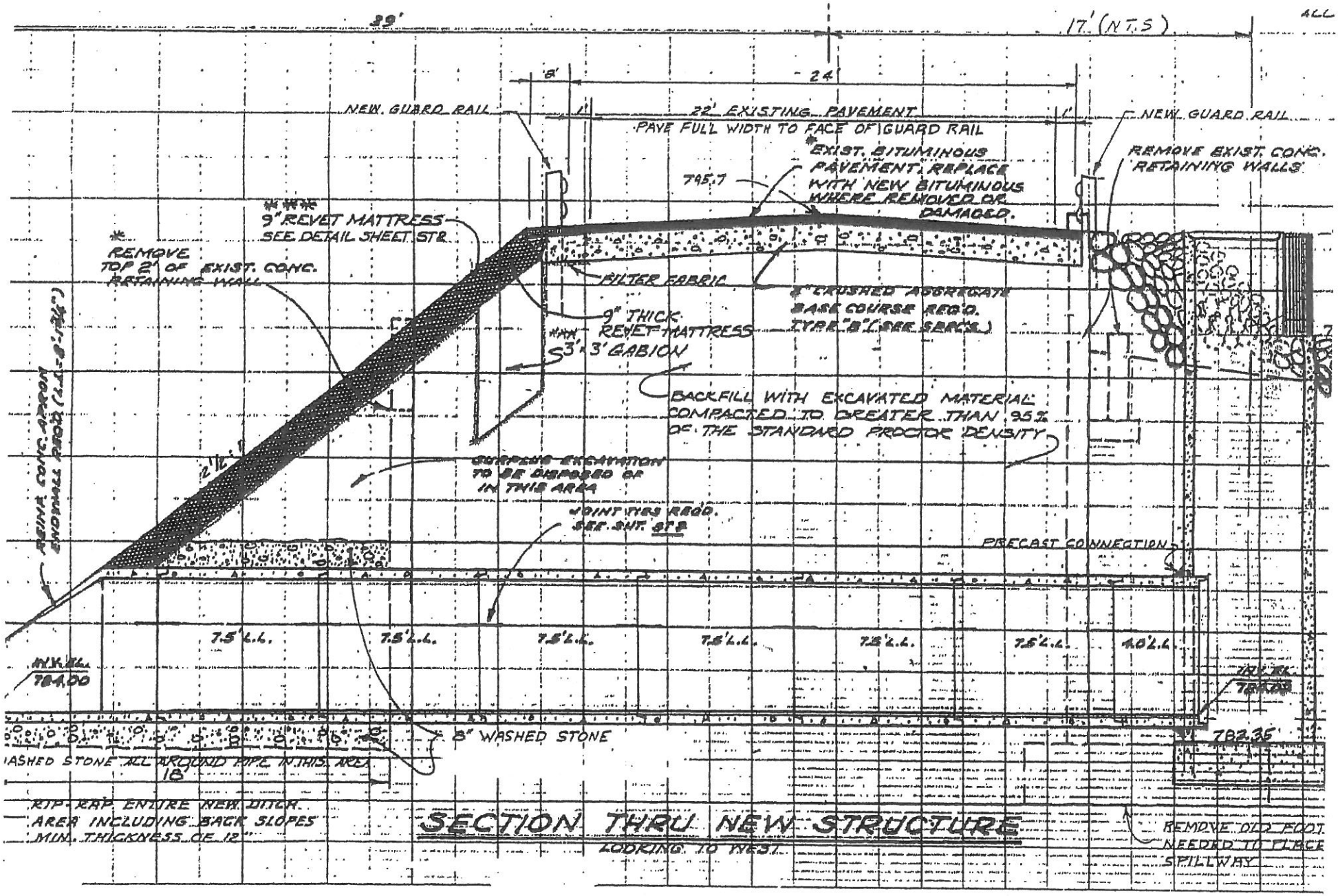
36” RCP Outlet Pipe- 9/30/20

Lakeside Drive- 9/30/20

(Forest Lake on right side of road, outlet pipe on left side;
HMA resurfacing completed September 2020)

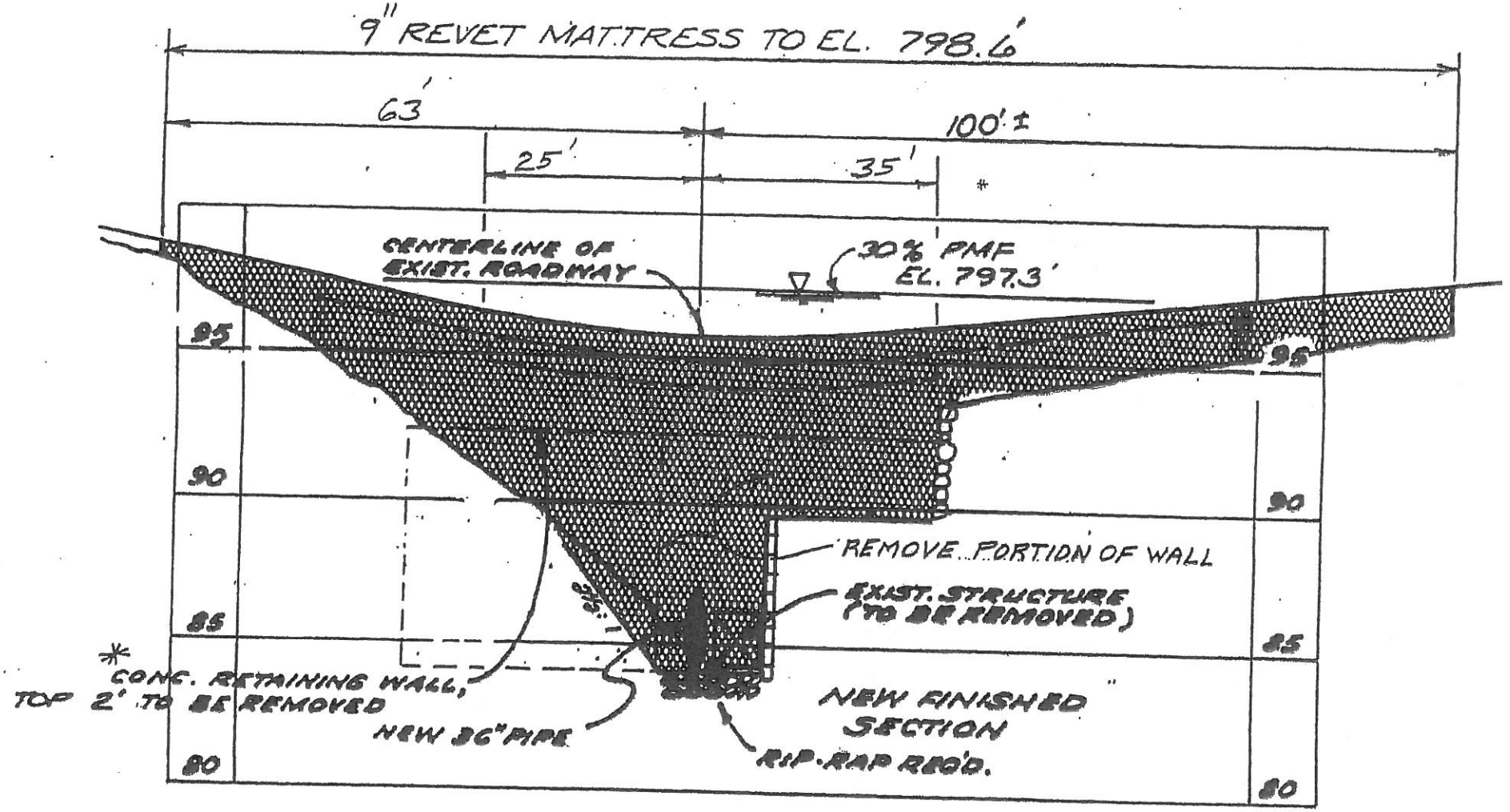


GENERAL LAYOUT PLAN
SCALE 1"=25'



SECTION THRU NEW STRUCTURE

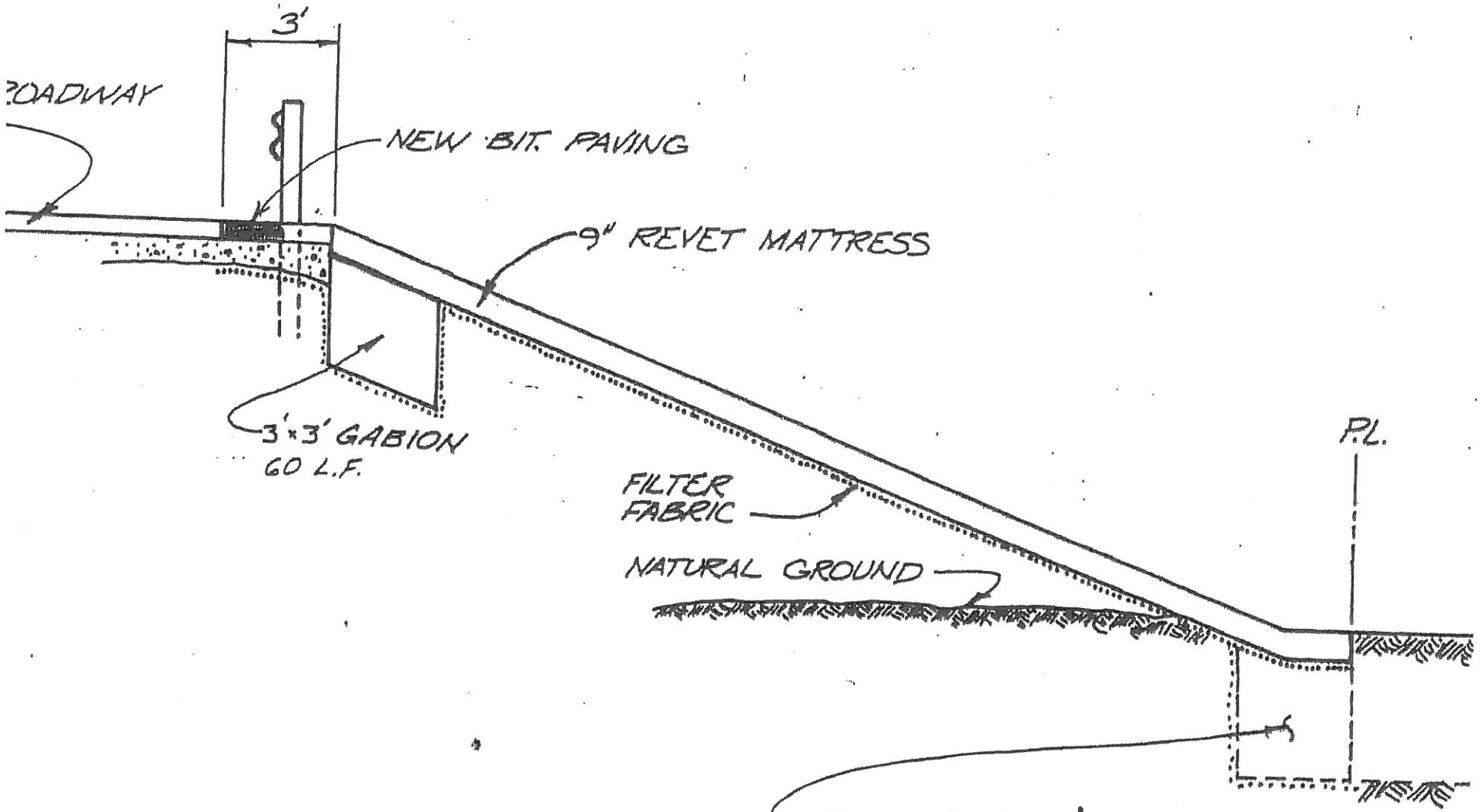
LOOKING TO WEST



DOWNSTREAM ELEVATION

SCALE:

HOR: 1" = 20'
VERT.: 3/16" = 1'



REVET MATTRESS DETAIL

SCALE 1/4" = 1'-0"