

City of Newburyport
Budget and Finance Committee
Loan Order for
Philips Drive Neighborhood
Roadway, Drainage and Watermain Improvements Project

City Councilor's Additional Information Requests

Responses by:

DIANE GAGNON – Assistant City Engineer and DAVE BIANCAVILLA – BSC Consultant

Artichoke Reservoir Data – will Philips Drive Neighborhood backup in heavy rainfall events?

Review of elevations at Reservoir and Hoyts Lane culvert indicates that regardless of extent of reservoir flooding it will not back up into the Philips Drive Neighborhood. The restriction point to the neighborhood is the culvert at the Hoyts Lane Culvert that has an elevation of 37.9". The 100- year storm elevation at the reservoir/river is 12', a difference of 26'.



What is the Status of Design?

The project plans and cost estimate are currently at 100% design. See Appendix B for Project Estimate as of 8/12/2021. Updated Project plan set will be posted to City Website once available.

How many Easements are needed and what is the status of obtaining the Easements?

BSC is finishing up the latest easement plans to give to our surveyor, Hancock Engineers. Once these plans are complete, we can get a cost proposal and a timeline for the required easements plans from both the surveyor and for associated legal documents from Kopelman and Page, attorney for the City.

What is the condition of the Hoyts Lane Culvert?

City personnel have inspected the culvert at Hoyts Lane. As noted at the previous meeting a tree has fallen at the inlet of the culvert but has not stopped flow. A work order has been submitted to DPS to clean out the inlet/outlet to remove tree and any standing debris.

What were the results of the test pits and soil conditions in the Philips Drive Neighborhood?

See attached Boring Logs as Appendix A which can also viewed on Sheet C-05 on the Plan Set with their locations.

NRCS Soil Map shown here with descriptions of historical soils in the vicinity.



The southern portion of the Philips Drive neighborhood consists of Paxton fine loam which is a Group C Soil. It has a slow infiltration rate

PaB	305B	C	Paxton fine sandy loam
PaB	306D	C	Paxton fine sandy loam

The northern loop of Philips Drive is made up of a Scarboro mucky fine sandy loam which is an A/D soil so in its natural state has a very slow infiltration rate (and therefore high runoff potential) when wet. General consist of clay (or nearly non permeable material) and have a high water table.

Sc	6A	A/D	Scarboro mucky fine sandy loam
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The northeast area of the consists of Charlton-Rock outcrop- Hollis complex which is an A soil

CrB	711B	A	Charlton-Rock outcrop- Hollis complex
CrC	711C	A	Charlton-Rock outcrop- Hollis complex

And below this we find Allentown fine sandy loam which is classified as a C/D soil. C/D soil in its natural state has a very slow infiltration rate (and therefore high runoff potential) when wet. General consist of clay (or nearly non permeable material) and have a high water table. If drained is classified as a C soil.

AnB	258B	C/D	Allentown fine sandy loam
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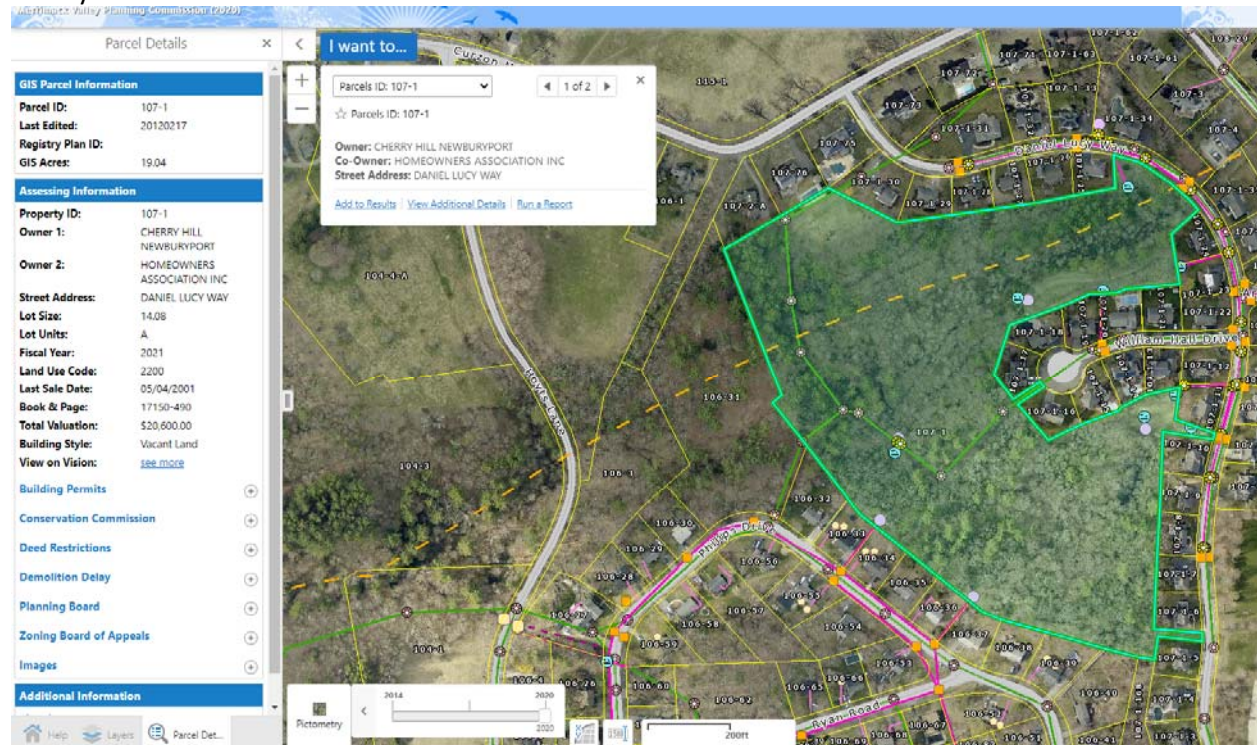
There is a pocket of Ninigret fine sandy loam which is classified as a C/D soil. C/D soil in its natural state has a very slow infiltration rate (and therefore high runoff potential) when wet. General consist of clay (or nearly non permeable material) and have a high-water table. If drained is classified as a C soil.

NnB 276B C/D Ninigret fine sandy loam

Who owns and who is responsible for the maintenance of the detention ponds and drainage structures between Philips Drive and the Cherry Hill Neighborhood?

The land deemed as open space is owned by the Cherry Hill Homeowners Association as shown in the figure below per the City's Assessors Maps on our GIS.

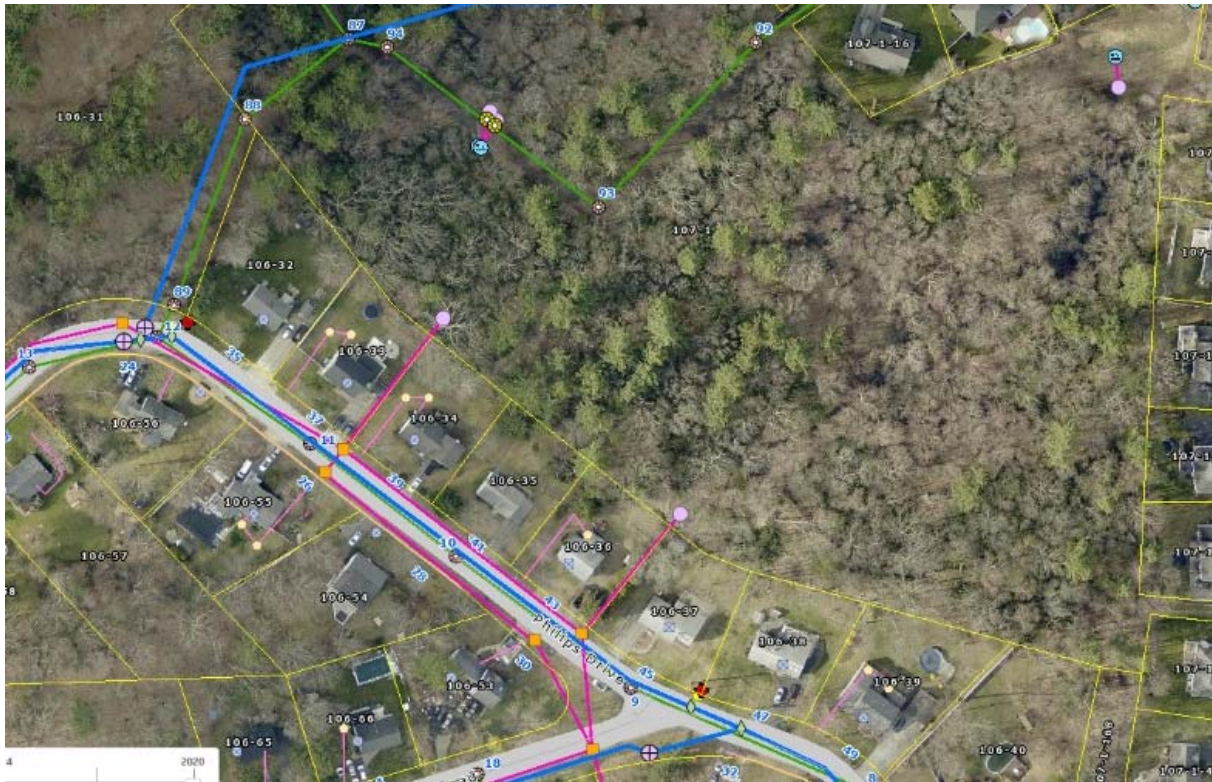
Cherry Hill Homeowners Association Parcel



Per the Operation and Maintenance Plan for the proposed Stormwater Management of the Cherry Hill Estates and The Conservation Restriction as to Cherry Hill Cluster Residential Development, attached as Appendix B, and discussion with the City's Conservation Agent the City is responsible for the maintenance of these structures. The association/development was responsible until the time when the City accepted the roadways in the Cherry Hill development.

These structures, shown as purple dots on the below screen shot of our MIMAP GIS data, as well as third inlet further up the hill toward Storey Avenue have been inspected by City Personnel. Currently there is no water backup and the inlets are open and to flow from the detention basins. There is some small debris built up around these structures. A work order has been submitted to DPS to have these structures cleaned out.

Drainage Inlets at bottom of Cherry Hill development.



What is the yearly maintenance cost of the proposed drainage system in the Philips Drive Neighborhood?

Using quote information submitted from BMC Corp it is anticipated that it would cost approximately \$4,000 to clean out the neighborhood. This would not be an additional cost to the City as this cleanout should be conducted on an annual basis regardless.

What is the age of the Sewer Line?

The sewer line was installed around 1979. Approximately 42 years old.

What is the status of replacing the sidewalks?

The existing sidewalks will be placed with Asphalt sidewalks. Sidewalks will be added where there are gaps and ADA compliant ramps will be added at all appropriate intersections.

What is the difference in cost between HDPE and Ductile Iron watermain?

Water Line HDPE vs Ductile Iron cost – Typically 20% cheaper,

What is the age of the gas line?

Per plans supplied by National Grid Maps and Records department the gas service in the neighborhood was installed between 1964 and 1970.

What is the status of the condition and status of potentially replacing the gas line?

In April 2021, the City was informed that the gas lines in the neighborhood are coated steel gas mains and were clear for paving and were told that National Grid would only replace the gas main if it poses a conflict with the proposed drainage work. At this time the proposed plans were submitted for review to National Grid. Inquiries were then made via phone and again via email in May, July and once again last week to the status of National Grids review. We have yet to hear back on their intentions to replace the gas line prior to the commencement of this project.

What is the cost/life differential between installing Granite vs Asphalt Curbing?

Sloped Granite Curbing



Asphalt Berm



The estimated cost of installing sloped granite curbing is: \$340,000

The estimated cost of installing asphalt berm is: \$41,300

Responses by:

JON CAREY – Water Distribution Manager

Question: Number and location of breaks?

Response: I was able to confirm one Main Break on October of 2006 on Drew Street due to the water main lying on ledge and surrounded by ledge, as well as 3 service line in that neighborhood also with breaks due to poor or improper installation. It is my earnest opinion based on these and verbal history of the area that should the main not be replaced and the full scope of work completed the department will be cutting and repairing new roadway due to the total roadway reclamation and drainage efforts. The shifting of soils and vibratory and heavy equipment that will be used in the scope of work will most certainly in my opinion open up future issues moving forward.

In addition to any main service breaks laid out in the Philips Drive Neighborhood Committee Letter there have been 5-6 breaks on Sullivan Drive, in 2019 it was discovered that the water seeping from the hill on Philips drive was due to a Main break, and around 2020 there were service breaks at 29 & 35 Philips Drive (TF).

Question: Information about costs to install stubs for future resident hookups?

Response: The scope of work will cover the replacement of any existing service. Should there be any open lots that have not yet been developed they would be able to connect to the system and bring utilities to the edge of the property under the current fee and permitting structure or would be subject to the road opening moratorium following the project completion. It is estimated that the cost for residential hookup would be approximately \$40/LF (DB)

Question: Water/Sewer Commission vote on waterline (has it occurred)?

Response: The initial request was for a recommendation from the Water Distribution Superintendent regarding the need or efficacy of water main upgrade and replacement. The Water and Sewer Commission voted on 8/11/21 and approved project.

Question: Modeling on Water Line?

Response: The water line was not hydraulically modeled as this would have added significantly to the overall project cost. At the same time without a complete citywide system assessment assessing flow characteristics would be moot. The department did conduct hydrant flow tests and found static pressures to be just above the minimums required under National Fire code. This project would improve fire flow to the entire neighborhood and improve system hydraulics as both ends of the neighborhood where it connects to Hoyts Lane and as well as William Hall Drive are both 8" water mains and then it is stepped down to 6" in the entire Phillips Drive neighborhood. Increasing the water main to 8" would increase fire flows by nearly a factor of 50%.

Responses by:

ETHAN MANNING – Finance Director

Question: Amount needing Funding and Source?

Response: Estimate used to build the CIP (HW006) was \$4,200,000 based on preliminary engineering. As of April 9, 2021, the estimate had gone down to \$3,850,000, which is the amount shown on the submitted loan order. As of July 15, 2021, the 75% estimate was \$4,321,000; closer to the original estimate due to changes in material. Increase from CIP estimate = \$121,000.

See breakdown of changes from the April cost estimate to July cost estimate. The increase was primarily due to a change from 6" to 8" pipe and inclusion of fittings and gate boxes.

SEE APPENDIX D for April vs. July Cost Estimate Comparison

Question: What is the Debt service and Water Rate impact?

Response: Project can be borrowed for a term of up to 30 years. The CIP assumed annual debt service of \$147,000 from the General Fund and \$80,000 from the Water Enterprise Fund. Based on the latest engineering estimate of \$4,321,000, we assume annual debt service of \$113,000 from the General Fund and \$122,000 from the Water Enterprise Fund.

The current average residential water charge per year is \$596. This project would increase it to \$606 (i.e. +\$10 per year per homeowner). This is based on annual usage of 7,750 cubic feet.

Question: What is the Eligibility of ARPA funding?

Response: This project appears to be an eligible use of ARPA funding.

From the U.S. Treasury: "The Interim Final Rule generally aligns eligible uses of the Funds with the wide range of types or categories of projects that would be eligible to receive financial assistance through the Environmental Protection Agency's Clean Water State Revolving Fund (CWSRF) or Drinking Water State Revolving Fund (DWSRF)." The drainage/stormwater work would fall under the CWSRF and the water main replacement under DWSRF.

If the full amount of the project is approved as a borrowing authorization and the City were to subsequently elect to fund all or a portion of this project from ARPA, the borrowing authorization could then be rescinded. To be reviewed by the ARPA Ad Hoc Committee.

APPENDIX A

Soil Borings

Boring Location: Ryan Road
Ground Elevation: 55'
Depth to First Water: 5'
Depth to Static Water: _____
Stabilization Time: _____

Sampler
Type: _____
Hammer: _____
Fall: _____

Notes:

Depth (feet)	Blow Counts	Penetration / Recovery (inches)	Sample I.D.	Sample Depth (feet bgs)	PID (ppm/v)	USCS Class.	Description of Sample	Well Construction	Depth (feet)
1	6						0-5" Pavement Layer		1
2	6	18/14					7"-24" Fine to Medium Sand Some Silt with trace of gravel Moist		2
3	6						26"-39" Silty Sand with traces of grains, moist, brown	Native Fill:	3
4	5						39"-52" Silty Sand with traces of grains, moist, grey		4
5	10	24/22					52"-64" Sand with some fines, light grey, wet at 60"		5
6	10							Well Riser Details:	6
7	5								7
8	5								8
9	4	24/20					Auger to 9' depth, resistance due to low water table.	Bentonite Seal:	9
10	6								10
11								Sand Pack Details:	11
12									12
13									13
14								Well Screen Details:	14
15								0.010" Slot	15
16								Machine Slotted	16
17								Schedule 40 PVC	17
18									18
19									19
20									20

Proportions Used
Trace 0 to 10%
Little 10 to 20%
Some 20 to 35%
And 35 to 50%

--- Change in Material Type
--- Change in Deposit Type

Penetration Resistance ("Blow Counts")

Cohesionless Density		Cohesive Consistency	
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Stiff
30-49	Dense	9-15	Stiff
50+	Very Dense	16-30	Very Soft
		31+	Hard

Concrete	xxx	xxx
Silica Sand Pack		
Native Fill		
Bentonite Seal		
Riser		
Screen		

Depth (feet)	Blow Counts	Penetration / Recovery (inches)	Sample I.D.	Sample Depth (feet bgs)	PID (ppm/v)	USCS Class.	Description of Sample	Well Construction	Depth (feet)
1	6						0-5" Pavement Layer		1
2	6	24/16					5"-6" Broken pavement		2
3	6						6"-21" Fine sand, Orange brown	Native Fill:	3
4	6						Moist		4
5	5	24/22					30"-31" Fine Sand, Orange brown, moist	Well Riser Details:	5
6	10						31"-50" Fine Sand with little silt, moist to wet, grey		6
7	5								7
8	5							Bentonite Seal:	8
9	4						Auger to 9' depth, resistance due to low water table.		9
10	6								10
11								Sand Pack Details:	11
12									12
13									13
14								Well Screen Details:	14
15								0.010" Slot	15
16								Machine Slotted	16
17								Schedule 40 PVC	17
18									18
19									19
20									20

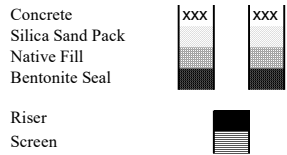
Proportions Used

Trace	0 to 10%
Little	10 to 20%
Some	20 to 35%
And	35 to 50%

Change in Material Type: - - - - -
Change in Deposit Type: = = = = =

Penetration Resistance ("Blow Counts")

Cohesionless Density		Cohesive Consistency	
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Stiff
30-49	Dense	9-15	Stiff
50+	Very Dense	16-30	Very Soft
		31+	Hard



Boring Location: Phillips Drive
Ground Elevation: 46'
Depth to First Water: _____
Depth to Static Water: _____
Stabilization Time: _____

Sampler
Type: _____
Hammer: _____
Fall: _____

Notes:

Depth (feet)	Blow Counts	Penetration / Recovery (inches)	Sample I.D.	Sample Depth (feet bgs)	PID (ppm/v)	USCS Class.	Description of Sample	Well Construction	Depth (feet)
1	6						0-5" Pavement Layer		1
	6						5"-6" Broken Pavement and samll 3" flat stones		
2	6	24/14					6"-12" Gravely Sand with some coarse 1/2" rocks, light brown Moist		2
	6								
3	5						12"-18" Fine Sand with little silt, moist, light brown	Native Fill:	3
	10	24/0							
4	5								4
	5								
5	4							Well Riser Details:	5
	6								
6	6								6
7									7
8								Bentonite Seal:	8
9									9
10									10
11								Sand Pack Details:	11
12							Auger to 12', no resisittance		12
13									13
14								Well Screen Details:	14
15								0.010" Slot	15
								Machine Slotted	
16								Schedule 40 PVC	16
17									17
18									18
19									19
20									20


Proportions Used
Trace 0 to 10%
Little 10 to 20%
Some 20 to 35%
And 35 to 50%

----- Change in Material Type
----- Change in Deposit Type







Penetration Resistance ("Blow Counts")

Cohesionless Density		Cohesive Consistency	
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Stiff
30-49	Dense	9-15	Stiff
50+	Very Dense	16-30	Very Soft
		31+	Hard

Concrete	xxx	xxx
Silica Sand Pack		
Native Fill		
Bentonite Seal		
Riser		
Screen		

 300 Brickstone Square, Andover, MA 01810		Project:	Boring ID No.: 4 Well ID No.: Sheet of
Boring Location: Phillips Drive		Project Manager:	Project Number: 89923.00
Ground Elevation: 80'		Dated Started: 7/30/2020	Dated Completed: 7/30/2020
Depth to First Water:		Drill Type: Auger	Borehole Dia:
Depth to Static Water:		Drill Rig and Model Number: Mobile Drill B-48	
Stabilization Time:		Drilling Company: New England Boring	
Sampler Type: Hammer: Fall:		Notes: Driller's Name: Patrick Schofield Geologist/Engineer: Owner/Client Rep.:	

Depth (feet)	Blow Counts	Penetration / Recovery (inches)	Sample I.D.	Sample Depth (feet bgs)	PID (ppm/v)	USCS Class.	Description of Sample	Well Construction	Depth (feet)
							0-4.5" Pavement Layer		
1	6								1
2	6	24/14					4.5"-10.5" Gravelly Sand with some coarse rocks, Orange brown Moist		2
3	6						10.5"-14.5" Gravel, moist, white	Native Fill:	3
4	5						14.5"-36.5" Gravel, light grey		4
5	10	24/22						Well Riser Details:	5
6	10								6
7	5								7
8	5						Auger refusal at 8'	Bentonite Seal:	8
9	4								9
10	6								10
11								Sand Pack Details:	11
12									12
13									13
14								Well Screen Details:	14
15								0.010" Slot	15
16								Machine Slotted	16
17								Schedule 40 PVC	17
18									18
19									19
20									20

Proportions Used		Penetration Resistance ("Blow Counts")			
Trace	0 to 10%	Cohesionless Density		Cohesive Consistency	
Little	10 to 20%	0-4	Very Loose	0-2	Very Soft
Some	20 to 35%	5-9	Loose	3-4	Soft
And	35 to 50%	10-29	Med. Dense	5-8	M/Stiff
		30-49	Dense	9-15	Stiff
		50+	Very Dense	16-30	Very Soft
				31+	Hard
- - - - - Change in Material Type - - - - - Change in Deposit Type				Concrete Silica Sand Pack Native Fill Bentonite Seal Riser Screen	
				xxx	xxx
					
					
					

Boring Location: Phillips Drive 2
Ground Elevation: 78'
Depth to First Water: _____
Depth to Static Water: _____
Stabilization Time: _____

Sampler
Type: _____
Hammer: _____
Fall: _____

Notes:

Depth (feet)	Blow Counts	Penetration / Recovery (inches)	Sample I.D.	Sample Depth (feet bgs)	PID (ppm/v)	USCS Class.	Description of Sample	Well Construction	Depth (feet)
							0-5" Pavement Layer		
1	6								1
2	6	24/4					5"-10" Gravely Sand with little coarse rocks, light brown Moist		2
3	6						30"-36" Gravely sand, moist, light brown	Native Fill:	3
4	5						30"-40" Gravel / withered bedrock, light grey		4
5	10	19/10					Spoon refusal - 50 blows for 1" at 41", possible bedrock at spoon refusal	Well Riser Details:	5
6	10						Auger refusal at 48"		6
7	5								7
8	5							Bentonite Seal:	8
9	4								9
10	6								10
11								Sand Pack Details:	11
12									12
13									13
14								Well Screen Details:	14
15								0.010" Slot	15
16								Machine Slotted	16
17								Schedule 40 PVC	17
18									18
19									19
20									20


Proportions Used
Trace 0 to 10%
Little 10 to 20%
Some 20 to 35%
And 35 to 50%

----- Change in Material Type
----- Change in Deposit Type

Penetration Resistance ("Blow Counts")

Cohesionless Density		Cohesive Consistency	
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Stiff
30-49	Dense	9-15	Stiff
50+	Very Dense	16-30	Very Soft
		31+	Hard

Concrete	xxx	xxx
Silica Sand Pack		
Native Fill		
Bentonite Seal		
Riser		
Screen		

 300 Brickstone Square, Andover, MA 01810		Project:	Boring ID No.: 6 Well ID No.: Sheet of
Boring Location: Phillips Drive 2		Project Manager:	Project Number: 89923.00
Ground Elevation: 70'		Dated Started: 7/30/2020	Dated Completed: 7/30/2020
Depth to First Water:		Drill Type: Auger	Borehole Dia:
Depth to Static Water:		Drill Rig and Model Number: Mobile Drill B-48	
Stabilization Time:		Drilling Company: New England Boring	
<u>Sampler</u> Type: Hammer: Fall:		<u>Notes:</u> Driller's Name: Patrick Schofield Geologist/Engineer: Owner/Client Rep.:	

Depth (feet)	Blow Counts	Penetration / Recovery (inches)	Sample I.D.	Sample Depth (feet bgs)	PID (ppm/v)	USCS Class.	Description of Sample	Well Construction	Depth (feet)
							0-4" Pavement Layer		
1	6	16/14					5"-17" Sand with little fine, Orange brown Moist	Native Fill: Well Riser Details: Bentonite Seal: Sand Pack Details: Well Screen Details: 0.010" Slot Machine Slotted Schedule 40 PVC	1
2	6		2						
3	6		3						
4	5		4						
5	10		5						
6	5		6						
7	5					17"-20" Gravel / Withered bedrock, white		7	
8	4					Spoon refusal - 50 blows for 4" at 20", possible bedrock at spoon refusal		8	
9	4					Auger refusal at 24"		9	
10	6							10	
11								11	
12								12	
13								13	
14								14	
15								15	
16								16	
17								17	
18								18	
19								19	
20								20	

<u>Proportions Used</u>		<u>Penetration Resistance ("Blow Counts")</u>			
Trace	0 to 10%	<u>Cohesionless Density</u>		<u>Cohesive Consistency</u>	
Little	10 to 20%	0-4	Very Loose	0-2	Very Soft
Some	20 to 35%	5-9	Loose	3-4	Soft
And	35 to 50%	10-29	Med. Dense	5-8	M/Stiff
		30-49	Dense	9-15	Stiff
		50+	Very Dense	16-30	Very Soft
				31+	Hard
- - - - - Change in Material Type - - - - - Change in Deposit Type				Concrete Silica Sand Pack Native Fill Bentonite Seal Riser Screen	
				xxx	xxx

Depth (feet)	Blow Counts	Penetration / Recovery (inches)	Sample I.D.	Sample Depth (feet bgs)	PID (ppm/v)	USCS Class.	Description of Sample	Well Construction	Depth (feet)
							0-5" Pavement Layer		
1	6								1
2	6	24/15					5"-9" Coarse sand, Orange Moist		2
3	6						9"-12" Asphalt mix, black	Native Fill:	3
4	5						12"-20" Coarse sand with some rocks, light brown, moist		4
5	10	24/4					30"-34" Gravelly sand with some rocks, light brown, moist	Well Riser Details:	5
6	10								6
7	5						Auger heavy refusal at 60"		7
8	4							Bentonite Seal:	8
9	6								9
10									10
11								Sand Pack Details:	11
12									12
13									13
14								Well Screen Details:	14
15								0.010" Slot Machine Slotted Schedule 40 PVC	15
16									16
17									17
18									18
19									19
20									20

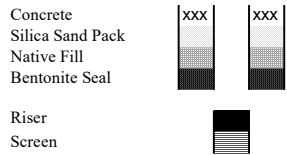
Proportions Used

Trace	0 to 10%
Little	10 to 20%
Some	20 to 35%
And	35 to 50%

----- Change in Material Type
- - - - - Change in Deposit Type

Penetration Resistance ("Blow Counts")

Cohesionless Density		Cohesive Consistency	
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Stiff
30-49	Dense	9-15	Stiff
50+	Very Dense	16-30	Very Soft
		31+	Hard



Boring Location: Phillips Drive
 Ground Elevation: 89'
 Depth to First Water:
 Depth to Static Water:
 Stabilization Time:

Sampler
 Type:
 Hammer:
 Fall:

Notes:

Depth (feet)	Blow Counts	Penetration / Recovery (inches)	Sample I.D.	Sample Depth (feet bgs)	PID (ppm/v)	USCS Class.	Description of Sample	Well Construction	Depth (feet)
							0-7" Pavement Layer		
1	6	24/19					7"-17" Fine sand with little silt and rocks, light brown Moist	Native Fill:	1
2	6						17"-26" Gravel, white		2
3	5	5/5"					26"-31" Gravelly sand, light brown, moist	Well Riser Details:	3
4	10						Spoon refusal - 50 blows for 5" at 31"		4
5	10						Auger heavy refusal at 36"		5
6	5								6
7	5						Bentonite Seal:	7	
8	4							8	
9	6						Sand Pack Details:	9	
10								10	
11							Well Screen Details:	11	
12								12	
13							0.010" Slot Machine Slotted Schedule 40 PVC	13	
14								14	
15								15	
16								16	
17								17	
18								18	
19								19	
20								20	

Proportions Used
 Trace 0 to 10%
 Little 10 to 20%
 Some 20 to 35%
 And 35 to 50%

--- Change in Material Type
 - - - Change in Deposit Type

Penetration Resistance ("Blow Counts")

Cohesionless Density		Cohesive Consistency	
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Stiff
30-49	Dense	9-15	Stiff
50+	Very Dense	16-30	Very Soft
		31+	Hard

Concrete	xxx	xxx
Silica Sand Pack		
Native Fill		
Bentonite Seal		
Riser		
Screen		



ROADWAY & DRAINAGE IMPROVEMENTS

PHILIPS DRIVE NEIGHBORHOOD IN NEWBURYPORT MASSACHUSETTS

SUBSURFACE EXPLORATION PLAN & LOGS

APRIL 9, 2021

REVISIONS:

PREPARED FOR: CITY OF NEWBURYPORT 60 PLEASANT STREET NEWBURYPORT, MA 01950



© 2021 BSC GROUP, INC. SCALE: NONE

FILE: 8992300-NOTES.DWG DWG. NO: C-05 JOB. NO: 89923.00

Log for Boring ID No. 19174, 2422, 2420. Includes project details and soil log data.

Log for Boring ID No. 2416, 2422. Includes project details and soil log data.

Log for Boring ID No. 2414, 2420. Includes project details and soil log data.

Log for Boring ID No. 2414, 2422. Includes project details and soil log data.

Log for Boring ID No. 2414, 19170. Includes project details and soil log data.

Log for Boring ID No. 1614. Includes project details and soil log data.

Log for Boring ID No. 2415, 2414. Includes project details and soil log data.

Log for Boring ID No. 2419, 2414. Includes project details and soil log data.



75% DESIGN

APPENDIX B

Current Project Estimate

**PHILIPS DRIVE NEIGHBORHOOD ROADWAY AND DRAINAGE IMPROVEMENTS
NEWBURYPORT, MASSACHUSETTS
ENGINEER'S ESTIMATE
95% DESIGN
AUGUST 11, 2021
PREPARED BY BSC GROUP
BSC PROJECT NO. 89923.00**

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
101.	CLEARING AND GRUBBING	A	\$30,000.00	0.25	\$7,500.00
120.	EARTH EXCAVATION	CY	\$30.00	100.00	\$3,000.00
121.	CLASS A ROCK EXCAVATION	CY	\$150.00	100.00	\$7,500.00
129.	SIDEWALK REMOVAL	SY	\$30.00	1875.00	\$56,250.00
142.	CLASS B TRENCH EXCAVATION	CY	\$40.00	1366.00	\$54,640.00
144.	CLASS B ROCK EXCAVATION	CY	\$150.00	100.00	\$15,000.00
145.	DRAINAGE STRUCTURE ABANDONED	EA	\$500.00	15.00	\$7,500.00
146.	DRAINAGE STRUCTURE REMOVED	EA	\$700.00	13.00	\$9,100.00
153.	CONTROLLED DENSITY FILL - TYPE 1E	CY	\$150.00	169.99	\$25,498.17
170.	FINE GRADING AND COMPACTING	SY	\$4.20	2000.00	\$8,400.00
181.	DISPOSAL OF UNREGULATED SOIL	CY	\$76.00	100.00	\$176.00
201.	CATCH BASIN	EA	\$4,500.00	35.00	\$157,500.00
202.	MANHOLE	EA	\$5,000.00	32.00	\$160,000.00
206.	DROP INLET, TYPE A	EA	\$4,500.00	9.00	\$40,500.00
206.5	WATER QUALITY UNIT	EA	\$15,000.00	2.00	\$30,000.00
220.7	SANITARY STRUCTURES ADJUSTED	EA	\$500.00	24.00	\$12,000.00
252.118	18 INCH CORRUGATED PLASTIC PIPE FLARED END	EA	\$1,350.00	1.00	\$1,350.00
252.12	12 INCH CORRUGATED PLASTIC (POLYETHYLENE) PIPE	FT	\$100.00	745.00	\$74,500.00
252.130	30 INCH CORRUGATED PLASTIC PIPE FLARED END	EA	\$1,500.000	1.00	\$1,500.00
252.15	15 INCH CORRUGATED PLASTIC (POLYETHYLENE) PIPE	FT	\$95.00	2405.00	\$228,475.00
252.18	18 INCH CORRUGATED PLASTIC (POLYETHYLENE) PIPE	FT	\$107.50	505.00	\$54,287.50
252.24	24 INCH CORRUGATED PLASTIC (POLYETHYLENE) PIPE	FT	\$140.000	460.00	\$64,400.00
252.30	30 INCH CORRUGATED PLASTIC (POLYETHYLENE) PIPE	FT	\$180.000	110.00	\$19,800.00
252.36	36 INCH CORRUGATED PLASTIC (POLYETHYLENE) PIPE	FT	\$200.00	410.00	\$82,000.00
269.06	6 INCH SLOT-PERFORATED CORRUGATED PLASTIC PIPE (STUB)	EA	\$500.00	40.00	\$20,000.00
269.10	10 INCH SLOT-PERFORATED CORRUGATED PLASTIC PIPE (SUBDRAIN)	FT	\$110.00	2885.00	\$317,350.00
302.08	8 INCH DUCTILE IRON WATER PIPE (ROBBER CASSET)	FT	\$150.00	7075.00	\$1,061,250.00
309.	DUCTILE IRON FITTINGS FOR WATER PIPE	LB	\$7.50	3500.00	\$26,250.00
347.075	3/4 INCH COPPER TUBING TYPE K	FT	\$95.00	2025.00	\$192,375.00
350.08	8 INCH GATE VALVE AND GATE BOX	EA	\$2,500.00	23.00	\$57,500.00
350.09	6 INCH GATE VALVE AND GATE BOX	EA	\$2,000.00	8.00	\$16,000.00
363.075	3/4 INCH CORPORATION COCK	EA	\$475.00	76.00	\$36,100.00
376.	HYDRANT	EA	\$5,500.00	8.00	\$44,000.00
384.	CURB STOP	EA	\$650.00	76.00	\$49,400.00
402.	DENSE GRADED CRUSHED STONE FOR SUB-BASE (SIDEWALKS AND ROADWAY BLENDING)	CY	\$72.00	1250.00	\$90,000.00
403.	RECLAIMED PAVEMENT FOR BASE COURSE AND/OR SUB-BASE	SY	\$3.750	16050.00	\$60,187.50
443.	WATER FOR ROADWAY DUST CONTROL	MGL	\$75.00	100.00	\$7,500.00
450.41	SUPERPAVE BASE COURSE - 25.0 (SBC - 25.0)	TON	\$100.00	1800.10	\$180,010.00
470.	HOT MIX ASPHALT BERM	TON	\$275.00	150.14	\$41,287.40
472.	TEMPORARY ASPHALT PATCHING (2 INCH APPLICATION)	TON	\$200.00	576.30	\$115,260.00
482.3	SAWCUTTING ASPHALT PAVEMENT	FT	\$2.88	22600.00	\$65,088.00
697.1	SILT SACK	EA	\$180.00	44.00	\$7,920.00
697.	SEDIMENTATION FENCE	LF	\$10.00	3000.00	\$30,000.00
701.2	CEMENT CONCRETE WHEELCHAIR RAMP	SY	\$100.00	53.33	\$5,333.33
702.	HOT MIX ASPHALT SIDEWALK	TON	\$225.00	314.93	\$70,858.13
703.	HOT MIX ASPHALT DRIVEWAY	TON	\$225.00	77.11	\$17,350.20
748.	MOBILIZATION	LS	\$100,000.00	1.00	\$100,000.00
751.	LOAM BORROW	CY	\$58.00	1000.00	\$58,000.00
756.	NPDES STORMWATER POLLUTION PREVENTION PLAN	LS	\$5,000.00	1.00	\$5,000.00
765.	SEEDING	SY	\$2.00	6500.00	\$13,000.00
832.	WARNING - REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)	EA	\$150.00	8.00	\$1,200.00
847.1	SIGN SUPPORT (NOT GUIDE) AND ROUTE MARKER WITH 1 BREAKAWAY POST ASSEMBLY - STEEL	EA	\$250.00	8.00	\$2,000.00
850.01	POLICE DETAIL	HRS	\$60.00	2400.00	\$144,000.00
859.	REFLECTORIZED DRUM	DAY	\$100.00	280.00	\$28,000.00
860.1	CROSS WALK WHITE LINE (PAINTED)	EA	\$5.00	250.00	\$1,250.00
860.112	12-INCH REFLECTORIZED WHITE LINE (PAINTED)	FT	\$4.00	1400.00	\$5,600.00

SUBTOTAL = \$3,989,946.23

CONTINGENCY (10%) = \$398,994.62

TOTAL (Rounded to nearest 1,000) = \$4,389,000.00

APPENDIX C

Operation and Maintenance Plan for Proposed Stormwater Management
Cherry Hill Estates, Newburyport, Massachusetts

and

Conservation Restriction as to
Cherry Hill Cluster Development, Newburyport, MA

**OPERATION / MAINTENANCE PLAN
FOR PROPOSED STORMWATER MANAGEMENT
CHERRY HILL ESTATES
NEWBURYPORT, MASSACHUSETTS**



September 27, 2004

Stormwater management facilities necessary to control runoff from the completed project known as Cherry Hill Estates accomplish the multiple goals of mitigating peak runoff rates from the project that would otherwise occur, as well as mitigating the water quality of the associated runoff prior to that runoff reaching wetland resource areas.

Essentially, the water quality of all runoff from the roadways that is to be directed to one of the upland Best Management Practices will be improved by the following practices.

- Deep Sump Catch Basin
- Constructed Pocket Wetland

Each of these facilities has unique characteristics, uses, planning considerations and maintenance requirements. The maintenance requirements, as suggested by DEP in their March 1997 Stormwater Technical Handbook, have been summarized below. It is suggested that the following maintenance guidelines be adhered to for a one-year cycle following completion of the project, then adjusted, as necessary, based on the results of the required inspections.

Deep Sump Catch Basins

- Sump inlets shall be cleaned a minimum of four times per year and inspected monthly.
- All sediments and hydrocarbons shall be properly handled and disposed, in accordance with local, state and federal guidelines and regulations.
- Regular scheduling of street sweeping will reduce the number of times the deep sump catch basins need cleaning.

Constructed Pocket Wetland

- Careful observation of the system development over time is required. In the first three years after construction, twice a year inspections are required during both the growing and non-growing seasons, with annual inspections thereafter. Data gathered during these inspections shall be recorded, mapped and assessed.

- Regulating the sediment input to the proposed pocket wetland area is the priority maintenance activity. The majority of sediments should be trapped and removed before they reach the wetland. Sediment accumulation in the wetland gradually results in reduced water depths and changes in the growing conditions for the emergent plants. In addition, sediment removal within the wetland can destroy the wetland plant community.
- Outlet control structures shall be inspected during inspection/cleaning of the deep sump catch basins, and cleared of debris if necessary.
- The embankment shall be mowed twice annually to prevent woody growth. Bottom areas can be managed as a wet meadow or forest.
- Sediment build-up shall be removed from the pocket wetland approximately every 10 years, or as necessary. The grading of the basin shall be returned to the grading shown on the final as-built drawings.

The following observations shall be made during the inspections.

- Types and distribution of dominant wetland plants in the marsh;
- The presence and distribution of planted wetland species; the presence and distribution of volunteer wetland species; signs that volunteer species are replacing the planted wetland species;
- Percentage of unvegetated standing water;
- The maximum elevation and the vegetative condition in this zone, if the design elevation of the normal pool is being maintained for wetlands with extended zones; and
- Survival rate of plants in the wetland buffer near the outlet from the constructed pocket wetland.

Based on the observations made during the inspections, an engineer shall determine if the stormwater management facility is functioning properly and, if not, what steps need to be taken to restore its functionality.

In the case of all proposed stormwater management facilities, during construction of the proposed stormwater management system, the developer shall be the owner and party responsible for maintenance. Upon acceptance of the road and drainage system, the Homeowners' Association shall assume the maintenance responsibilities of the stormwater management system.

Operation / Maintenance Plan
Cherry Hill Estates, Newburyport, MA
September 27, 2004

RECEIVED MAY 20 2002

Law Offices of
LATHAM, LATHAM & LAMOND, P.C.

643 MAIN STREET
READING, MASSACHUSETTS 01867-3096
WWW.LLLLAW.COM

KENNETH C. LATHAM (1939-1996)
O. BRADLEY LATHAM
JOHN T. LAMOND
SHEILAH GRIFFIN-REICHARDT
JOSHUA E. LATHAM
DAVID J. LATHAM, OF COUNSEL

TELEPHONE: (781) 944-0505

FAX: (781) 944-7079

May 15, 2002

Joel A. Lerner, Director
Executive Office of Environmental Affairs
251 Causeway Street; Suite 900
Boston, MA 02114-2119

Re: *Cherry Hill Limited Partnership, Newburyport CR #4*

Dear Mr. Lerner:

Enclosed please find a copy of the above-referenced conservation restriction which has been recorded at the Essex South District Registry of Deeds at Book 18067, Page 521; together with the GIS Data Entry Form.

Sincerely yours,

Latham, Latham & Lamond, P.C.


O. Bradley Latham

cc: Nancy Colbert
Newburyport Conservation Commission
60 Pleasant Street
Newburyport, MA 01950

obl122:pp:symes newburyport

Executive Office of Environmental Affairs / Division of Conservation Services
GIS Data Entry Form

Selp-Help, Urban Self-Help, SURF, Land & Water Conservation Fund Projects
and Conservation Restrictions

1. Contact Person: Conservation Administrator
Conservation Commission
Newburyport City Hall
60 Pleasant Street
Newburyport, MA 01950
(978-465-4400)

(telephone number)

2. Project Type (select one):

- Self-Help
 Urban Self-Help
 SURF
 Land & Water Conservation Fund

3. Municipality: Newburyport Project Number _____

4. a. Fee Owner: City of Newburyport
(Holder of the Deed)

b. Manager (if different from Owner): _____

5. *Conservation Restriction held by: City of Newburyport, Conservation Commission

*Complete only if land is encumbered by a Chapter 184 section 31-33 Conservation Restriction.

Check the box corresponding to how the restriction was obtained:

Gifted Exacted by Regulation Purchased

Number of reserved lots within the restriction, if any: _____

6. Assessor's Information _____
(map) (block) (lot)

7. Registry Information Essex South District Registry of Deeds
(name)
18067 521 344 84
(book) (page) (plan book) ~~pages~~ (plan)

8. Acreage: 19.095 acres

9. Primary Use: (select one)

Public Access:

- Conservation
 Recreation
 Both Conservation and Recreation
 Water Supply Protection
 Agriculture
 Historic/Cultural
 Other (please explain)

- Public
 Public, residents only
 Public, seasonal
 None
 Other (please explain)

The applicant must provide to the Executive Office of Environmental Affairs materials that will allow MassGIS to accurately represent the site in the state's open space data layer. These materials include:

1. A copy of a USGS topological map with the site accurately drawn on it.
The name and date of the USGS topo quad must be noted on this map.
2. A copy of the site plan and/or a survey plan if available (required for exacted conservation restrictions).

MassGIS will attempt to add the site to the open space data layer using these materials but may request additional material from the grantee if the materials provided are not at an appropriate scale or are not sufficiently clear to support conversion to digital data that conform to MassGIS data standards.

Topographical maps can be purchased at many book stores, or can be printed from the web site TopoZone.com.
Please call MassGIS at 617.626.1076 with any questions or for assistance with this form.

CONSERVATION RESTRICTION
AS TO CHERRY HILL CLUSTER RESIDENTIAL DEVELOPMENT
NEWBURYPORT, MA

12/19

Cherry Hill Limited Partnership, a limited partnership duly organized under the laws of the Commonwealth of Massachusetts, with a mailing address of 50 Dodge Street, Beverly, MA 01880 (hereinafter referred to as the "Grantor"), does hereby grant to, the City of Newburyport, through its Conservation Commission, with an address of 60 Pleasant Street, Newburyport, MA 01950 (hereinafter referred to as the "Grantee") in perpetuity and exclusively for the preservation of open space, the following described restriction on land located in the City of Newburyport (City), Essex County, Massachusetts, which is described as follows:

The area shown as "OPEN SPACE 1" (hereinafter sometimes called the Premises) on a plan entitled "Definitive Plan Cherry Hill Estates, Newburyport, Mass.; Hayes Engineering Inc. - Engineer; date: July 12, 1999 as revised on 12-30-99 and 02-14-00;" (Plan) which Plan is recorded at the Essex South District Registry of Deeds at Plan Book 344 as Plan 84. The PREMISES are more fully described on Exhibit A, which is attached hereto and incorporated herein by reference.

For grantor's title see deed recorded at the Essex South District Registry of Deeds, Book 16,532, Page 4.

This conservation restriction is granted pursuant to Condition No. 4.5 in the Cluster Residential Development, Special Permit for the Cherry Hill Estates issued by the Newburyport Planning Board dated March 16, 2000 which special permit is recorded with the Essex South District Registry of Deeds Book 16459, Page 144.

I. PURPOSES

The Premises contains unusual, unique, and/or outstanding qualities the protection of which in their natural and open condition will be of benefit to the public. The purpose of this CONSERVATION RESTRICTION is to maintain the Premises in perpetuity, predominantly in a natural, scenic and undeveloped condition, and to prevent any use of the Premises that would significantly impair or interfere with its open space values.

The Premises serves as a source of significant scenic, natural and open space value to the residents of the City of Newburyport, Massachusetts, including those who will inhabit the dwellings being constructed on the lots within Cherry Hill Estates Subdivision. The open, scenic and natural condition of the Premises further contributes to the preservation of the City of Newburyport's unique character. The Premises lies adjacent to a Quaker cemetery and serves to buffer it from the adjacent development, known as "Cherry Hill Estates".

The Premises contains a wide variety of plant and animal species.



**II. BINDING EFFECT, PROHIBITS ACTS AND USES, EXCEPTIONS THERETO,
AND PERMITTED USES**

A. BINDING EFFECT

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The Grantor covenants that the Premises will at all time be held, used and conveyed subject to and not used in violation of the following restrictions which shall run with the land comprising the Premises in perpetuity.

B. PROHIBITED ACTS AND USES

Subject to the easements and rights reserved by the Grantor as stated below, the following acts and uses are prohibited on the land comprising the Premises:

- (1) Mining, excavating, dredging, cutting, destroying or removing soil, loam, peat, gravel, sand, rock or other mineral resource or natural deposit;
- (2) Construction or placing of any buildings or structures, including but not limited to athletic fields, tennis courts, swimming pools, greenhouses, landing strips, mobile homes, skating rinks, asphalt, concrete or other forms of impervious pavement, antennae and dishes, signs, billboards or other advertising displays, utility poles, towers, conduits, lines or other temporary or permanent structure or facilities on, below, through or above the Premises;
- (3) Installation of underground storage tanks or the placing, filling, storing or dumping of refuse, trash, vehicle bodies or parts, rubbish, debris, junk, yard waste or other substance or material whatsoever;
- (4) Cutting, removing or otherwise destroying trees, grasses, shrubs, brush or other vegetation;
- (5) Activities detrimental to drainage, flood control, water conservation, water quality, erosion control or soil conservation;
- (6) Use of the Premises for residential, commercial or industrial purposes;
- (7) Use of wheeled or motorized vehicles, such things as bicycles ski-mobiles, all-terrain vehicles (ATV's) or the like (except governmental vehicles are allowed for emergency purposes only, such as for the fighting of fires or a medical emergency);
- (8) Herding or grazing of animals;
- (9) Use of or entry onto the Premises between sunset and the following sunrise;
- (10) Any other use of the Premises or activity which, in the reasonable opinion of the Grantee is inconsistent with the intent of this conservation restriction.

Notwithstanding the foregoing, or anything contained in this document to the contrary, these provisions and this conservation restriction do not prevent the Grantor from activities as allowed by Orders of Conditions issued by the Newburyport Conservation Commission under

DEP File No. 051-0506 recorded at Essex South District Registry of Deeds, Book 16244, Page 384 and the conditions of the special permit and subdivision approval as issued by the Newburyport Planning Board and as said Orders and approvals may be extended, amended, replaced or reissued.

C. EXCEPTIONS TO OTHERWISE PROHIBITED ACTS AND USES

Notwithstanding any of the Prohibited Acts and Uses in subparagraph B above, the following acts and uses are permitted to the Grantor and its successors in title as such acts and uses have been determined not to materially impair significant conservation interests:

- (1) Selective pruning and cutting of trees and their shrub understory to remove hazards, disease and insect, storm or fire damage and for the removal of dead wood;
- (2) Selective pruning and cutting of trees and their shrub understory for fire protection, tick control or otherwise to preserve the present condition of the Premises;
- (3) Pedestrian use only of trails during daylight hours for walking, strolling, hiking, skiing or other similarly passive, non-motorized and non-mechanized recreational activities on the Premises;
- (4) Maintenance of existing fences, gates, stonewalls or other structures , if any.
- (5) The installation, use, maintenance, repair and replacement of subsurface/underground sewers, drainage structures, utilities and associates appurtenances within the easements as shown on the above-referenced Plan provided the surface is substantially restored to the condition it was in prior to such activity. This right is reserved by the Grantor. The Grantor also may grant similar rights to the City of Newburyport and/or utility companies.
- (6) The creation, maintenance and refinement of walking paths, replacement vegetation areas, retention and detention areas and other drainage controls and drainage of surface water from other land of the Grantor onto the area covered by this Premises and such other activities as allowed by Orders of Conditions and law.
- (7) The Premises shall be for the private and principal use by the residents of the individual dwelling units on the lots within the subdivision of which the Premises is a part.
- (8) The right to drain surface water from the access ways and the lots as shown on the Plan into the Premises to the extent not prohibited by law and to clean and maintain existing drainage channels.
- (9) The right to install, maintain and replace subsurface/underground utility lines, manholes and other structures as marked on said Plan. These rights may also be granted, in common, to the City of Newburyport, Massachusetts, and/or the appropriate utility companies.
- (10) temporary construction easement of ten feet in width along both sides of the roadway slope easement for construction purposes. This easement shall terminate when

the roadway, utilities, dwellings and lot grading has been completed in accordance with the Plan and governmental approvals.

III. LEGAL REMEDIES OF THE GRANTEE AND THE CITY OF NEWBURYPORT

A. LEGAL AND INJUNCTIVE RELIEF

The rights hereby granted shall include the right in both the Grantee and the Cherry Hill Newburyport Homeowners' Association, Inc. (HOA), acting together or acting alone, to enforce this Conservation Restriction by appropriate legal proceedings and to obtain injunctive and other equitable relief against any violations, including, without limitation, relief requiring restoration of the Premises to its condition prior to the time of the injury complained of (it being agreed that the Grantee and the HOA may have no adequate remedy at law). The rights hereby granted shall be in addition to, and not in limitation of, any other rights and remedies available to the Grantee or the HOA for the enforcement of the conservation restriction.

B. GRANTEE DISCLAIMER OF LIABILITY

By its acceptance of this Conservation Restriction, the Grantee does not undertake any liability or obligation relating to the existing condition of the Premises.

IV. ACCESS:

The Premises hereby conveyed does not grant to the Grantee or to the general public or to any other person any right to enter upon the Premises, except as expressly stated herein and the Grantor grants to the Grantee, or its duly authorized agents or representatives, an easement of access to enter the Premises at reasonable times and in a reasonable manner and upon reasonable advanced notice to the Grantor or its designee for the purpose of inspecting the same to determine compliance herewith, enforcing the restrictions herein, and remedying any violation thereof.

The Premises may be used by the citizens of the City during daylight hours only for the passive and quiet recreation of walking, jogging, bird-watching, cross country skiing and the enjoyment of nature provided that the Premises is not damaged thereby and further provided the peace and tranquility of the Owners of lots in Cherry Hill Estates is not disturbed. Any person using the Premises does so at their own risk and subject to the limitations contained in Mass. General Laws Chapter 21, section 17c.

V. ASSIGNABILITY

A. RUNNING OF THE BURDEN

The burdens of this conservation restriction shall run with the Premises in perpetuity and shall be enforceable against the Grantor during such time as it has the fee ownership interest in the land comprising the Premises and then against the successors and assigns of the Grantor holding any interest in the land comprising the Premises.

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B. RUNNING OF THE BENEFIT

The benefits of this conservation restriction shall not be assignable by the Grantee, except in the following instances and from time-to-time:

- (1) As a condition of any assignment, the Grantee shall require that the purpose of this conservation restriction continue to be carried out; and
- (2) The Assignee, at the time of the assignment, qualifies under Section 170(h) of the Internal Revenue Code of 1986, as amended or any successor statute and applicable regulations thereunder, and under Section 32 of Chapter 184 of the General Laws, as amended or any successor statute, as an eligible donee to receive this conservation restriction directly.
- (3) Grantee complies with the provisions required by Article 97 of the Articles of Amendment to the Constitution of the Commonwealth of Massachusetts.

VI. SUBSEQUENT TRANSFERS

The Grantor shall incorporate by reference the terms of this Conservation Restriction in any deed or other legal instrument by which it divests itself of any interest in all or a portion of the land comprising the Premises. The Grantor shall notify the Grantee in writing if it conveys the Premises; or any part thereof or interest therein (including a lease). Nevertheless, a failure to do so shall not nullify such conveyance.

VII. ESTOPPEL CERTIFICATES

Upon request by the Grantor, the Grantee shall within twenty (20) days execute and deliver to the Grantor any document, including an estoppel certificate, which certifies the Grantor's compliance with any obligation of the Grantor contained in the Conservation Restriction.

VIII. NOTICES

Any notice, demand, request, consent, approval or communication that either party desires or is required to give to other shall be in writing and either served personally or sent by first class mail, postage pre-paid, addressed as follows:

To Grantor:	Cherry Hill Limited Partnership 50 Dodge Street Beverly, MA 01915
To Grantee:	City of Newburyport Conservation Commission 60 Pleasant Street Newburyport, MA 01950
To Newburyport:	Conservation Commission City Hall Newburyport, MA 01950

With a copy to:

Planning Director
City Hall
Newburyport, MA 01950

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12/19/2001 10:59:00 OTHER Pg 6/12

or such other address as any of the above parties from time to time shall designate by written notice to the others.

IX. GENERAL PROVISIONS:

A. CONTROLLING LAW

The interpretation and performance of this Conservation Restriction shall be governed by the laws of the Commonwealth of Massachusetts.

B. LIBERAL CONSTRUCTION

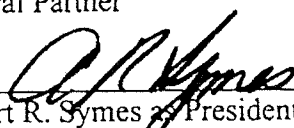
If any provision in this instrument is found to be ambiguous, an interpretation consistent with the purpose of this Conservation Restriction that would render the provision valid shall be favored over any interpretation that would render it invalid. Notwithstanding anything in this grant to the contrary, this grant in no way creates the right of the public at large to cross or use the land comprising the Premises (except as provided in the Article IV ACCESS) and shall not be construed in any manner that would cause the land comprising the Premises to not qualify as open space under the City of Newburyport Zoning Ordinance.

C. SEVERABILITY

If any provision of this conservation restriction or the application thereof to any person or circumstance is found to be invalid, the remainder of the provisions of this Conservation Restriction shall not be affected thereby.

IN WITNESS WHEREOF, Cherry Hill Limited Partnership, acting by and through its general partner, Cherry Hill Corp., has caused its corporate seal to be hereto affixed and these presents to be signed in its name and behalf by ALBERT R. SYMES, as President and Treasurer of Cherry Hill Corp. this 27th day of September 2001.

Cherry Hill Limited Partnership
By Cherry Hill Corp.,
Its General Partner

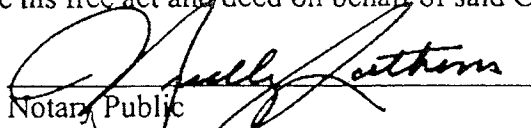
by: 
Albert R. Symes as President and Treasurer
acting in his corporate capacity and not individually

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss

September 27, 2001

Then personally appeared the above-named ALBERT R. SYMES as President and Treasurer of Cherry Hill Corp., acting as general partner of Cherry Hill Limited Partnership and acknowledged the foregoing instrument to be his free act and deed on behalf of said Corporation, and General Partner before me.


Notary Public
My Commission Expires:

O. BRADY
NOTARY
MY COMMISSION EXPIRES
OCTOBER 1, 2004

obl:pp:symes\conservationrestriction newburyport 5.3.01

APPROVAL BY
NEWBURYPORT CONSERVATION COMMISSION

The undersigned, being a majority of the Conservation Commission of the City of Newburyport, Essex County, MA, hereby certifies that pursuant to a vote of the Newburyport Conservation Commission duly held on July 18th, 2001, the Conservation Commission voted to accept the foregoing Conservation Restriction pursuant to M.G.L. Ch.184, section 32 and Chapter 40, section 8C.

Paul Healy
Mary K. Murphy-Cameron
Jeanette Carey
Pat Hart

COMMONWEALTH OF MASSACHUSETTS

Essex, ss.

7/24, 2001

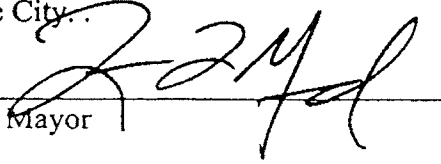
Then personally appeared the above-named Members and acknowledged the foregoing to be his free act and deed, before me.

Marianne G. [Signature]
NOTARY PUBLIC
MY COMMISSION EXPIRES: 12/24/04

APPROVAL BY THE MAYOR

2001121900377 Bk:18067 Pg:529
12/19/2001 10:59:00 OTHER Pg 9/12

Undersigned, being the Mayor of the City of Newburyport, Massachusetts, does hereby approve this conservation restriction on behalf of the City.



Mayor

APPROVAL OF GRANT BY
CITY OF NEWBURYPORT

2001121900377 Bk:18067 Pg:530
12/19/2001 10:59:00 OTHER Pg 10/12

The City Council of the City of Newburyport, Essex County, Massachusetts, hereby certifies that a meeting duly held on August 13, 2001, it voted to approve the foregoing Conservation Restriction grant to the Newburyport Conservation Commission and agrees to be bound by its terms.

August 13, 2001
Date

Eford Fowler
President, City Council

COMMONWEALTH OF MASSACHUSETTS

Essex, ss.

August 13, 2001

Then personally appeared the above-named ERFORD FOWLER and acknowledged the foregoing to be his/her free act and deed, before me.

J. F. Moak
NOTARY PUBLIC
MY COMMISSION EXPIRES:

JOHN F. MOAK
Notary Public
My Commission Expires October 12, 2001

obl:pp:symes\conservationrestriction newburyport 5.3.01

APPROVAL BY SECRETARY OF ENVIRONMENTAL AFFAIRS
COMMONWEALTH OF MASSACHUSETTS

The undersigned, Secretary of Executive Office of Environmental Affairs of the Commonwealth of Massachusetts, hereby certifies that the foregoing Conservation Restriction grant to the City of Newburyport has been approved in the public interest pursuant to Massachusetts General Laws, Chapter 184, Section 32. Said approval is not to be construed as representing the existence or non-existence of any pre-existing rights of the public, if any, in and to the Premises, and any such pre-existing rights of the public, if any, are not affected by the granting of this Conservation Restriction.

Dated: 11/15/01

Bob Durand
Secretary of Environmental Affairs

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss. Nov. 15, 2001

Then personally appeared the above-named Bob Durand and acknowledged the foregoing to be his free act and deed, before me.

Nicole Sicard
NOTARY PUBLIC
MY COMMISSION EXPIRES:

NICOLE SICARD
Notary Public
My Commission Expires December 31, 2003

2001121900377 Bk:18067 Pg:531
12/19/2001 10:59:00 OTHER Pg 11/12

EXHIBIT A
THE PREMISES

2001121900377 Bk:18067 Pg:532
12/19/2001 10:59:00 OTHER Pg 12/12

The area shown as "OPEN SPACE 1" (hereinafter sometimes called "the Premises") on a plan entitled "Definitive Plan Cherry Hill Estates Newburyport, Mass.; date: July 12, 1999, as revised; Engineer: Hayes Engineering Inc.; Applicant: Symes Associates Inc.", comprised of five sheets recorded with Essex South District Registry of Deeds on July 20, 2000 as Instrument No. 167, (Plan). The Premises are subject to all of the easements as shown on the above – referenced Plan including but not limited to drainage easements and 20 foot wide temporary slope easement as well as the right of the Grantor to engage in activities as allowed by the Orders of Conditions referenced in this grant.

This grant imposes a Conservation Restriction. The fee ownership is not conveyed. The fee ownership is retained by the Grantor, its successor and assigns.

For grantor's title see deed recorded at the Essex South District Registry of Deeds, Book
Page

obl:pp:symes\conservationrestriction newburyport 7.05.01

DIAMOND & LAMOND, P.C.
613 MAIN STREET
NEWBURYPORT, MASSACHUSETTS 01950

APPENDIX D

April 2021 vs July 2021 Cost Estimate Comparison

**PHILIPS DRIVE NEIGHBORHOOD ROADWAY AND DRAINAGE IMPROVEMENTS
ENGINEER'S ESTIMATE**

AS OF APRIL 9, 2021

Item No. / Description	Total
142. CLASS B TRENCH EXCAVATION	\$39,662.50
144. CLASS B ROCK EXCAVATION	\$21,375.00
146. DRAINAGE STRUCTURE REMOVED	\$22,008.00
170. FINE GRADING AND COMPACTING	\$67,096.18
201. CATCH BASIN	\$170,000.00
202. MANHOLE	\$176,000.00
206. DROP INLET, TYPE A	\$32,400.00
220.7 SANITARY STRUCTURES ADJUSTED	\$10,160.16
241.15 15 INCH REINFORCED CONCRETE PIPE	\$8,500.00
252.115 15 INCH CORRUGATED PLASTIC PIPE FLARED E	\$1,200.00
252.12 12 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$74,500.00
252.130 30 INCH CORRUGATED PLASTIC PIPE FLARED E	\$1,500.00
252.15 15 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$232,000.00
252.18 18 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$54,287.50
252.24 24 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$64,400.00
252.30 30 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$94,500.00
269.10 10 INCH SLOT-PERFORATED CORRUGATED PLA	\$193,600.00
303.06 6 INCH DUCTILE IRON WATER PIPE (MECHANIC	\$1,157,475.00
347.075 3/4 INCH COPPER TUBING TYPE K	\$182,250.00
376. HYDRANT	\$33,672.00
384. CURB STOP	\$49,400.00
403. RECLAIMED PAVEMENT FOR BASE COURSE AND	\$57,747.50
450.21 SUPERPAVE SURFACE COURSE - 4.75 (SSC - 4.75	\$156,570.00
450.41 SUPERPAVE BASE COURSE - 25.0 (SBC - 25.0)	\$173,000.00
470. HOT MIX ASPHALT BERM	\$36,769.08
702. HOT MIX ASPHALT SIDEWALK	\$40,142.42
703. HOT MIX ASPHALT DRIVEWAY	\$17,350.20
752. TOPSOIL REHANDLED AND SPREAD	\$21,000.00
765. SEEDING	\$7,910.00
901. 4000 PSI 1.5 INCH, 565 CEMENT CONCRETE	\$10,205.16
910. STEEL REINFORCEMENT FOR STRUCTURES	\$1,120.00
SUBTOTAL =	<u>\$3,207,800.70</u>
CONTINGENCY (20%) =	\$641,560.14
TOTAL (Rounded to nearest 1,000)=	<u>\$3,850,000.00</u>

AS OF JULY 15, 2021

Item No. / Description	Total	CHANGE
142. CLASS B TRENCH EXCAVATION	\$39,662.50	\$0.00
144. CLASS B ROCK EXCAVATION	\$21,375.00	\$0.00
146. DRAINAGE STRUCTURE REMOVED	\$22,008.00	\$0.00
170. FINE GRADING AND COMPACTING	\$67,257.12	\$160.94
201. CATCH BASIN	\$170,000.00	\$0.00
202. MANHOLE	\$176,000.00	\$0.00
206. DROP INLET, TYPE A	\$32,400.00	\$0.00
220.7 SANITARY STRUCTURES ADJUSTED	\$10,160.16	\$0.00
		-\$8,500.00
252.115 15 INCH CORRUGATED PLASTIC PIPE FLARED EN	\$3,600.00	\$2,400.00
252.12 12 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$74,500.00	\$0.00
252.130 30 INCH CORRUGATED PLASTIC PIPE FLARED EN	\$1,500.00	\$0.00
252.15 15 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$240,500.00	\$8,500.00
252.18 18 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$54,287.50	\$0.00
252.24 24 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$64,400.00	\$0.00
252.30 30 INCH CORRUGATED PLASTIC (POLYETHYLENE	\$94,500.00	\$0.00
269.10 10 INCH SLOT-PERFORATED CORRUGATED PLA	\$193,600.00	\$0.00
303.06 8 INCH DUCTILE IRON WATER PIPE (RUBBER GA	\$1,473,150.00	\$315,675.00
309. DUCTILE IRON FITTINGS FOR WATER PIPE	\$330,000.00	\$330,000.00
350.08 8 INCH GATE AND GATE BOX	\$81,900.00	\$81,900.00
347.075 3/4 INCH COPPER TUBING TYPE K	\$182,250.00	\$0.00
376. HYDRANT	\$33,672.00	\$0.00
384. CURB STOP	\$49,400.00	\$0.00
403. RECLAIMED PAVEMENT FOR BASE COURSE AND	\$57,917.50	\$170.00
450.21 SUPERPAVE SURFACE COURSE - 4.75 (SSC - 4.75	\$157,029.00	\$459.00
450.41 SUPERPAVE BASE COURSE - 25.0 (SBC - 25.0)	\$173,510.00	\$510.00
470. HOT MIX ASPHALT BERM	\$36,769.08	\$0.00
702. HOT MIX ASPHALT SIDEWALK	\$40,142.42	\$0.00
703. HOT MIX ASPHALT DRIVEWAY	\$17,350.20	\$0.00
752. TOPSOIL REHANDLED AND SPREAD	\$21,000.00	\$0.00
765. SEEDING	\$7,910.00	\$0.00
		-\$10,205.16
		-\$1,120.00
SUBTOTAL =	<u>\$3,927,750.48</u>	<u>\$719,949.78</u>
CONTINGENCY (10%) =	\$392,775.05	-\$248,785.09
TOTAL (Rounded to nearest 1,000)=	<u>\$4,321,000.00</u>	<u>\$471,000.00</u>