

Newton Parks, Recreation & Culture Department
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Nicole Banks, Commissioner



To: City Council

CC: Mayor Ruthanne Fuller, Design Review Committee, Parks & Recreation Commission, Community Preservation Committee, Commission on Disability, Public Buildings Commissioner Josh Morse

RE: New Gath Pool depth analysis

3/10/23

Dear City Councilors,

I am writing with an update on the Gath Pool design effort. I am excited that we are moving forward to having a new pool complex in place in time for the 2024 swim season. Our design provides for an incredible family-friendly, universally accessible, welcoming aquatics facility for people of all abilities and interests. The two-pool design allows for a zero-depth entry recreational pool with attached walking lanes, a fun slide, and varying depths for a pool experience for all ages and abilities. Next to the recreational pool will be a fully accessible 8-lane lap pool for our lap swimmers with diving blocks into 12 feet of water, (2) 1-meter diving boards, and ample space for swim lessons, aqua fitness classes, and swim league use. The design plan includes a large splash pad that can be opened for expanded season fun, ample deck space, seating, and shade opportunities. The bathhouse will also get accessibility, restroom, and changing room updates.

The design has been well received, with the one lingering question about the depth of the 8-lane lap pool; we have received emails from some community members requesting a deeper shallow end depth in the lap pool. In order for this pool to serve a wide variety of swimmers well, it has a shallow end of 4 feet increasing to a deep end of 12 feet. These depths work well for league swimmers/divers as well as recreational lap swimmers, people of all ages taking swim lessons, recreational users, and swimmers with disabilities.

Gath Pool Design - A Community Driven Process

The Gath Pool design team has listened carefully to all of the input that has come in on the pool design. We are delighted that so many people are following the project and helping improve the design. We have met with residents and groups, with the swim team having the most meetings. We're grateful for the input from the Bluefish Swim Team, residents with disabilities including the Commission on Disability, recreation camp leaders, the LGBTQ+ community, older residents, and community members. We kept improving the designs in response to the input and feedback received.

In looking back at past correspondences here is an example of some modifications that were incorporated due to input. The following quote is from a Bluefish Swim Team email from last April:

“The main thing is we do not want to lose any functionality for competition (at least State minimum 4' depth for diving at both ends), consistent depth in all lanes (like NN) and view for spectators along the fences for championship meets.”

The shallow end depth of the 8-lane lap pool was redesigned from 3 ½' to 4' over a year ago in line with this request; we changed the pool floor to eliminate any cross slope to ensure consistent depth across the lanes per this request; and we maintained the spectator viewing area when we split the pool from a single connected pool to 2 separate pools by expanding the deck and shrinking the splash pad area.

We worked closely with our consultant to study the possibility of accommodating the recent request for a shallow end depth for all 8 lanes of 6'7". We met with swim team representatives. We explained that the accessible ramp must land at a depth between 3 ½' and 4' per ADA regulations.

After the meeting we received more correspondences from swim team members about the pool depth. These messages arrived in mid-February with a revised request for the first 2 lanes to remain at 4' deep at the shallow end and the other 6 lanes to have a 6'7" depth at the shallow end. We responded to each correspondence explaining the challenges of this request, particularly that the shallow end space is also planned to host other uses beyond competitive swim and that there are limits to the slope angle in the shallow end. We met with the swim team coaches to listen to what they were hoping to see in a revised pool design. Following this meeting (last Friday), we tasked our consultant with exploring a way to meet their request. The consultant, following pool design regulations, produced a design that honored the (2) lanes being at 4' to connect with the accessible ramp; the pool floor then slopes down to the requested 6'7" depth. Because of the regulations on slope steepness, only one lane of the eight achieved the 6'7" desired depth.

Meeting Community Needs

Our goal is to meet the needs of pool users. The requested design change results in much of the lap pool shallow end depth becoming deeper, and does not allow the swim league to use much of the shallow end for diving. Furthermore, the depth is over most everyone's heads. This design would prevent expanded programming for swim lessons. This is likely why no other community has built a recreation pool with a 6'7" shallow end. This design is insufficient in meeting community needs.

More details are provided below.

Accessibility

To ensure universal accessibility, both pools have multiple accessible options for entry/egress. Having a ramp and lift chair into each pool is incredibly important and will allow our older pool guests and those requiring assistance to enjoy the pools. As we decided on the 2-pool design, the overarching goal was to have usability for all swimmers. In addition to this goal, we are legally obligated to meet ADA accessibility regulations. An accessible ramp must land between 3' and 4' of water, so we cannot have all lanes be 6'7" deep in the shallow end as requested. The 6'7" request is linked to requirements for international championship meets (FINA) and Olympic championship meets, pools must have a 2-meter (6'7") depth that must be standard across the entire pool (these highest-level competitions would not accept a 12' deep end). FINA is also rigid in requiring consistency of each lane having the same exact slopes for non-championship meets meaning there can be no variation between any two lanes. This type of high-level competition is not in keeping with Newton's goals of having 2 pools that can be enjoyed by many different kinds of users, and by swimmers of varying abilities.

We acknowledge and appreciate that people requesting having 2 lanes at a 4' depth and the other 6 at the 6'7" depth recognize the importance of having an accessible ramp; which they understand must land at a 4' depth. The request, however, necessitates that the pool floor go from 4' immediately to 6'7", meaning there is a 2'7" vertical drop. For any depth change in under 5' of water, the slope cannot be steeper than 12:1, meaning any 1-foot drop must occur over a 12-foot span, and the slope must be consistent. We have shared this information with the Parks & Recreation Commission and the Design Review Committee.

Expanded Programming

As we undertook the design of the new Gath Pool, residents have asked for more programming in the afternoon and evenings for families who are unable to be at the pool in the morning or before 5pm. These parents would like children to have access to swim lessons in the evening when their schedule allows them to utilize the pool. We have not been able to offer evening swim lessons in the past. We believe that an expansion of swim lessons will be incredibly popular in Newton and increase our ability to provide youngsters with lifelong skills to be in and around water safely. The 4' depth in the shallow end of the lap pool is necessary to accommodate these programs. The alternative design significantly reduces the space in the lap pool where programming could be run to the point that it is unlikely evening programs could be offered.

Accommodating Everyone During Open Swim Times

Another reason to have a 4-foot shallow end depth in the 8-lane lap pool is to allow all types of users access to both pools during the busiest hours. Based on discussions with other community leaders who have recently opened new or refurbished pools, we anticipate seeing an approximate 30% increase in pool admittances throughout each day. Extensive input during community meetings tells us that the existing Gath Pool has been crowded. The two new pools will together be a little larger in area but may still sometimes be very busy given anticipated increased popularity. We welcome many individuals, families, and groups including campers from Parks & Recreation summer camps, Newton Public Schools Space Camp, the Boys and Girls Club, and other camps. Incorporating the sloped depth shallow end in the alternative design would result in losing more than ½ of the overall 4' swimming area. This will result in an unusually high use of the recreational pool and could ultimately mean that there is not enough pool capacity at shallower water depths for the majority of pool users. This could occur even if the lap pool is nearly vacant. With a 4' shallow end depth, pool guests will be able to navigate within and across both pools to find adequate space to enjoy the water. In the event of a temporary recreation pool closure, the lap pool could serve guests who wish to continue swimming. The alternative plan would significantly reduce usable swim space for pool guests.

Moving Forward with the Preferred Plan

The new Gath Pool will be a wonderful venue for the entire community, including the Bluefish Swim Team. The pool will have a similar layout to almost all community pools in the region, particularly newly designed pools.

A 4-Foot Depth Is Industry Standard

As part of our review of the 6'7" depth request, we researched other outdoor and indoor swimming pools to identify those that have a shallow end depth of 6'7". We were not able to identify any municipal pools that have this shallow end depth in the region, including several recently constructed pools.

Here are the depths of other community pools in the region at the shallow end of a lap pool:

<u>CITY/TOWN</u>	<u>DEPTH - SHALLOW END</u>
Acton	3.5
Belmont	4'
Brookline	4'
Canton	4'
Dedham	5'
Milford	4'
Needham	4.5
Newton	4'
Norwood	3'
Sudbury	3.5'
Walpole	2.5'
Wayland	4'
Wellesley	4'
Westboro	3.5
Weston	4'
Westwood	3.5'
Belmont (indoor)	4'
Canton (indoor)	4'
Concord (indoor)	4'
Newton North (in)	4'

Swim Team Practices and Meets

The good news is that the 12' depth of the starter block end of the lap pool functions well and safely for swim team practices and meets. Today's Gath Pool has dive blocks at each lane, meaning all dive entries from the starting blocks are into depths of less than 5 ½'. The starting dive blocks stand 29 ½ inches (about 2 ½ feet) above the water line. The new pool design meets USA-Swimming standards as well as those of the associations that oversee high school (NFHA) and collegiate (NCAA) swimming. They all require a minimum 4' depth from the starter blocks, our design far exceeds this minimum depth.

Some residents have written in regarding other, more stringent recommendations and regulations. New York State, for example, says diving must be into 8' of water. The American Red Cross recommends that diving occur in water 9' deep or greater. The deep end of the lap pool is 12', a very safe depth.

In speaking with the swim coaches, their team's preference is to have younger swimmers do deck starts (diving from the pool deck rather than the raised starter block). Other teams in the league allow their younger swimmers to use the starting blocks; they also allow kids who are not comfortable using the blocks to do a deck start right next to the starter block. This includes the Bluefish's winter swim team which has their youngest swimmers start off the blocks or next to them during their meets at NNHS. This idea was proposed to the swim team for their summer team; their concern is that swimmers would not be diving directly into the center of the lane, despite other teams doing this. We have offered to review starter block options that could allow for easy removal for events where they do not want to allow kids to use them.

Meeting Construction Code and Hosting the Championship Swim Meet

We love hosting the state swim meet in Newton at Gath Pool. The new design for the 8-lane lap pool is safer than what has been in use over the past 20+ years. The existing set-up is safe; the new design is safer. The new Gath Pool design has the same depth dimensions as the league's indoor winter championship meet pool in Milford, MA. It's actually even better as we will have 8 lanes rather than their 6 lanes. Milford's pool specs can be found here: <https://mcs.milford.ma.us/indoor-pool/>.

The lap pool is being designed to meet current State code and is anticipated to meet future code that is currently under discussion at the State level. The new Gath Pool will be among the best pools to host the championship swim meet, particularly given its 8 race lanes. Notably, there is no other pool that could be used to host the swim meet that has a 6'7" depth at both ends. There are also no pools that would meet the 6' depth at both ends. The summer swim league is a terrific league with several teams proudly using a lake or pond as their home swim venue. We look forward to working with the swim team if they are interested in ways to have all diving starts at the 12' end, such as removing and storing dive blocks during certain meet events (or have starts alongside the blocks) during the 5-6 swim meets hosted at Gath Pool. We look forward to working with the swim league so that we can welcome back the many swimmers from all communities who have come to enjoy Newton's Gath Pool as the summer championship meet swim venue.

Our team is excited to be moving the new Gath Pool project forward for the community. Our commitment has been to begin construction in late August 2023 so that the new facility will be ready for the usual season opening date next summer 2024.

Sincerely,

Nicole Banks

Commissioner of Parks, Recreation & Culture

Enclosure: Consultant memo on pool depths

9 Channel Center Street
Suite 300
Boston, MA 02210

617 350 0450
bha@bhplus.com
www.bhplus.com

memo

to: Gath Pool Working Group

from: Thomas A. Scarlata, CSI, CCS, CCCA, AIA
Principal

date: March 7, 2023

project name & number: Gath Pool Improvements
BH+A Project No. 3457

subject: Lap Pool Depth Study

cc: BH+A File

attachments: Sketch P801 and P801.1

As requested, we have developed an option to increase the pool depth at the shallow end of the lap pool. The pool depth would be 4 feet at the entry side of the pool and descend to 6'-7" at the northeast corner.

Parameters:

- DPH regulations define water less than 5'-0" as "non-Swimming"; water over 5'-0" is defined as "swimming".
- The southeast corner of the pool must remain at 4 feet to accommodate the accessible lift operation.
- The 4 ft. depth requires a 51"-0" long ramp.
- Pool floors in water 5ft. or less cannot exceed a 1:12 (8%) slope.
- The 5 ft. depth in the pool is marked with a 4-inch wide contrasting tile line so the depth is visible to someone underwater. The MA DPH prefers red tiles.
- The 5ft. depth in the pool will have rope floats to demark the location of the 5ft. depth from the water.

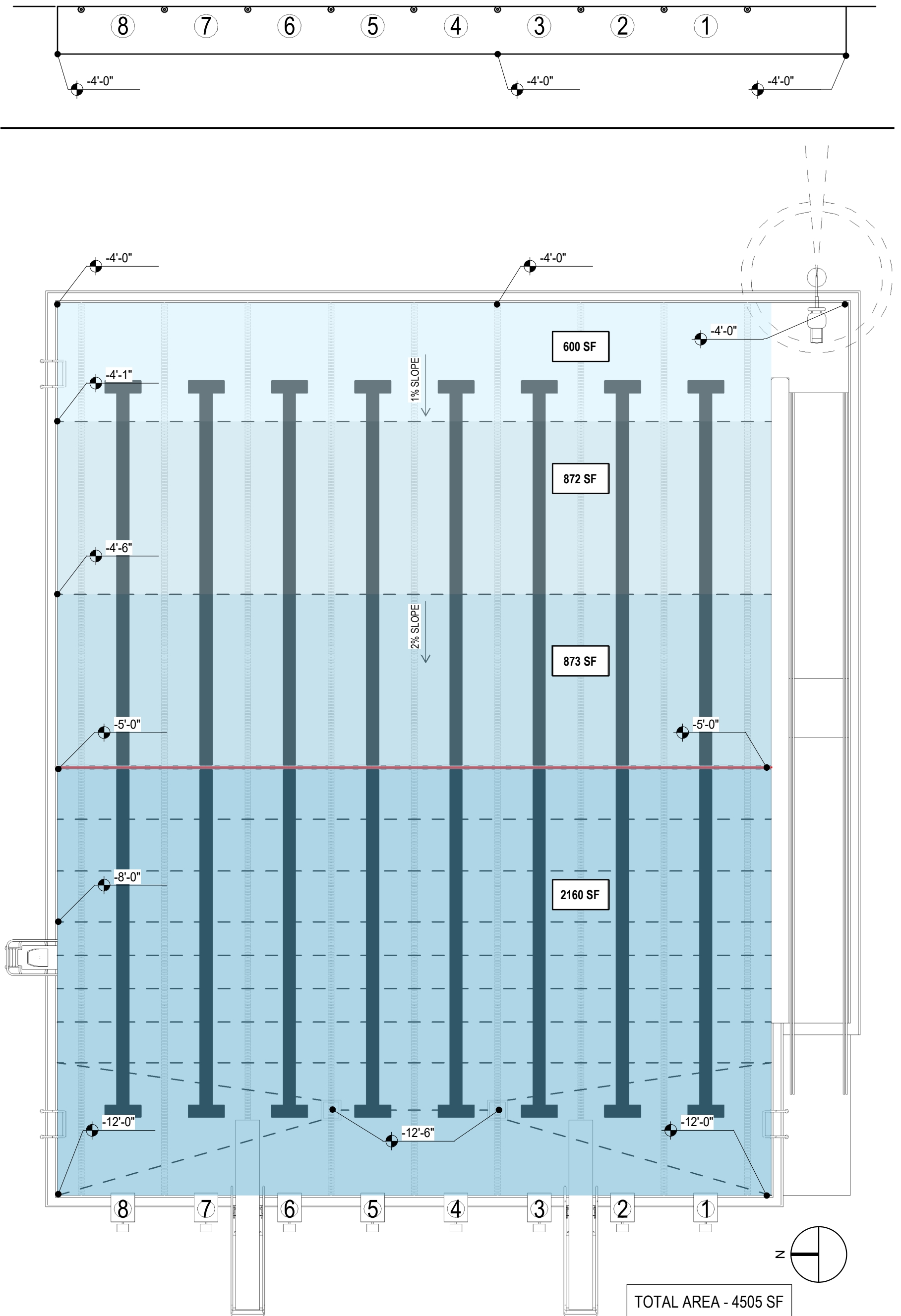
Current Design

- The shallow wall along the entire length of the pool is 4ft.
- The first ten feet of pool floor slopes at 1%. This area shown shaded is 600 SF.
- The remainder of the non-swimming area slopes at 2%. This area is shown with a diagonal cross hatch. The area is 1,745 SF.
- From the 5ft. depth, the pool slopes to 12 feet.
- The bottom of the pool has a continuous 12 ft. depth around the perimeter, the main drains are set at 12"-6" inches to ensure full drain down of the pool.
- The pool bottom and lane markers are uniform in all 8 lanes.

Gath Pool Improvements
Lap Pool Depth Study
March 3, 2023
Page 2

Option1

- The shallow wall drops from 4 feet at lane 1 to 6'-7" at the northeast corner of lane 8.
- A 1% slope is maintained at the shallow end of lanes 1 and 2. The area shown shaded is 304 SF.
- The remainder of the non-swimming area slopes between 5 & 7%. This area is shown with a diagonal cross hatch. The area is 1,140 SF.
- Lanes 5 and 6 slope from 5 ft. to 6 ft.
- Lanes 7 and 8 slope from 6 ft. to 6'-7".
- The bottom of the pool has a continuous 12 ft. depth around the perimeter, the main drains are set at 12"-6" inches to ensure full drain down of the pool.
- The bottom tile lane markings are uniform in lanes 1 and 2; the markings in lanes 3 to 8 perpendicular to the floor bottom slope. The slope is shallow and the lane markers will be clearly visible to swimmers. This condition is typical in many swimming pools.



TOTAL AREA - 4505 SF



Bargmann Hendrie + Archetype, Inc.
9 Channel Center Street, Suite 300
Boston, MA 02210
(617) 350 0450

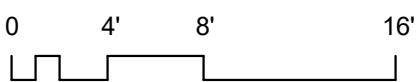
Gath Memorial Pool
Improvements
256 Albemarle Rd.
Newton, MA 02460

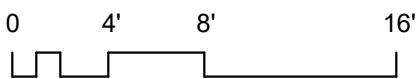
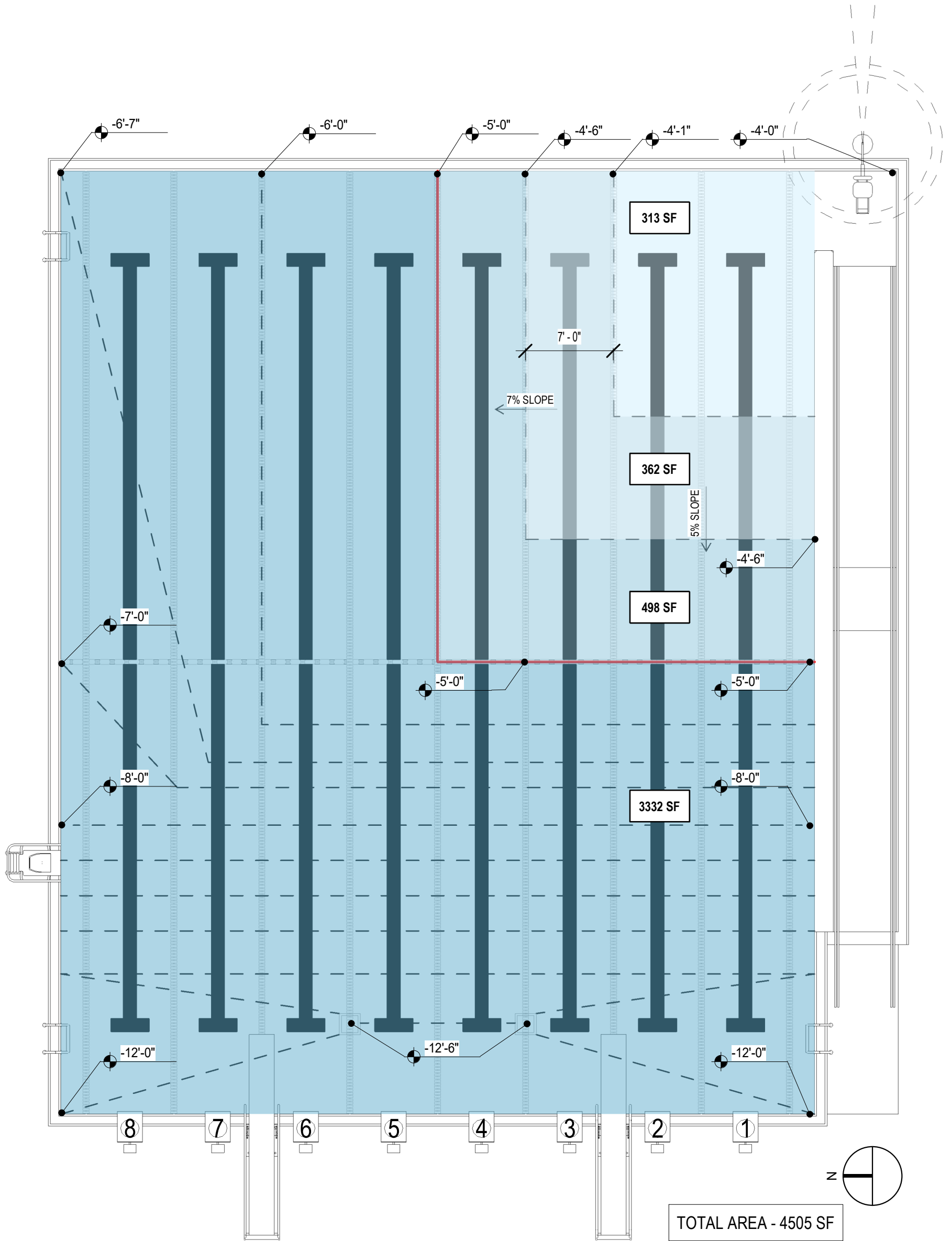
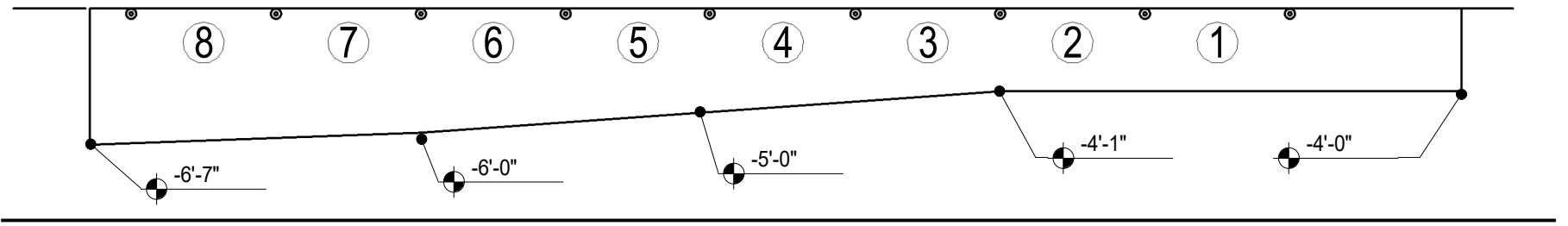
LAP POOL DEPTH CURRENT DESIGN

REFERENCE:

DATE: 03/07/23
SCALE: 1/8" = 1'-0"
PROJ. NO.: 3457
FILE NAME:
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P801





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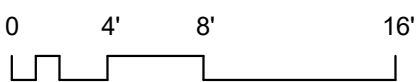
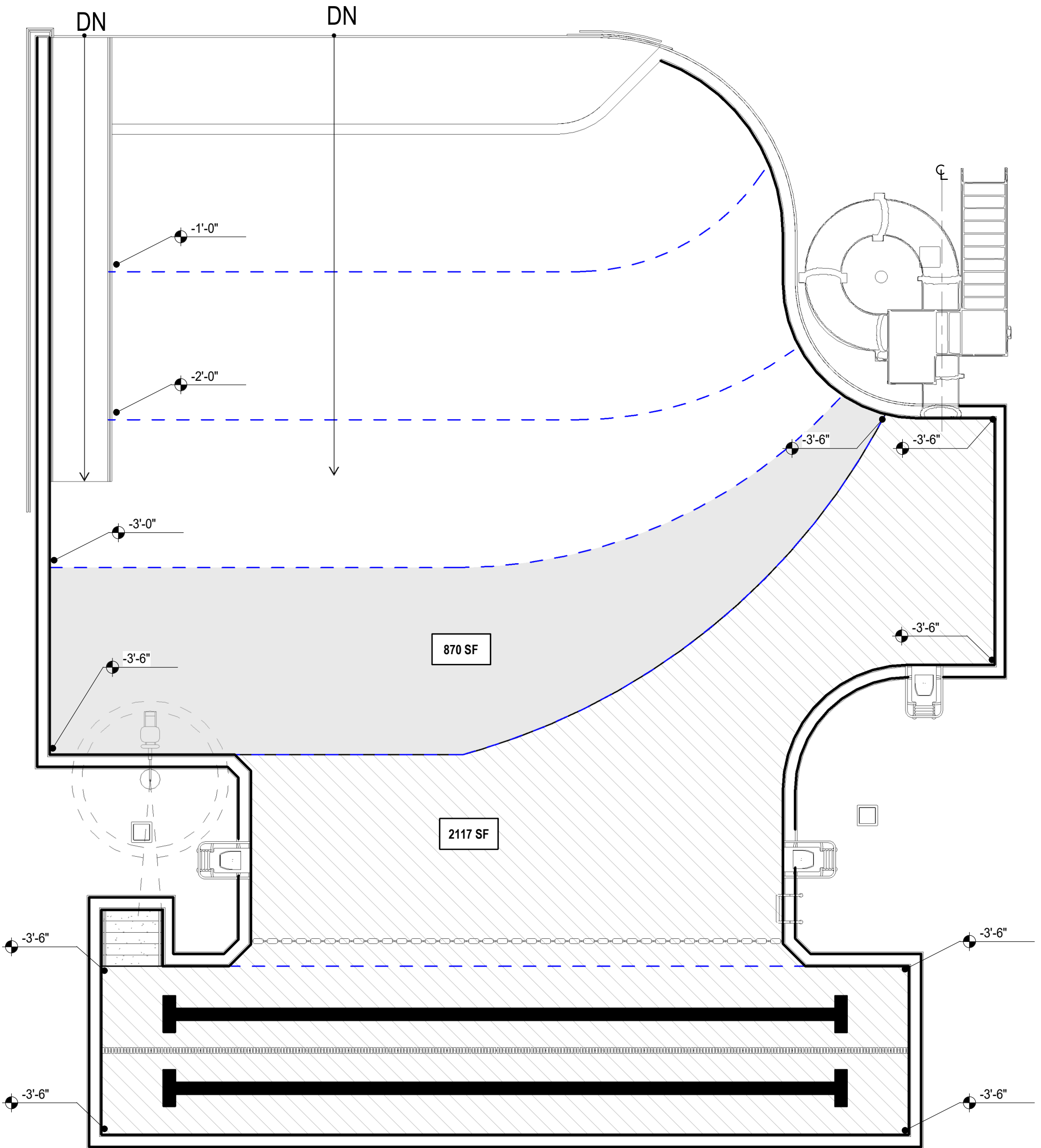
Gath Memorial Pool
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LAP POOL DEPTH OPTION 1

REFERENCE:

DATE: 03/07/23
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FILE NAME:
revit.rvt

P801.1



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**Gath Memorial Pool
 Improvements**
 256 Albemarle Rd,
 Newton, MA 02460

ZERO DEPTH POOL

REFERENCE:

DATE: 03/07/23
 SCALE: 1/8" = 1'-0"
 PROJ. NO.: 3457
 FILE NAME:
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P802