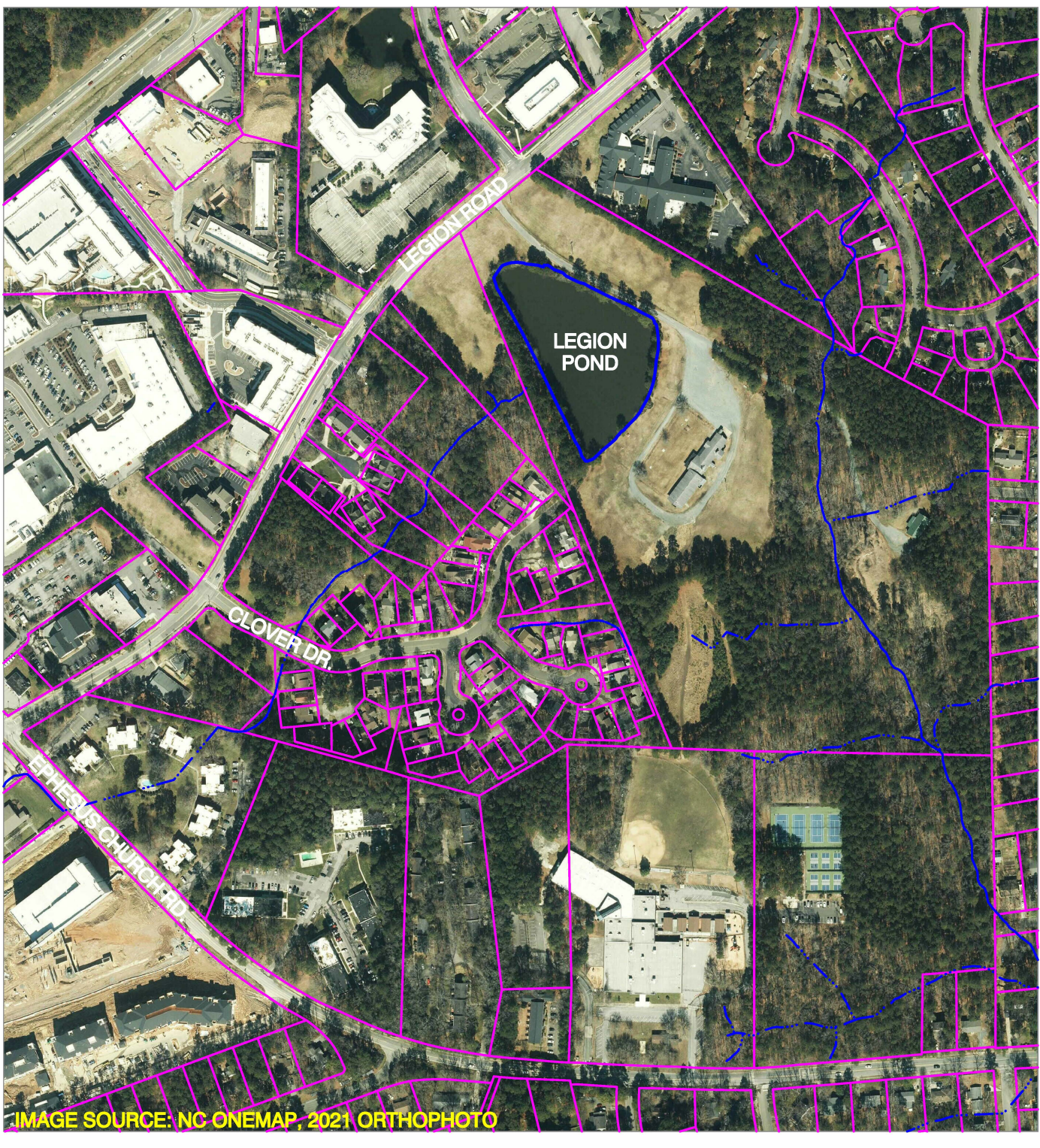


Town of Chapel Hill Legion Pond Dam

Presentation Summary of a

Preliminary Engineering Report







Dam Crest Facing East from West Abutment



Overflow Device Outlet,
Erosion Cavities



Pipe Culvert at Clover Drive

Concerns/Issues regarding the Dam:

1. Based on a review of dam safety criteria, the dam is regulated under the NC Dam Safety Act.
2. Based on classification criteria, the dam is classified as High Hazard: “Economic damage of More than \$200,000.”
3. Technical Concerns:
 - a. Extensive Tree Growth
 - b. Overly Steep Slopes
 - c. Extensive Erosion at Outlet Pipe
 - d. Downstream Culvert at Clover Dr. (The Meadows)

Options to bring the dam into compliance with the NC Dam Safety Law:

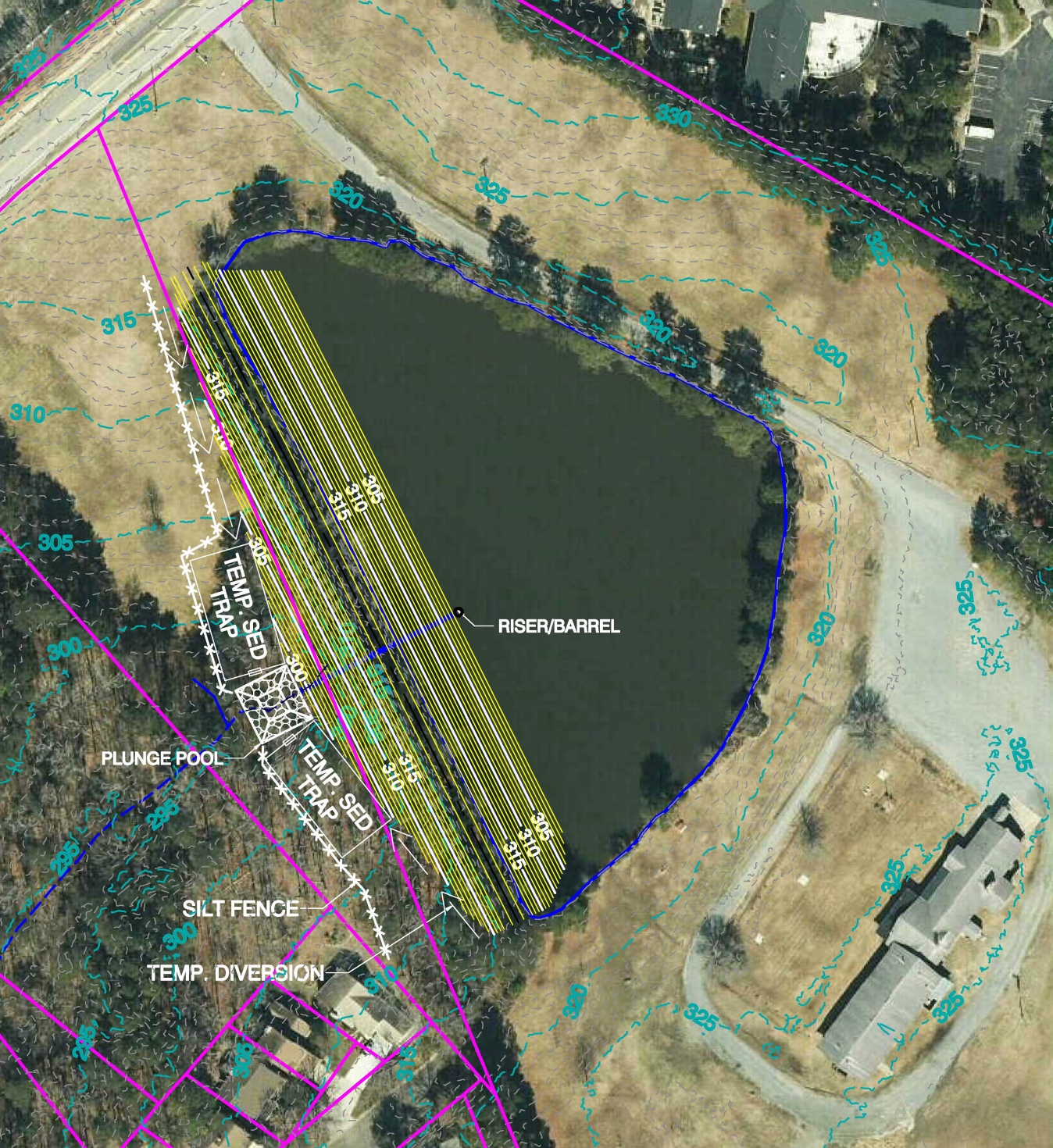
1. Repair the dam.

2. Remove the dam.

Repair Option

Construction Work includes:

- Draining the pond
- Erosion and sediment controls
- Tree removal
- Breach the dam
- New riser and barrel outlet pipe
- Backfill at 3:1 slopes
- Outlet energy dissipater



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RISER/BARREL

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PLUNGE POOL

SILT FENCE

TEMP. DIVERSION

TEMP. SED. TRAP

TEMP. SED. TRAP

TEMP. SED. TRAP

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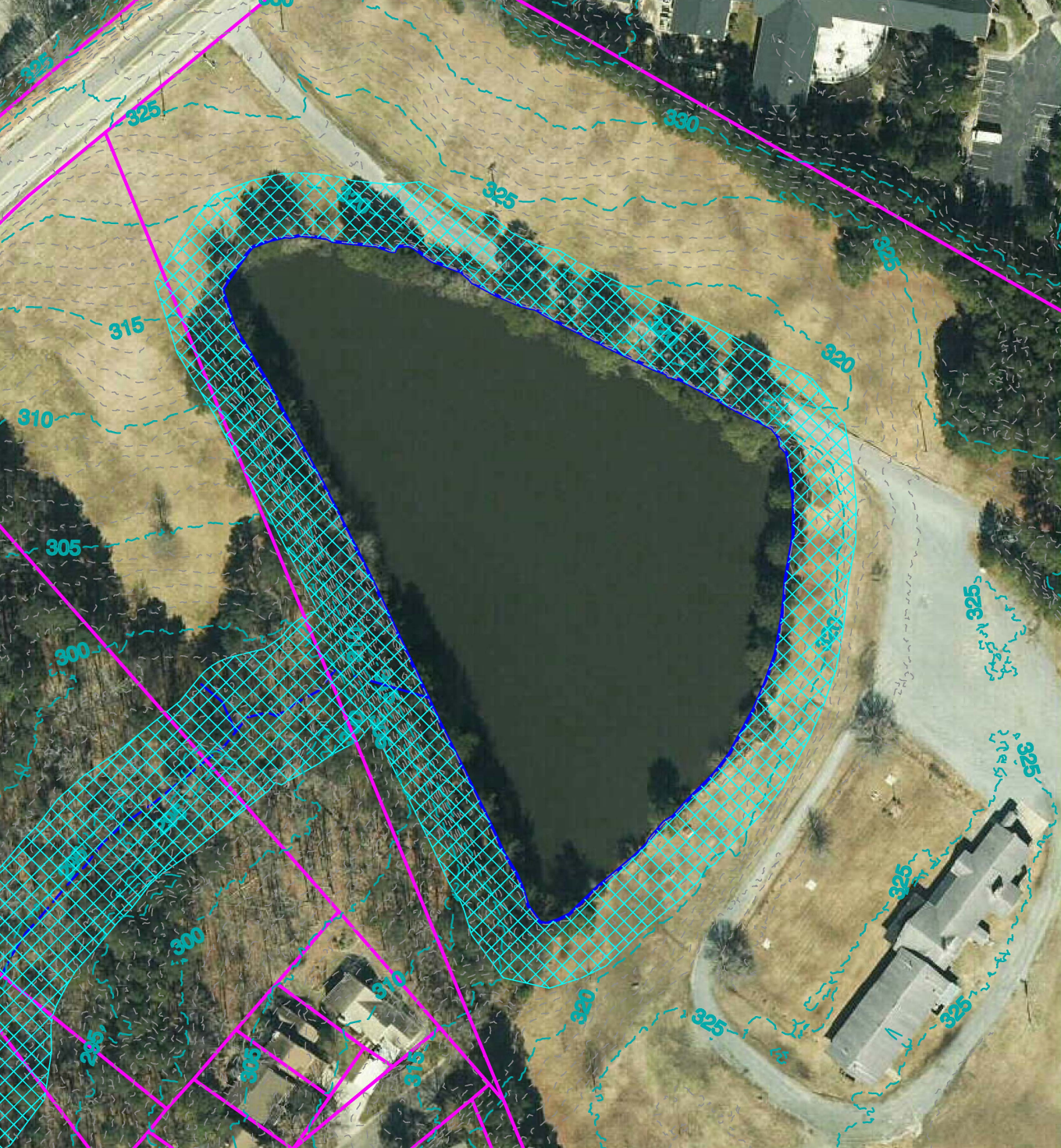
Removal Option

Construction Work includes:

- Draining the pond
- Erosion and Sediment Controls
- Tree removal
- Breach the dam
- Excavate dam down to natural grades
- Vegetation/Stabilization

Environmental Rules

- Section 404 Permitting (US Army Corps of Engineers)
- Section 401 Water Quality Certification (NCDEQ DWR)
- Jordan Lake Riparian Buffer Rules, 15A NCAC 02B .0267.
- Resource Conservation District



Environmental Rules

- Repair option:
 - Will likely require individual permits (approximately a 12-month review period)
 - May require mitigation for fill placement in Water of the US (mitigation cost of \$100,000 is included in the budget)
 - Will depend on the final design and COE interpretation of “minimal”
- Remove option:
 - Will likely qualify for nationwide permit (approximately a 4-month review period)
 - May require mitigation for impacts to a Water of the US (mitigation cost of \$25,000 is included in the budget)
 - Will depend on the final design and COE interpretation of “minimal”

Cost Estimates

- The cost estimates are limited to the work specifically required to bring the dam into compliance with dam safety regulations.
- Cost estimates do not address any mitigation costs associated with future projects that would include impacts to the pond or stream beyond the immediate dam repair.
- In following the State's procedures for the work, both the Repair and the Removal options will require that the pond be drained, and the dam be breached

Cost Estimates/Schedule Summary

Repair Option

- Will cost about \$800,000
- Will take about 24 months from initiation of the RFQ for engineering services.

Removal Option

- Will cost about \$600,000
- Will take about 24 months (includes a minimum 6-month post-construction phase for re-emergence of a stream/wetland feature).

Future Development Considerations

- Repair Option
 - Repair option may be preferred if the pond would be beneficial regarding future use of the site.
- Removal Option
 - Removal option may be preferred if the pond would hinder future use of the site
 - The extent to which a stream or wetland would re-emerge would need to be evaluated after completion of the dam removal project.