

Limit of Project Development

Existing Camp Lion Facility

Existing Camp Lion Access Road

Existing Meineke

Existing Traffic Signal

Lynn, MA
Salem, MA

Project Parcel

Existing Walmart

Existing Mixed Retail

Existing Shopping Center

Existing Driveway Cross Connection

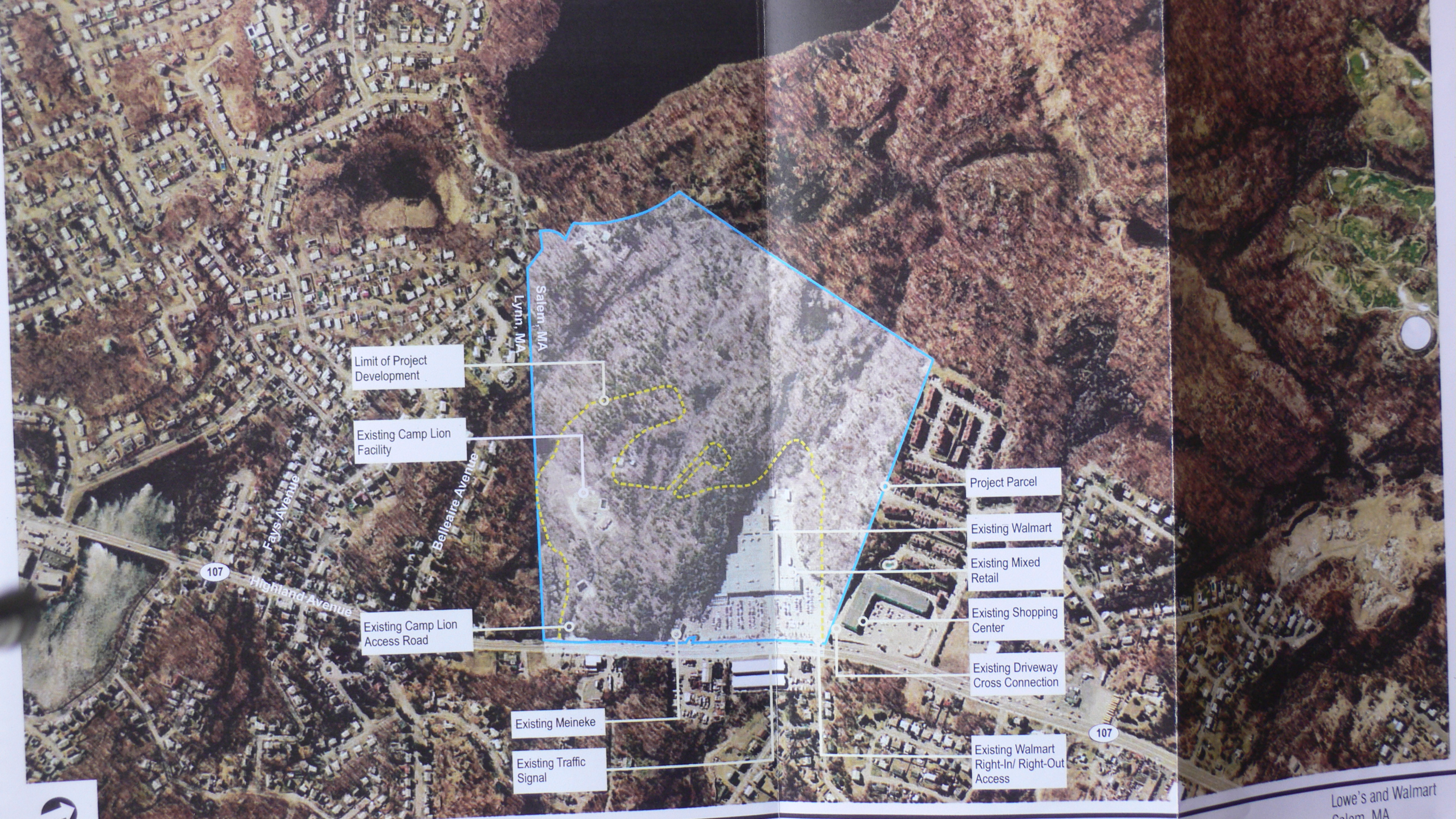
Existing Walmart

107

107

Fays Avenue
Bellevue Avenue
Highland Avenue





Salem, MA
Lynn, MA

Limit of Project Development

Existing Camp Lion Facility

Existing Camp Lion Access Road

Existing Meineke

Existing Traffic Signal

Project Parcel

Existing Walmart

Existing Mixed Retail

Existing Shopping Center

Existing Driveway Cross Connection

Existing Walmart Right-In/ Right-Out Access

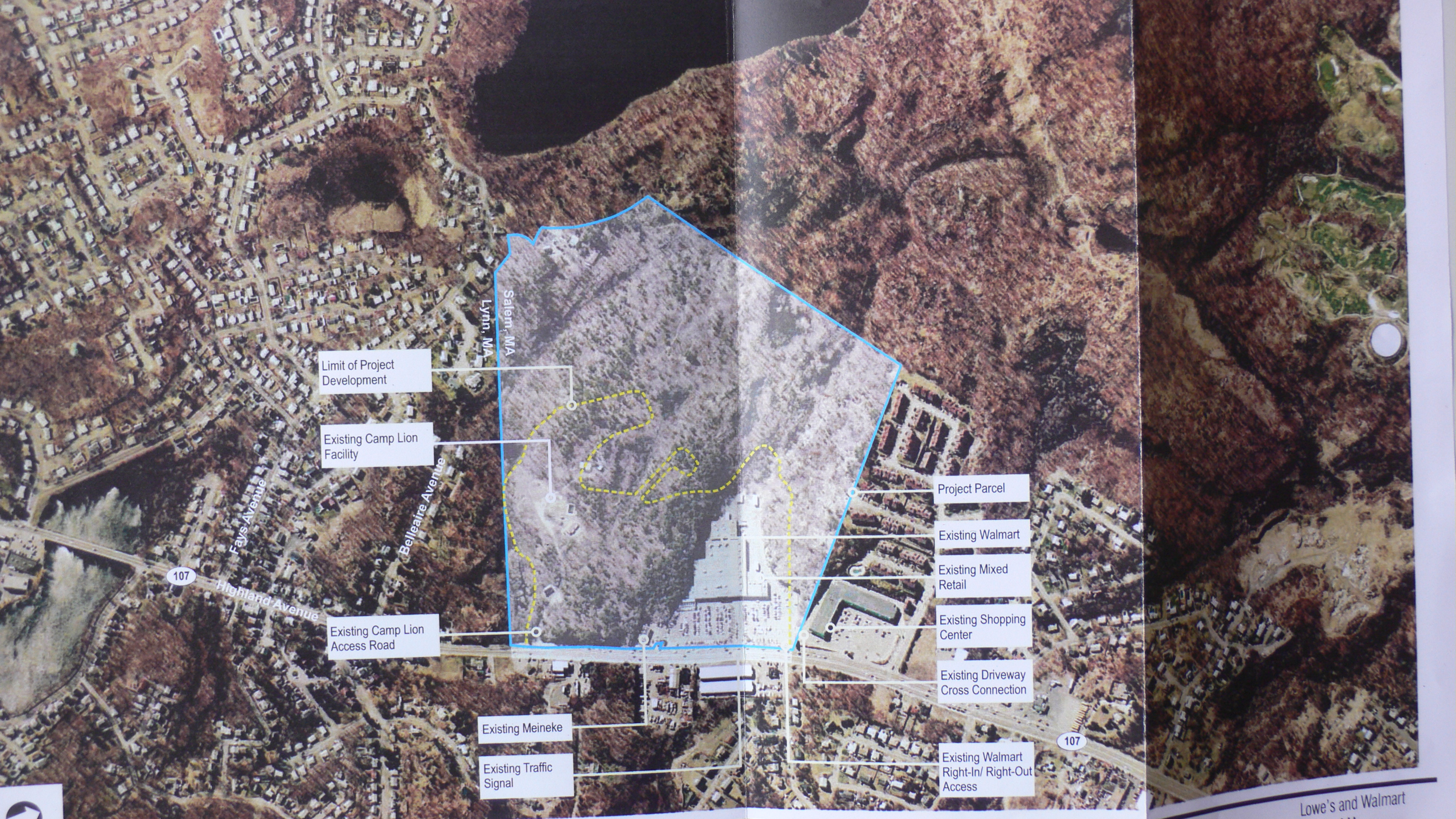
107

107

Fays Avenue

Highland Avenue

Belleaire Avenue



Limit of Project Development

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107

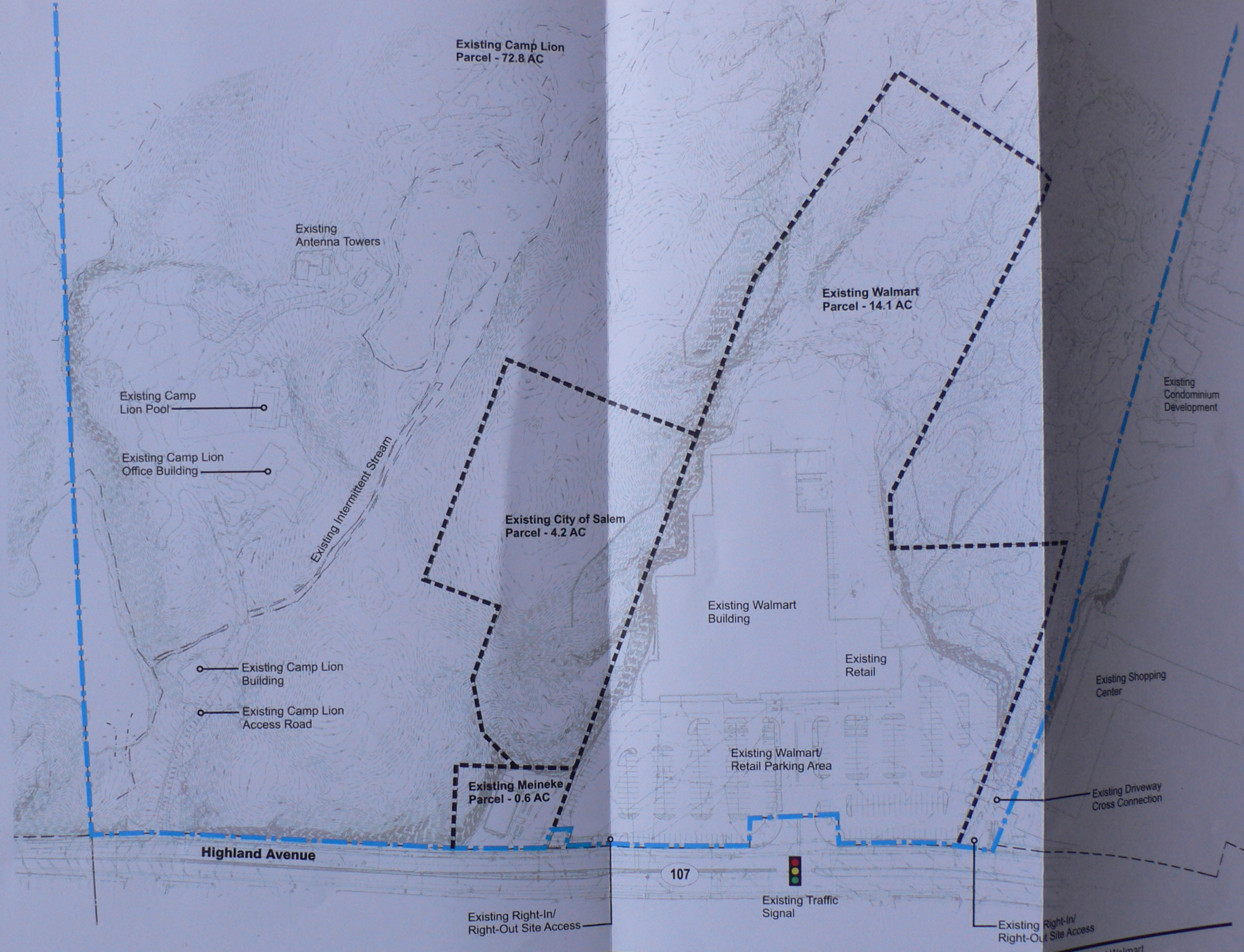
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Fays Avenue

Belleaire Avenue

Highland Avenue

Lynn, MA
Salem, MA



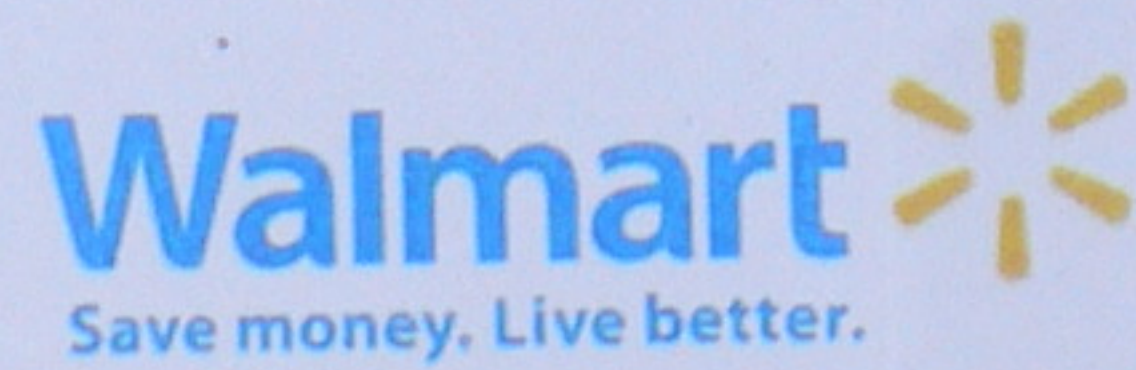
TETRA TECH RIZZO



Lowe's and Walmart
Salem, MA
Existing Conditions Plan
Figure 3

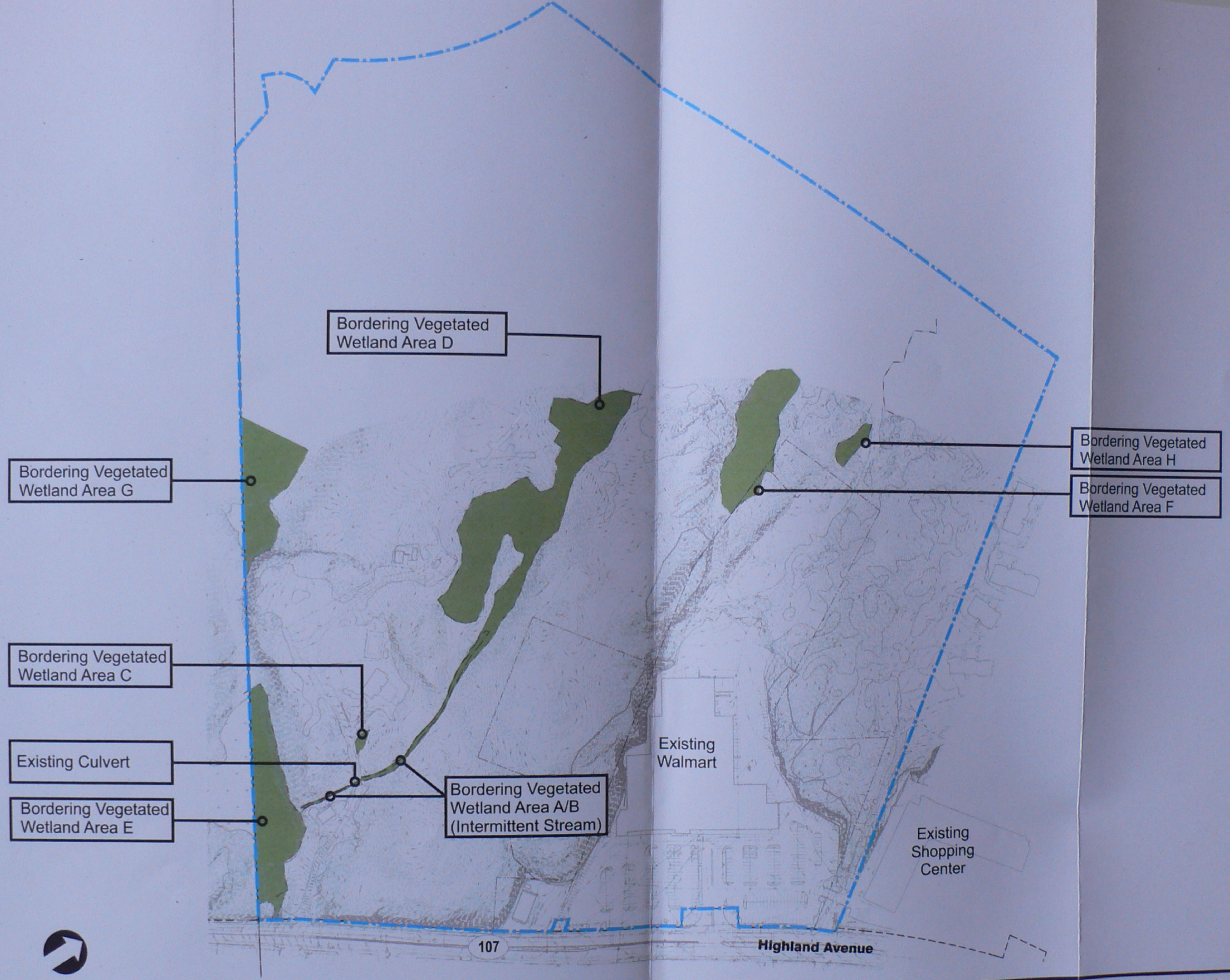


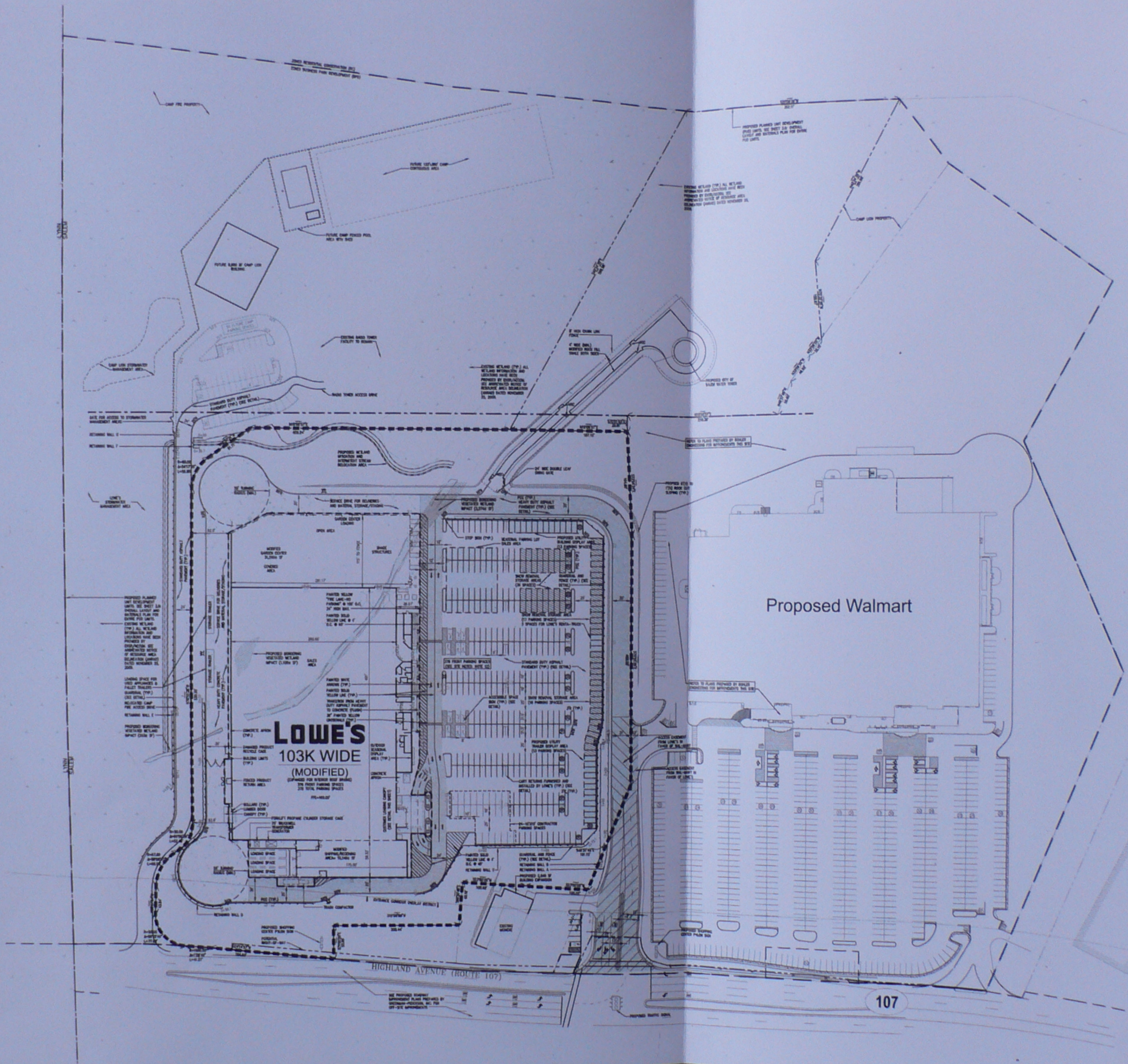
TE TETRA TECH RIZZO



Lowe's and Walmart
Salem, MA

Site Plan Rendering
Figure 4





Proposed Walmart

LOWE'S
103K WIDE
(MODIFIED)

HIGHLAND AVENUE (ROUTE 107)

107

Tt TETRA TECH RIZZO



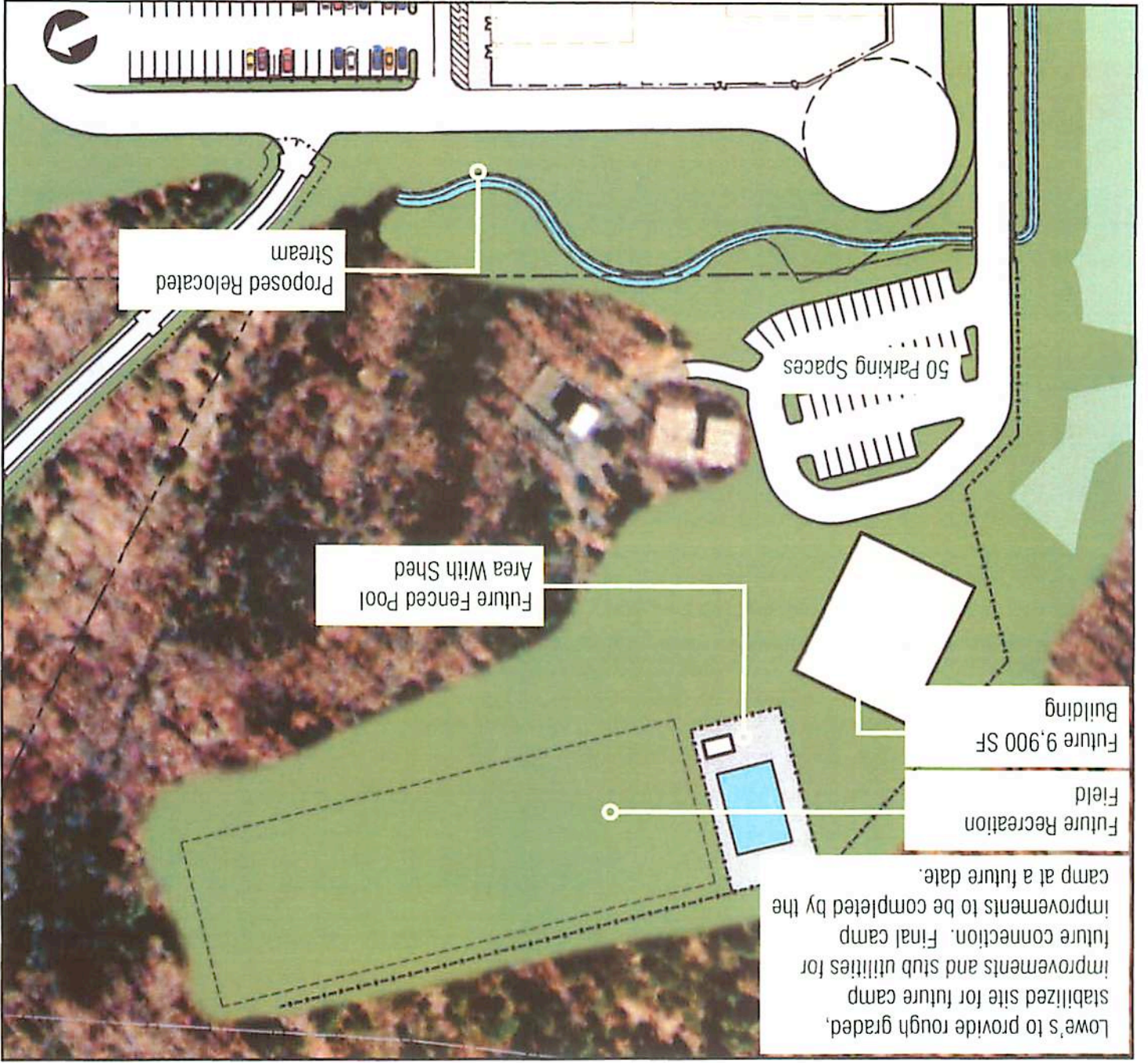
Walmart
Save money. Live better.

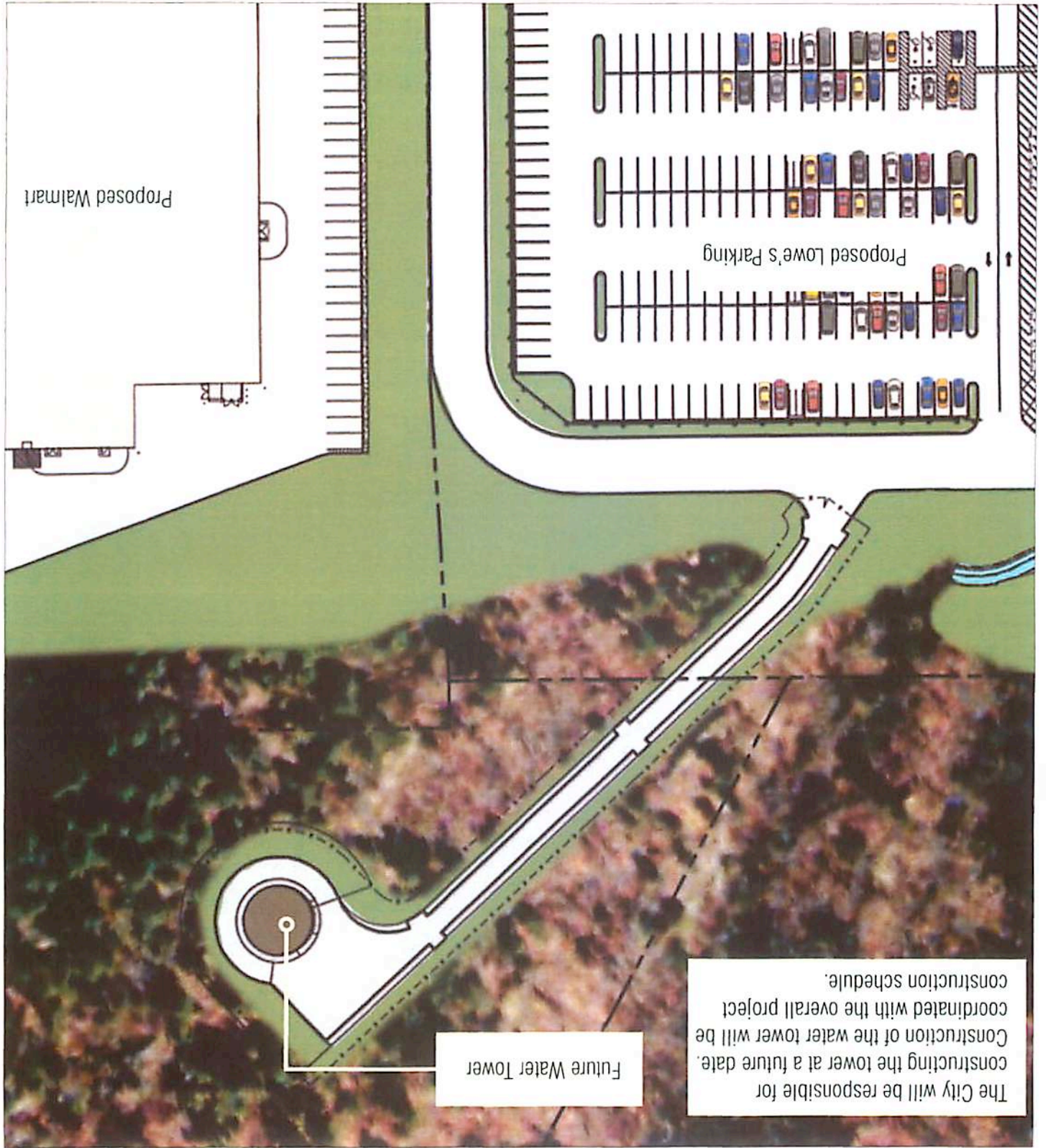
Lowe's and Walmart
Salem, MA
Layout and Materials Plan
Figure 6



Lowes and Walmart
Salem, MA

Proposed Camp Lion Facility
Figure 7





The City will be responsible for constructing the tower at a future date. Construction of the water tower will be coordinated with the overall project construction schedule.

Future Water Tower



TETRA TECH RIZZO



Lowe's and Walmart
Salem, MA
Wetland Impact Plan
Figure 9

NOTES

- 1) SEDIMENTATION CONTROLS SHALL BE INSTALLED AND MAINTAINED BETWEEN THE MITIGATION AREA AND THE UPLAND AREAS ON BOTH SIDES OF THE STREAM. CONTROLS SHALL CONSIST OF A ROW OF SILT FENCE.
- 2) THE MITIGATION AREA SHALL BE EXCAVATED TO A DEPTH OF 12 INCHES BELOW THE FINAL GRADE. A WETLAND SCIENTIST SHALL BE ON SITE TO VERIFY SUBGRADES AND MAKE FIELD ADJUSTMENTS AS NECESSARY.
- 3) MUCKY-PEAT MATERIAL EXCAVATED FROM IMPACT AREA SHALL BE ADDED OR IMPORTED LOAM SOILS APPROVED BY THE WETLAND SCIENTIST AND USED IN GRADING TO FINAL ELEVATIONS SHOWN ON PLANS.
- 4) SOILS CAN BE SPREAD BY EQUIPMENT, BUT SHOULD NOT BE HEAVILY COMPACTED.
- 5) MICRO-TOPOGRAPHY AND STREAM POOL SHOWN AS TYPICAL PROFILES (FIGURE 1A) SHALL BE CONSTRUCTED UNDER THE GUIDANCE OF A WETLAND SCIENTIST.
- 6) WOODY PLANT PLACEMENT SHOWN AS TYPICAL PLAN AND PROFILES (FIGURE 1B AND FIGURE 1C). ACTUAL LOCATIONS AND SPACING SHALL BE TAILORED TO EACH AREA IN ACCORDANCE WITH WETLAND SCIENTIST ON-SITE INSTRUCTION.
- 7) HOLES DUG FOR WOODY PLANT ROOTBALL PLACEMENT SHALL BE DUG TO AT LEAST 18" AND BACKFILLED WITH ORGANIC RICH SOILS.
- 8) FOLLOWING PLANTING OF WOODY SPECIES, THE MITIGATION AREA SHALL BE SEEDED WITH THE SPECIFIED WETLAND SEED MIX OR SIMILAR (TABLE 2), USING THE SPECIFIED APPLICATION RATES AND IN ACCORDANCE WITH ALL OTHER INSTRUCTIONS AS SPECIFIED BY THE NURSERY. SEED MAY BE MANUALLY BROADCAST OVER THE MITIGATION AREA OR SPRAYED AS A HYDROMULCH.
- 9) SIDE-SLOPES OF THE MITIGATION AREA SHALL BE PLANTED AS SHOWN WITH WOODY PLANT MATERIAL AND BROADCAST-SEEDED OR HYDRO-MULCHED WITH SPECIFIED SEED MIX OR SIMILAR (FIGURE 1B AND TABLE 3).
- 10) FOLLOWING BROADCAST-SEEDING, LOOSE, CLEAN, WEED-FREE STRAW SHALL BE DISPERSED EVENLY OVER THE GRADED AREAS. STRAW IS NOT REQUIRED FOR HYDRO-MULCHED AREAS.
- 11) EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE SITE ACHIEVES FINAL STABILIZATION.
- 12) COORDINATION SHALL BE MADE WITH THE WETLAND SCIENTIST PRIOR TO TREE CLEARING ACTIVITIES FOR THE MANAGEMENT OF TREES WITH HOLLOW CAVITIES AND OTHER WOODY DEBRIS FOR THE REPLICATION AREA.

Table 3. Native wildlife seed mix for side slopes.

Common Name**	Latin Name	Common Name**	Latin Name
Big Bluestem	<i>Andropogon gerardi</i>	New England Aster	<i>Aster novae-angliae</i>
Butterfly Milkweed	<i>Asclepias tuberosa</i>	New York Aster	<i>Aster novi-belgii</i>
Canada Wild Rye	<i>Elymus canadensis</i>	Nodding Bur-Marigold	<i>Bidens cernua</i>
Common Milkweed	<i>Asclepias syriaca</i>	Partridge Pea	<i>Chamaecrista fasciculata</i>
Creeping Red Fescue	<i>Festuca rubra</i>	Pennsylvania Smartweed	<i>Polygonum pensylvanicum</i>
Flat-top Aster	<i>Aster umbellatus</i>	Showy Tick-Trefoil	<i>Desmodium canadense</i>
Fox Sedge	<i>Carex vulpinoidea</i>	Switchgrass	<i>Panicum virgatum</i>
Fringed Bromegrass	<i>Bromus ciliatus</i>	Wild Blue Lupine	<i>Lupinus perennis</i>
Golden Alexanders	<i>Zizia aurea</i>	Wild Senna	<i>Cassia hebecarpa</i>
Indian Grass	<i>Sorghastrum nutans</i>	Zigzag Aster	<i>Aster prenanthoides</i>
Little Bluestem	<i>Schizachyrium scoparium</i>		

**Seed shall be broadcast over side-slopes except where clustered shrub plantings are located. A seed mix containing some or all of the listed species will be acceptable. An application rate of 25 lbs per acre is recommended. The Conservation Wildlife seed mix and/or the Wildflower seed mix sold by New England Wetland Plants will provide a representation of this species list. Substitutions shown on the Massachusetts Invasive Species List (<http://www.newfs.org/conservation/invlst.htm>) are not acceptable.

Table 1. Tree and shrub planting schedule.

Common Name	Latin Name	Mature Size (Feet)	Spacing (Feet)	Total Number of Plants	Size	Hydrology ^{1,2}
Int. Stream (BWW) Irregularly to Seasonally Inundated or Saturated						
Highbush Blueberry (hb)	<i>Vaccinium corymbosum</i>	6-12	6 or groups	165	12-18", 1-gallon container or similar	Seasonally inundated or saturated (13-25% of the growing season)
Arrowwood (aw)	<i>Viburnum dentatum</i>	6-12	6 or groups	115	12-18", 1-gallon container or similar	Seasonally inundated or saturated (13-25% of the growing season)
Winterberry (wb)	<i>Ilex verticillata</i>	10-12*	6	65	12-18", 1-gallon container or similar	Irregularly to seasonally inundated or saturated (up to 25% of the growing season)
Elderberry (eb)	<i>Sambucus canadensis</i>	10-12*	6	46	12-18", 1-gallon container or similar	Irregularly to seasonally inundated or saturated (up to 25% of the growing season)
Red Maple (rm)	<i>Acer rubrum</i>	75-100*	10	125	3-4", 3-gallon container or similar	Irregularly to seasonally inundated or saturated (up to 25% of the growing season)
Gray Birch (gb)	<i>Betula populifolia</i>	35-50*	20	30	3-4", 3-gallon container or similar	Irregularly to seasonally inundated or saturated (up to 25% of the growing season)
Swamp Azalea (sa)	<i>Rhododendron viscosum</i>	10-12*	6	60	12-18", 1-gallon container or similar	Seasonally to regularly inundated or saturated (13-75% of the growing season)
Sweet Pepperbush (sp)	<i>Clethra alnifolia</i>	9-10	6 or groups	345	12-18", 1-gallon container or similar	Seasonally to regularly inundated or saturated (13-75% of the growing season)
				TOTAL: 951		
Wetland Transition Zone Regions						
Witch Hazel (wh)	<i>Hamamelis virginiana</i>	8-10*	8	62	12-18", 1-gallon container or similar	Upland Slope/Transition Zone
Swamp White Oak (wo)	<i>Quercus bicolor</i>	75-100*	15	30	3-4", 3-gallon container or similar	Upland Slope/Transition Zone
Sweet Pepperbush (sp)	<i>Clethra alnifolia</i>	9-10	6 or groups	240	12-18", 1-gallon container or similar	Wetland Edge/Transition Zone
				TOTAL: 332		

^{1,2} Information sources include: Symonds, G. W. 1963. The shrub identification book. Thunhorst, G.A. 1993. Wetland planting guide for the Northeastern United States.

Figure 1A. Typical cross-section showing micro-topography of proposed intermittent stream.

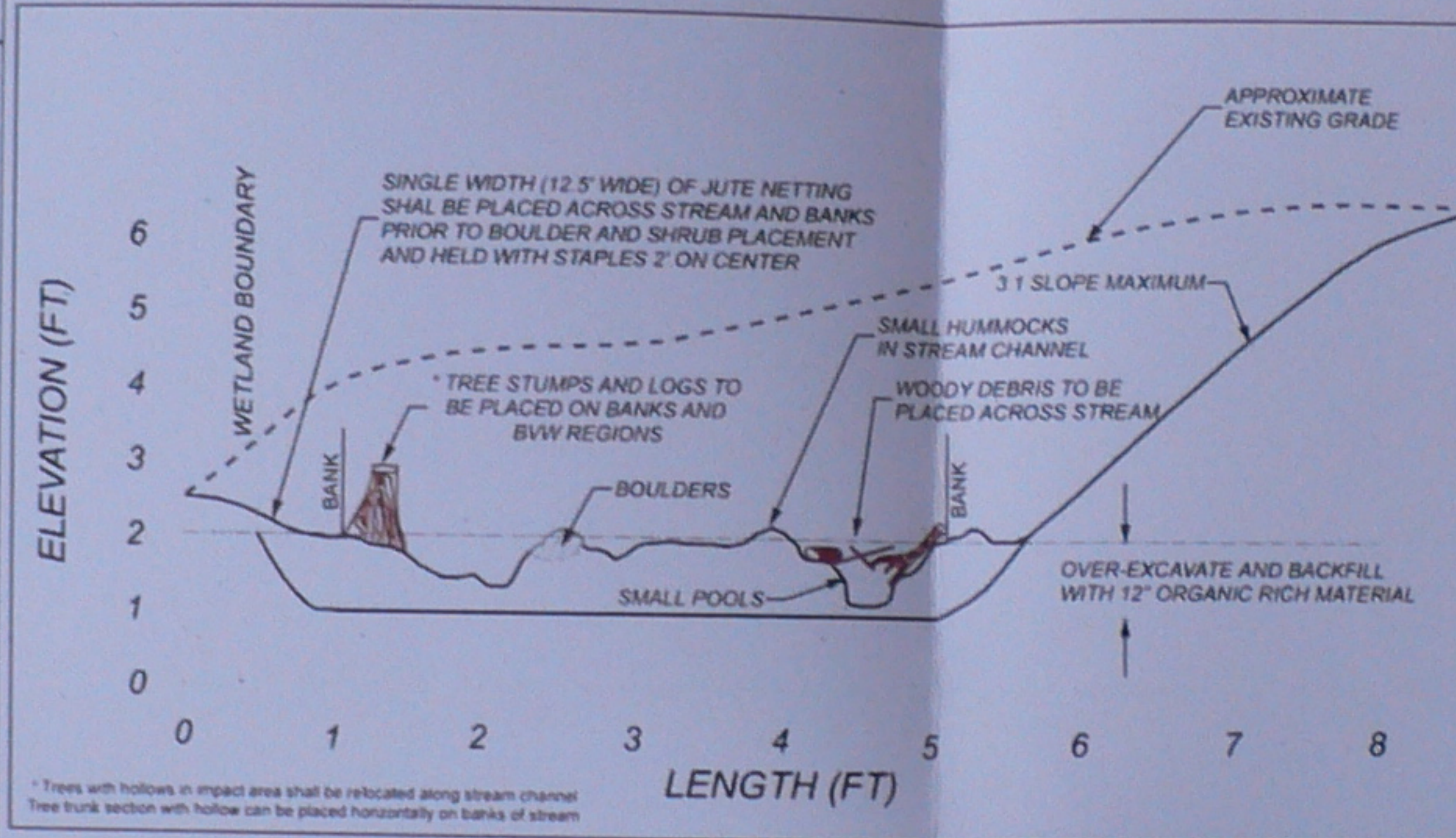


Figure 1B. Typical detail showing overview or section of intermittent stream with micropools and sinuosity.

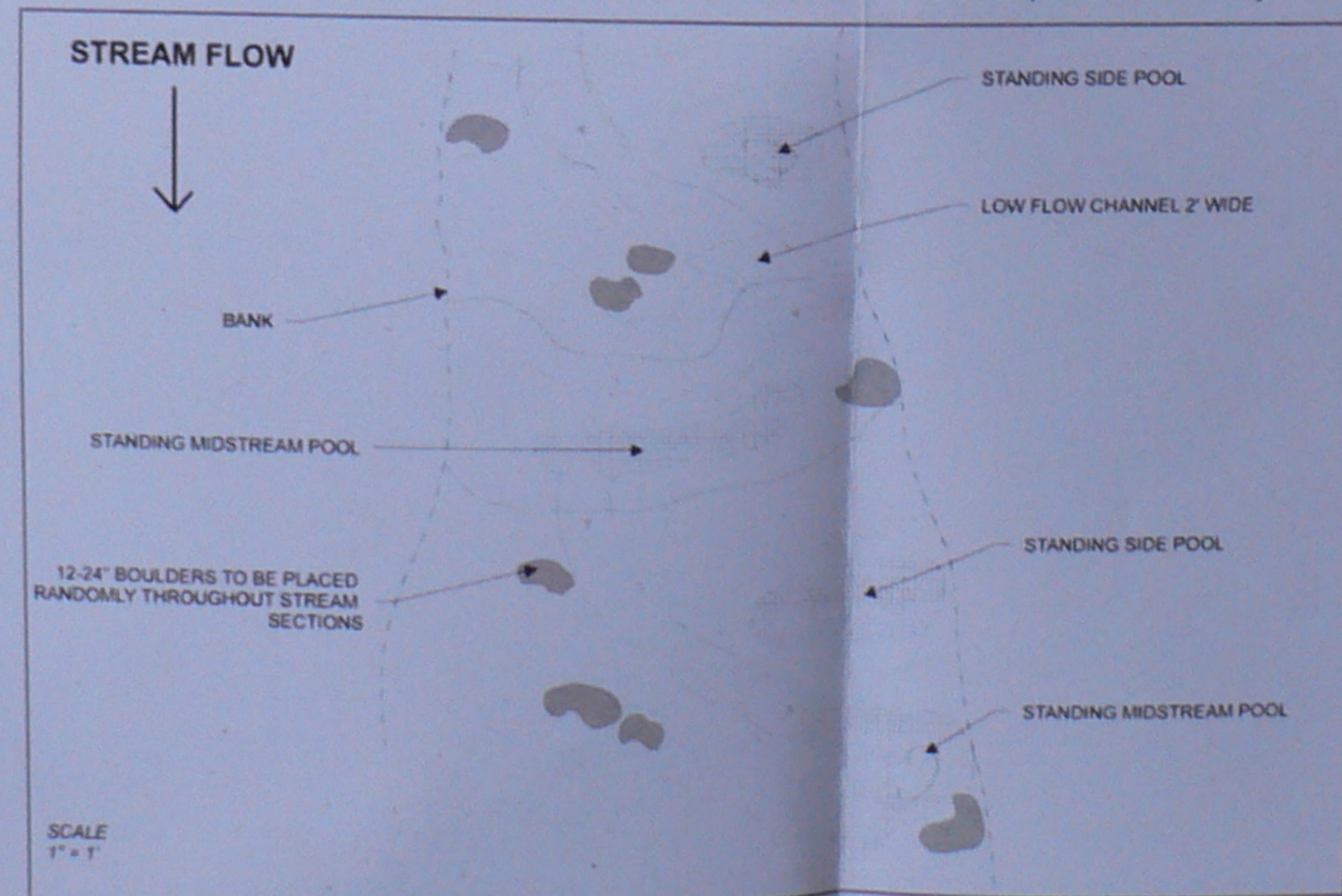
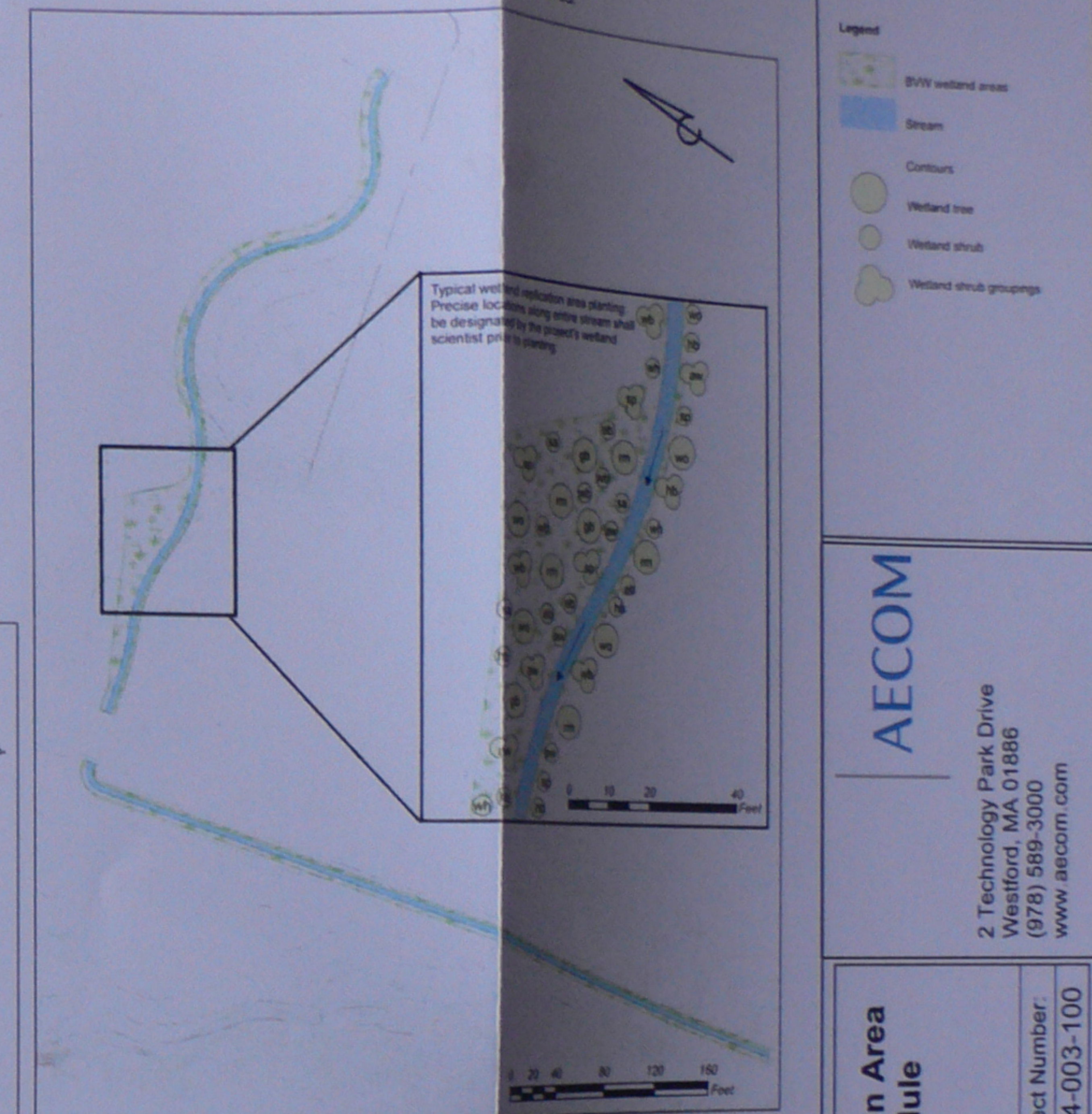


Figure 1C. Proposed location and extent of wetland mitigation area.



Legend

- BWW wetland areas
- Stream
- Contours
- Wetland tree
- Wetland shrub
- Wetland shrub groupings

AECOM

2 Technology Park Drive
Westford, MA 01886
(978) 589-3000
www.aecom.com

Proposed Wetland Mitigation Area Planting Plan and Schedule

Project Number: 10544-003-100
Date: 05/09
Approx. Scale: AS NOTED

Figure Number: **Figure 10**

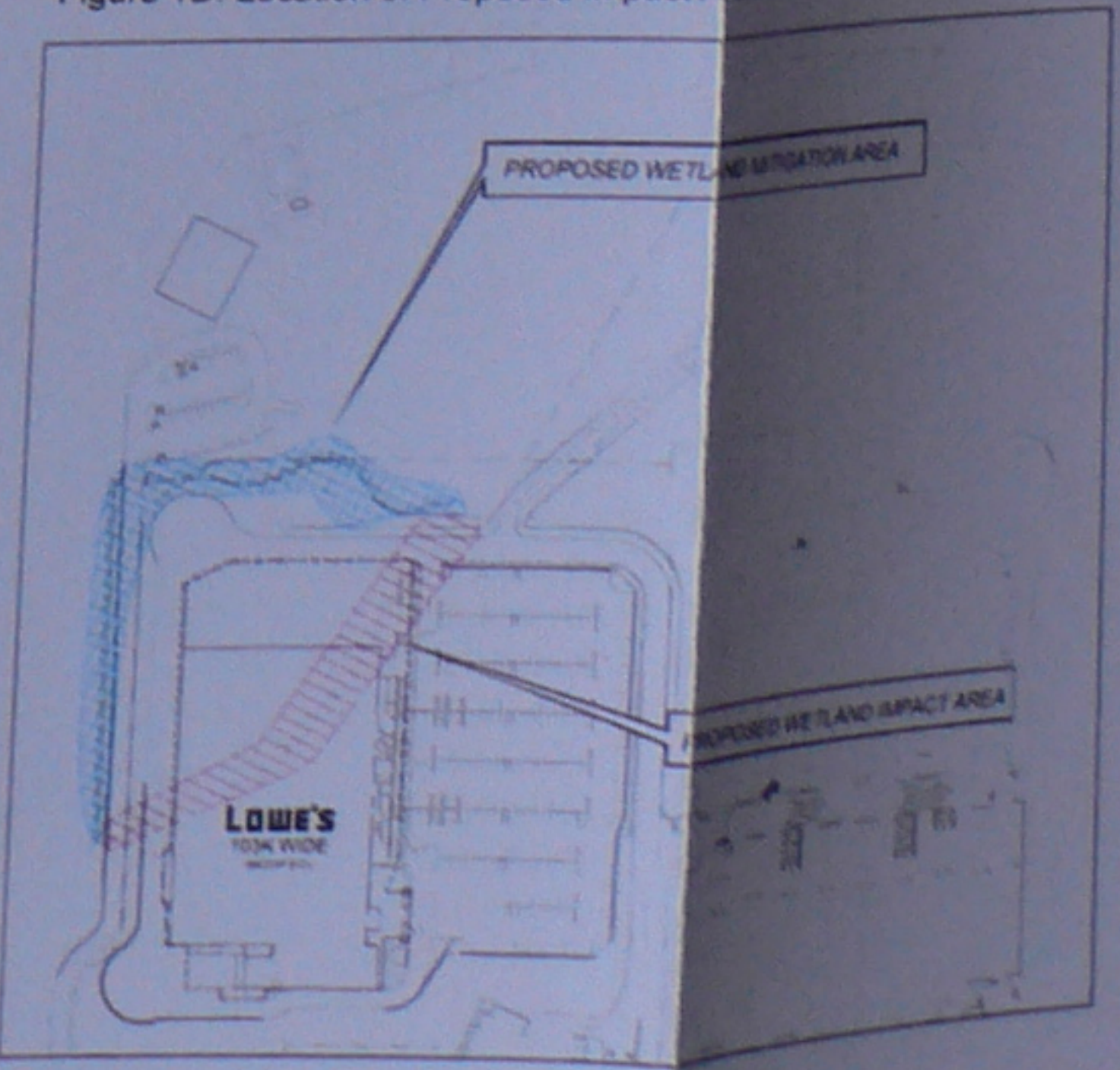
Designed By: TEG
Drafted By: TRD

Table 2. Herbaceous species to be included in wetland seed mix.

Common Name**	Latin Name	Common Name	Latin Name
Fox Sedge	<i>Carex vulpinoidea</i>	Sensitive Fern	<i>Onoclea sensibilis</i>
Bearded Sedge	<i>Carex comosa</i>	Blue Flag Iris	<i>Iris versicolor</i>
Lurid Sedge	<i>Carex lurida</i>	Woolgrass	<i>Scirpus cyperinus</i>
Soft Rush	<i>Juncus effusus</i>	Spotted Joe Pye weed	<i>Eupatorium maculatum</i>
Grass-leaved Goldenrod	<i>Euthamia graminifolia</i>	Swamp Milkweed	<i>Asclepias incarnata</i>
Boneset	<i>Eupatorium perfoliatum</i>	Monkey Flower	<i>Mimulus ringens</i>
Hop Sedge	<i>Carex lupulina</i>	Soft-Stem Bulrush	<i>Scirpus validus</i>
Blue Vervain	<i>Verberna hastata</i>	Hardstem Bulrush	<i>Scirpus acutus</i>
Nodding Sedge	<i>Carex gynandra</i>	Nodding Bur Marigold	<i>Bidens cernua</i>
Green Bulrush	<i>Scirpus atrovirens</i>	Flat-top Aster	<i>Aster umbellatus</i>

**Seed shall be broadcast over entire wetland mitigation area. An application rate of 18 pounds per acre is recommended for open areas, and 8-12 pounds per acre in areas planted with shrubs. A seed mix containing some or all of the listed species will be acceptable. The New England Wetland (Wetland Seed Mix) sold by New England Wetland Plants, Inc. contains each of these species. Substitutions shown on the Massachusetts Invasive Species List (<http://www.newfs.org/conservation/invlst.htm>) are not acceptable.

Figure 1D. Location of Proposed Impact Area and Proposed Mitigation Area.



CAMP LION FACILITY

CAMP DETENTION POND

LOWE'S DETENTION POND

PROPOSED INTERMITTENT STREAM RELOCATION

EXISTING INTERMITTENT STREAM

LOWE'S
103K WIDE
(MODIFIED)

Walmart

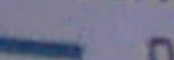
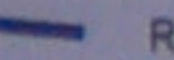

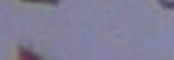
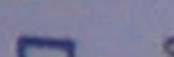

Highland Avenue

107

CONNECT TO CITY OF SALEM MUNICIPAL SYSTEM

CONNECT TO CITY OF SALEM MUNICIPAL SYSTEM

LEGEND:

-  DRAIN LINE
-  ROOF DRAIN
-  MANHOLE
-  CATCH BASIN
-  RIP RAP
-  STORMWATER QUALITY UNIT



Tt TETRA TECH RIZZO



Lowe's and Walmart
Salem, MA

Drainage Plan
Figure 11

Proposed Camp Lion Facility

Proposed City of Salem Water Tower

- LEGEND:
- SEWER LINE
 - WATER LINE
 - GAS LINE
 - TELEPHONE LINE
 - SEWER MANHOLE
 - HYDRANT
 - GATE VALVE

LOWE'S
103K WIDE
(MODIFIED)

Walmart

Highland Avenue



TETRA TECH RIZZO



Lowe's and Walmart
Salem, MA

Utility Plan
Figure 12

107

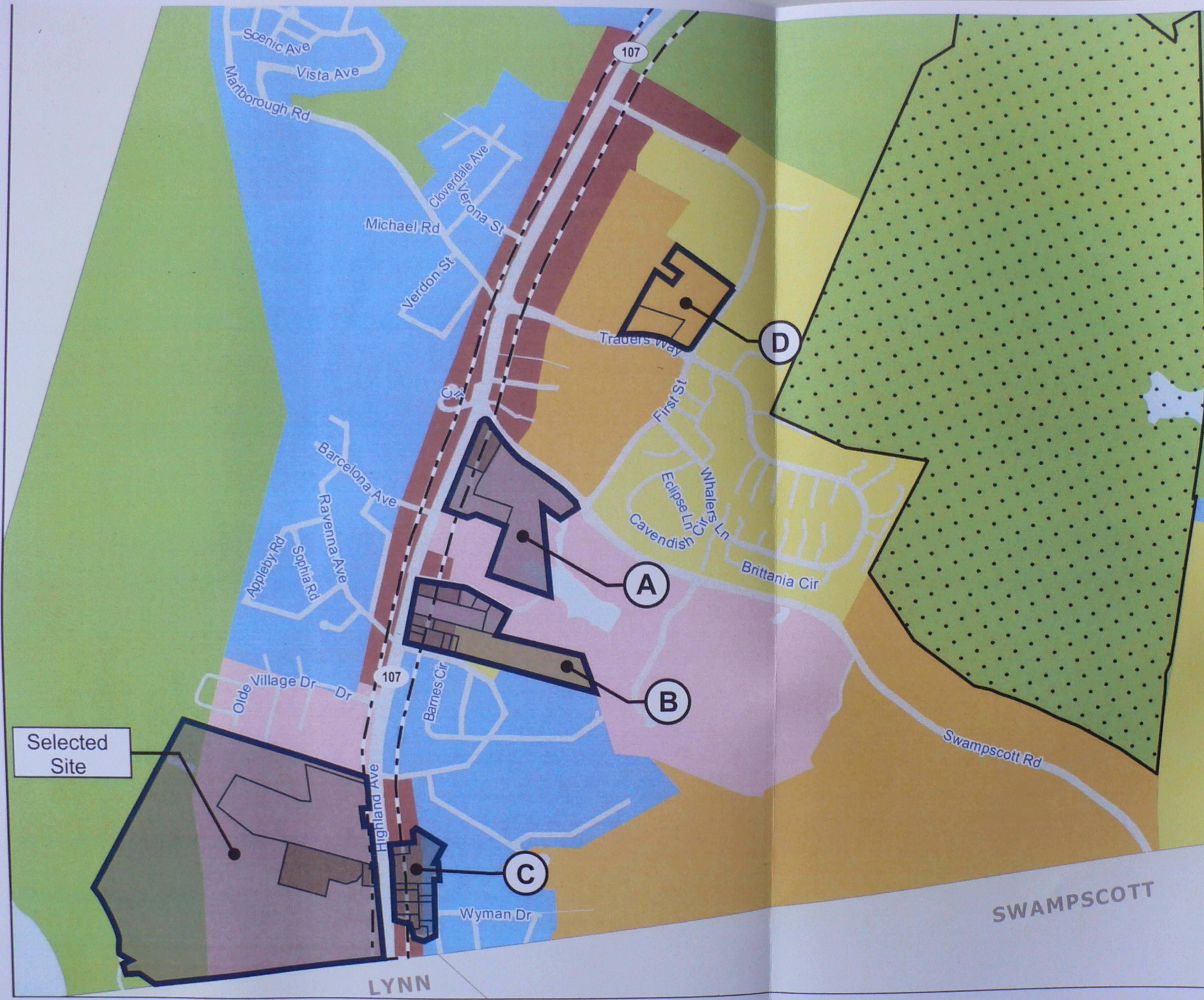


Lowe's and Walmart
Salem, MA

Preferred Alternative
Figure 13

Tt TETRA TECH RIZZO





Legend

- Zoning Designation**
- Residential Conservation (RC)
 - Residential One Family (R1)
 - Residential Two Family (R2)
 - Residential Multi-Family (R3)
 - Business Neighborhood (B1)
 - Business Highway (B2)
 - Wholesale and Automotive (B4)
 - Central Development (B5)
 - Industrial (I)
 - Business Park Development (BPD)
 - North River Canal Corridor (NRCC)
 - Neighborhood Mixed Use District
 - Entrance Corridor Overlay
 - Conservation Overlay District
 - Total Site boundary
 - Individual Parcels

Lowe's Home Centers, Inc.
 Salem, Massachusetts
 City of Salem Zoning
 Figure 14

TETRA TECH RIZZO



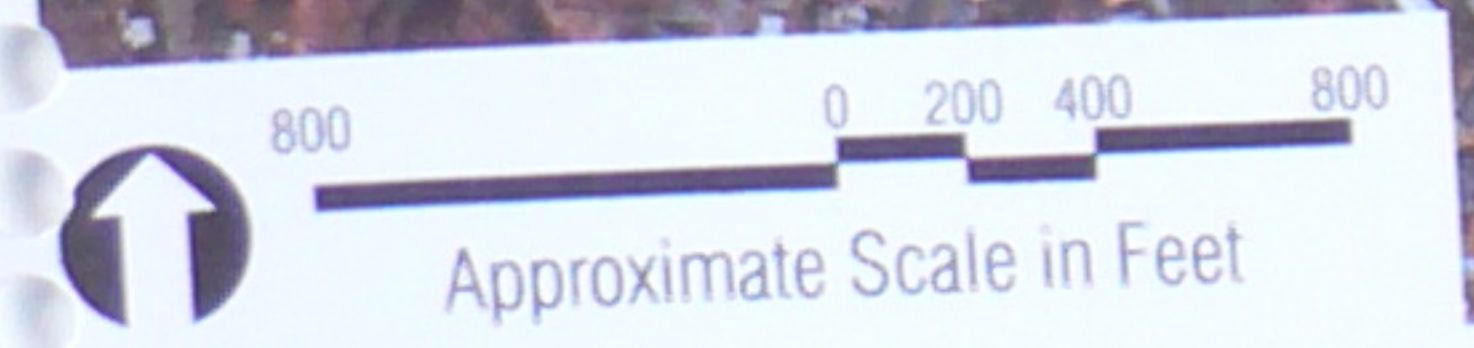


Selected Site

Existing WAL*MART

Legend:

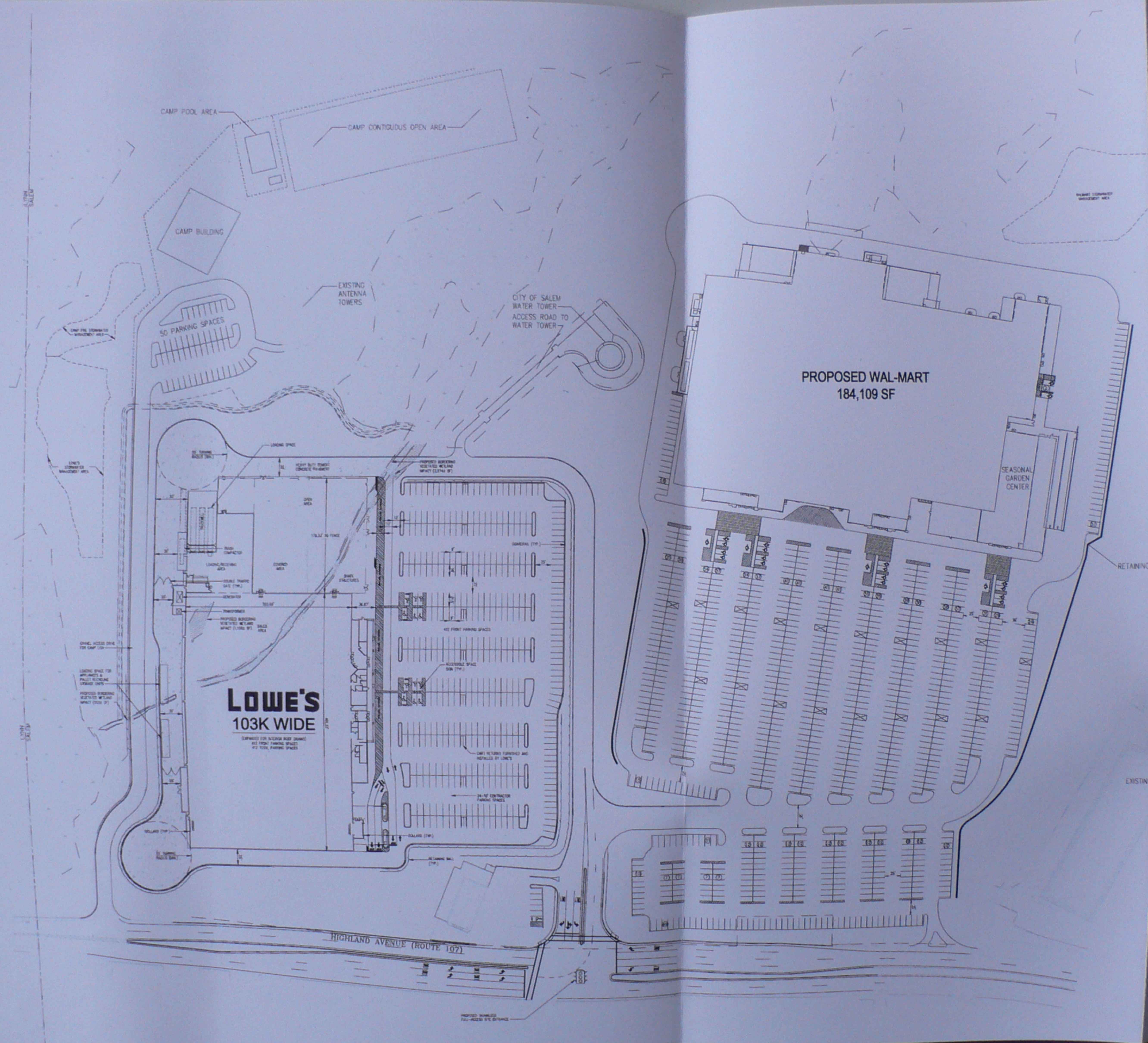
- Total Site boundary
- Individual Parcels



Lowe's and Walmart
 Salem, MA
 Alternative Site Considerations
 Figure 15

TETRA TECH RIZZO

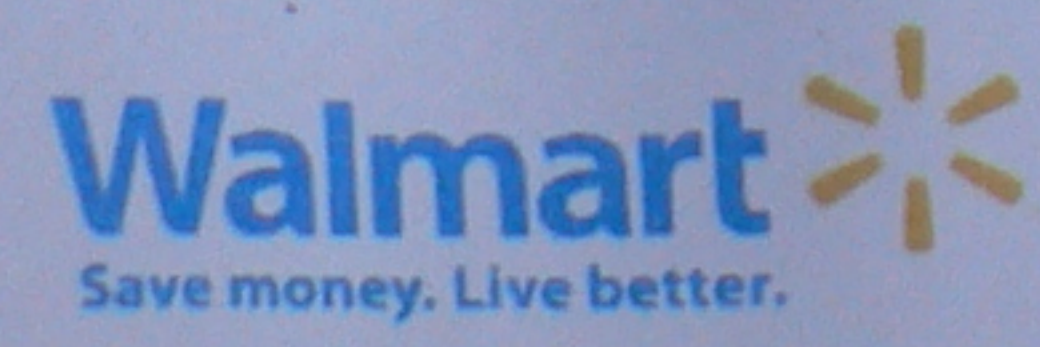


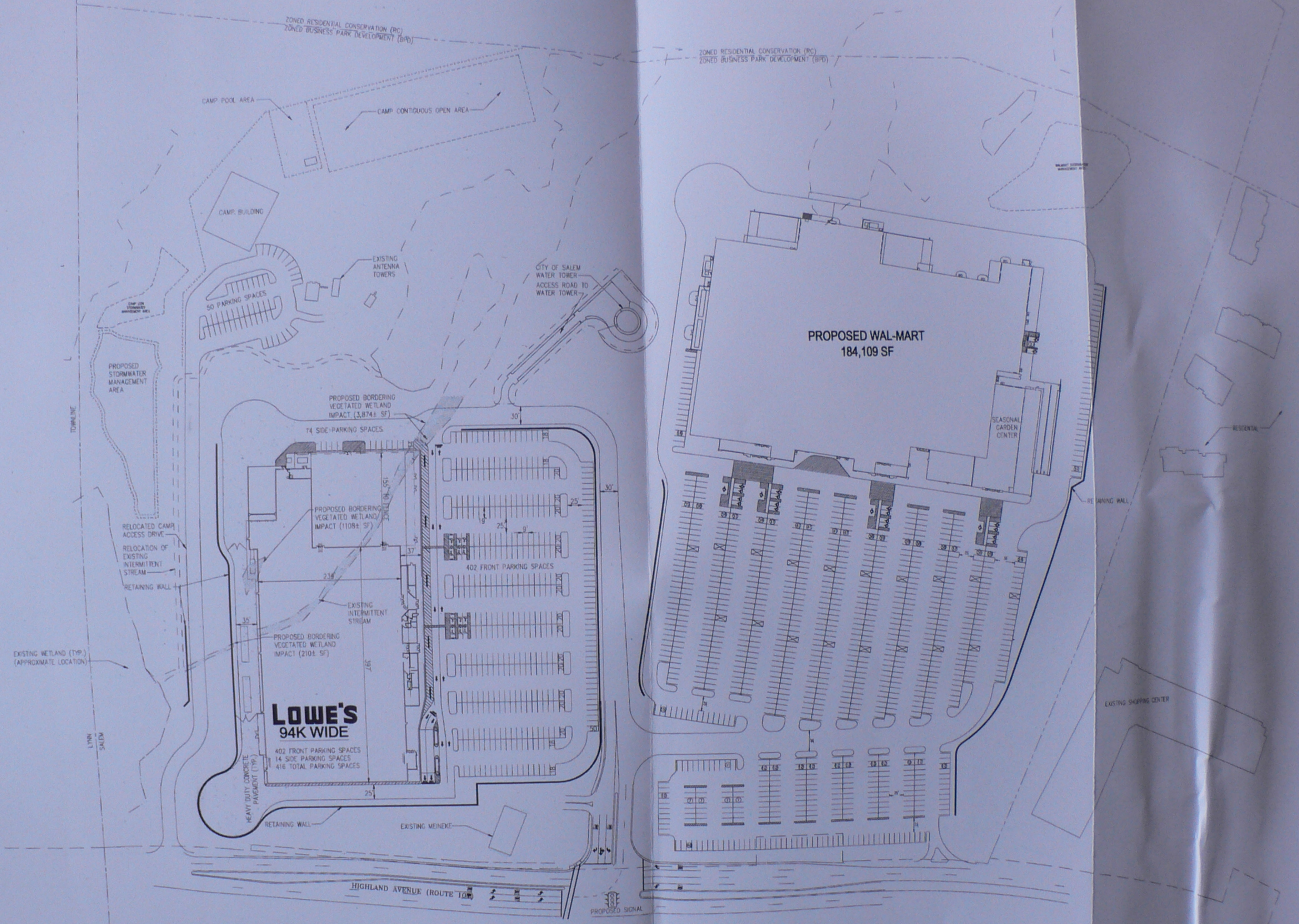


Lowe's and Walmart
 Salem, MA
 Prototypical 103K Alternative
 Figure 16



Tt TETRA TECH RIZZO



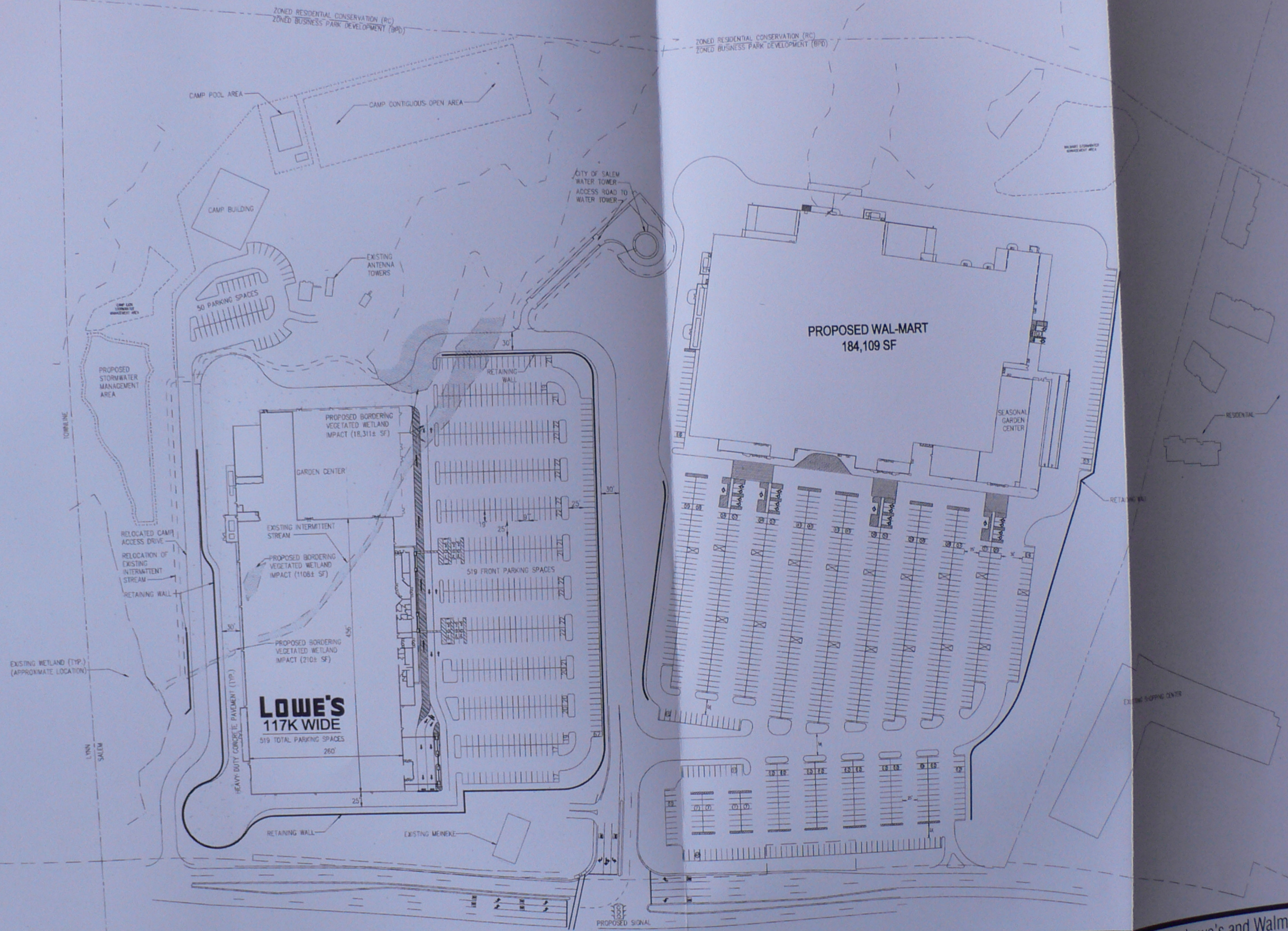


TE TETRA TECH RIZZO



Walmart
Save money. Live better.

Lowe's and Walmart
Salem, MA
Smaller Prototype Alternative
Figure 17



Lowe's and Walmart
Salem, MA
Larger Prototype Alternative
Figure 18



Tt TETRA TECH RIZZO

