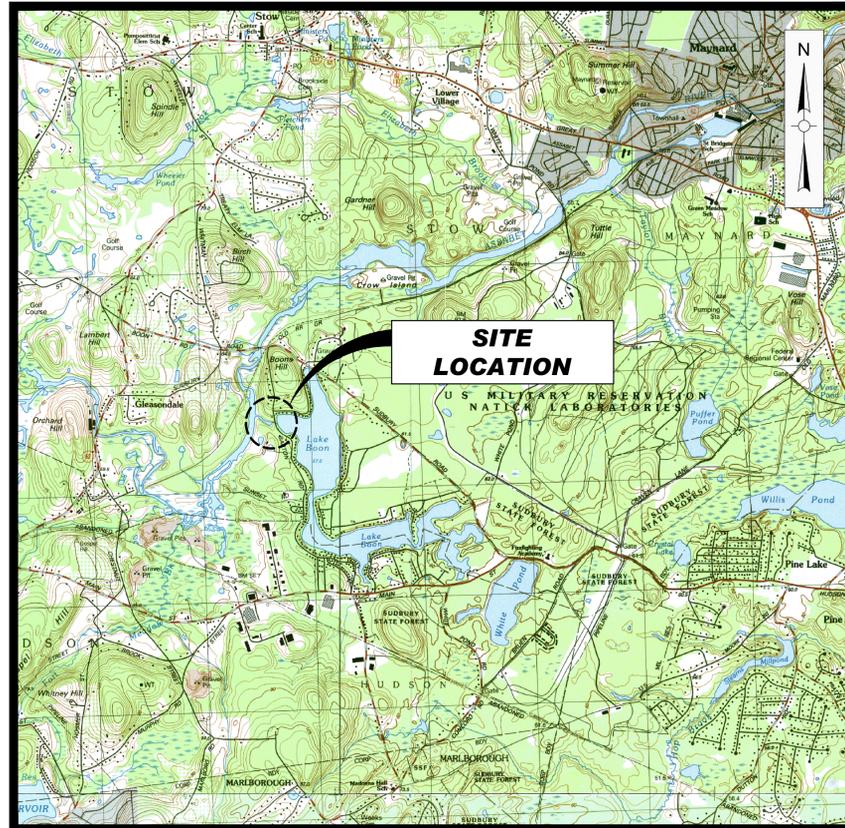


# TOWN OF STOW, MASSACHUSETTS

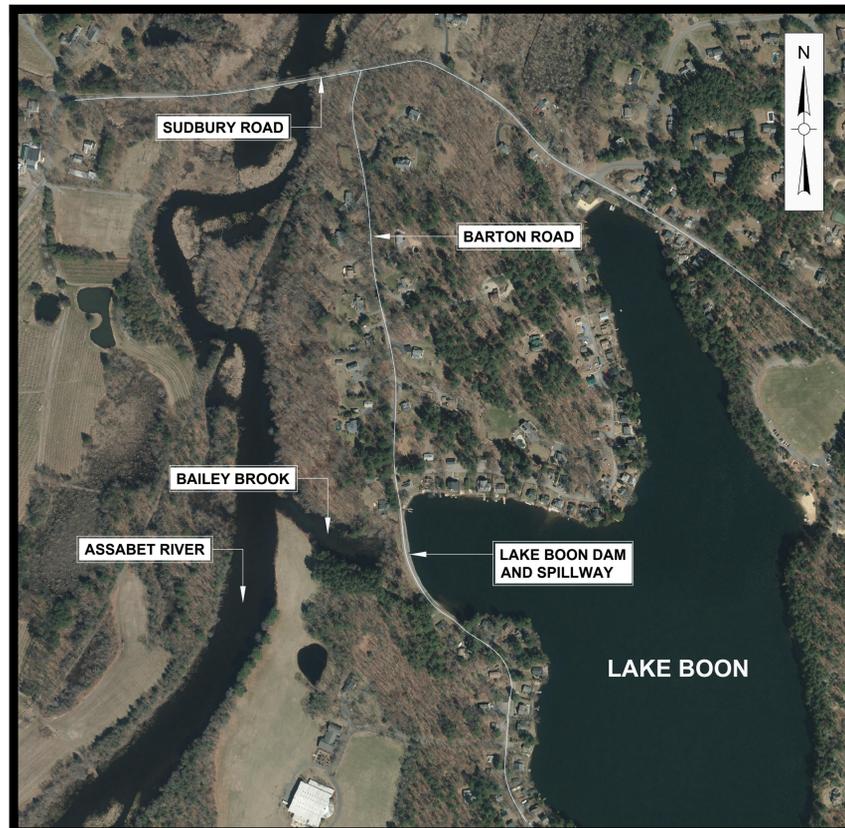


## LAKE BOON DAM REHABILITATION PROJECT

### JANUARY 2023 SPECIAL SELECT BOARD MEETING



**LOCUS**  
SCALE: 1" = 3000'



**AERIAL**  
SCALE: 1" = 400'

**NATIONAL DAM I.D. NUMBER:**  
MA00137

**DAM OWNER:**  
TOWN OF STOW, MASSACHUSETTS

**REGULATORY AUTHORITY:**  
MA DCR, OFFICE OF DAM SAFETY

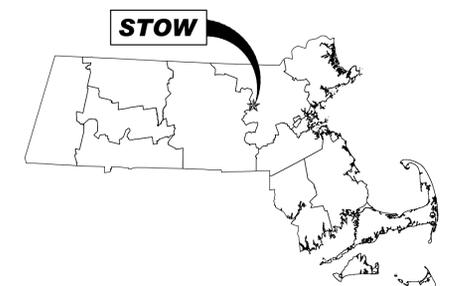
**STATE SIZE CLASSIFICATION:**  
LARGE

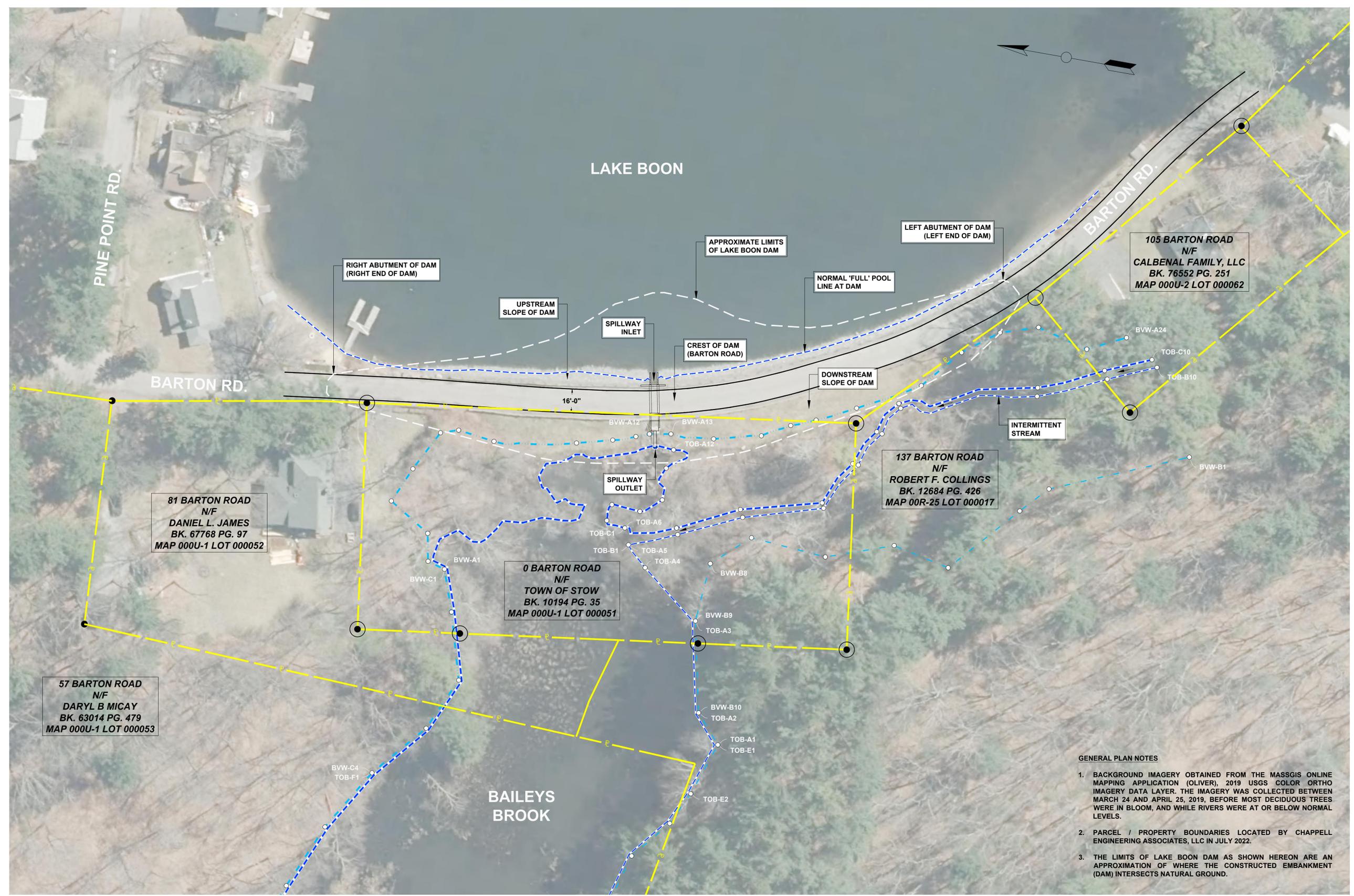
**STATE HAZARD POTENTIAL CLASSIFICATION:**  
SIGNIFICANT

**PROJECT DESIGN ENGINEER:**  
WESTON & SAMPSON ENGINEERS, INC.



Weston & Sampson Engineers, Inc.  
55 Walkers Brook Drive, Reading, MA 01867





**81 BARTON ROAD  
 N/F  
 DANIEL L. JAMES  
 BK. 67768 PG. 97  
 MAP 000U-1 LOT 000052**

**57 BARTON ROAD  
 N/F  
 DARYL B MICAY  
 BK. 63014 PG. 479  
 MAP 000U-1 LOT 000053**

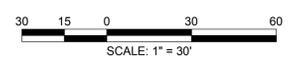
**0 BARTON ROAD  
 N/F  
 TOWN OF STOW  
 BK. 10194 PG. 35  
 MAP 000U-1 LOT 000051**

**137 BARTON ROAD  
 N/F  
 ROBERT F. COLLINGS  
 BK. 12684 PG. 426  
 MAP 00R-25 LOT 000017**

**105 BARTON ROAD  
 N/F  
 CALBENAL FAMILY, LLC  
 BK. 76552 PG. 251  
 MAP 000U-2 LOT 000062**

- GENERAL PLAN NOTES**
- BACKGROUND IMAGERY OBTAINED FROM THE MASSGIS ONLINE MAPPING APPLICATION (OLIVER), 2019 USGS COLOR ORTHO IMAGERY DATA LAYER. THE IMAGERY WAS COLLECTED BETWEEN MARCH 24 AND APRIL 25, 2019, BEFORE MOST DECIDUOUS TREES WERE IN BLOOM, AND WHILE RIVERS WERE AT OR BELOW NORMAL LEVELS.
  - PARCEL / PROPERTY BOUNDARIES LOCATED BY CHAPPELL ENGINEERING ASSOCIATES, LLC IN JULY 2022.
  - THE LIMITS OF LAKE BOON DAM AS SHOWN HEREON ARE AN APPROXIMATION OF WHERE THE CONSTRUCTED EMBANKMENT (DAM) INTERSECTS NATURAL GROUND.

**EXISTING SITE OVERVIEW**

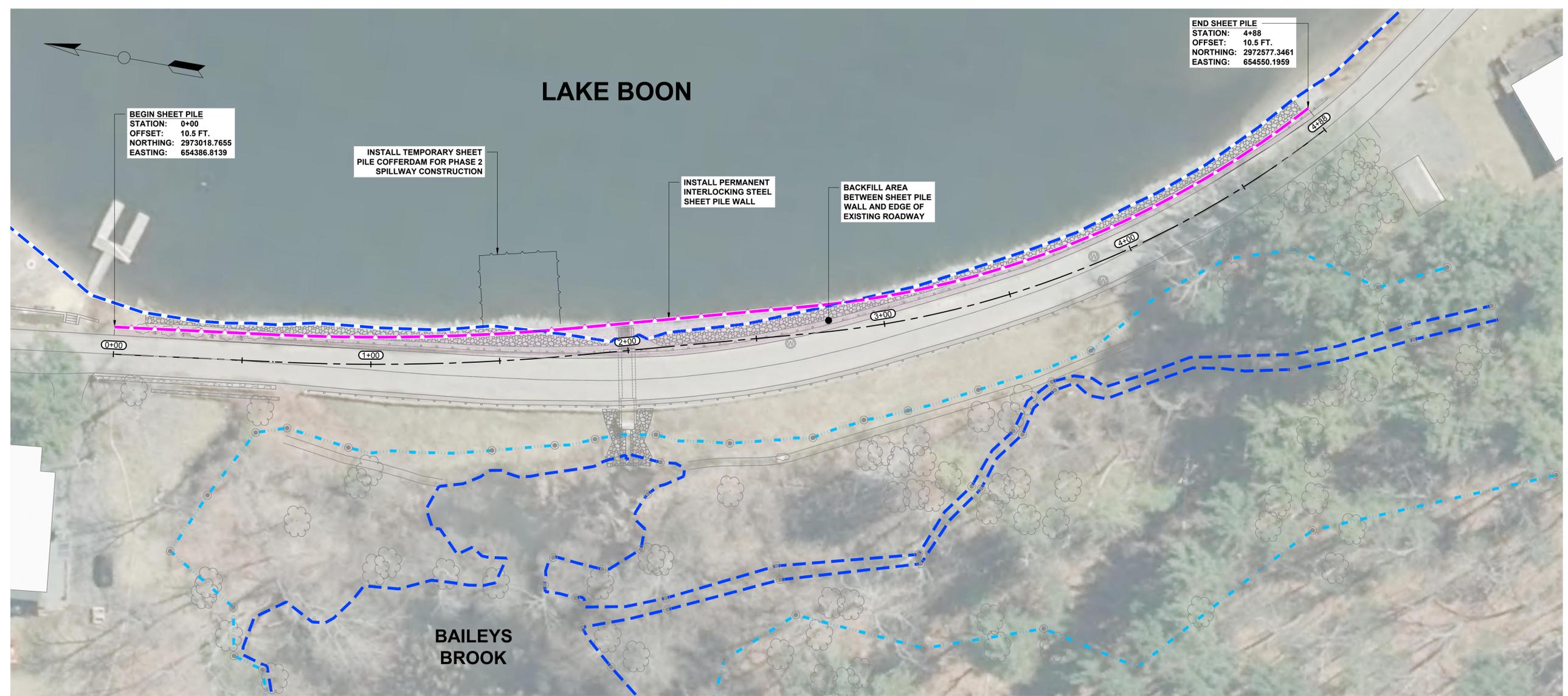


**PRELIMINARY  
 NOT FOR CONSTRUCTION**

Drawing Title:  
**EXISTING  
 SITE  
 OVERVIEW**

Sheet Number:  
**1 of 5**





**BEGIN SHEET PILE**  
 STATION: 0+00  
 OFFSET: 10.5 FT.  
 NORTHING: 2973018.7655  
 EASTING: 654386.8139

**INSTALL TEMPORARY SHEET PILE COFFERDAM FOR PHASE 2 SPILLWAY CONSTRUCTION**

**INSTALL PERMANENT INTERLOCKING STEEL SHEET PILE WALL**

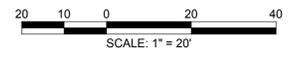
**BACKFILL AREA BETWEEN SHEET PILE WALL AND EDGE OF EXISTING ROADWAY**

**END SHEET PILE**  
 STATION: 4+88  
 OFFSET: 10.5 FT.  
 NORTHING: 2972577.3461  
 EASTING: 654550.1959

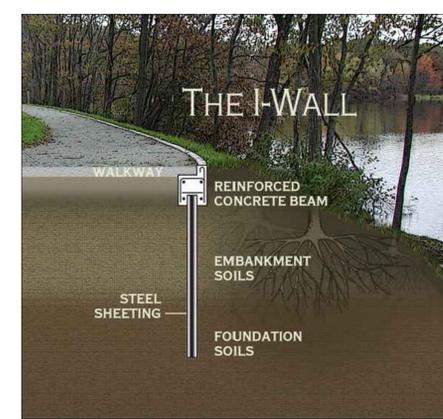
**PHASE 1 CONSTRUCTION OVERVIEW:**

1. INSTALL PERMANENT STEEL SHEET PILE WALL.
2. INSTALL TEMPORARY SHEET PILE COFFERDAM AT PROPOSED SPILLWAY LOCATION.
3. BACKFILL GAP BETWEEN SHEET PILE AND EXISTING EDGE OF ROAD.

**PHASE 1 PLAN**



**PRELIMINARY NOT FOR CONSTRUCTION**



**RASTER IMAGE OF TYPICAL PERMANENT STEEL PILING APPLICATION FOR DAM IMPROVEMENTS**



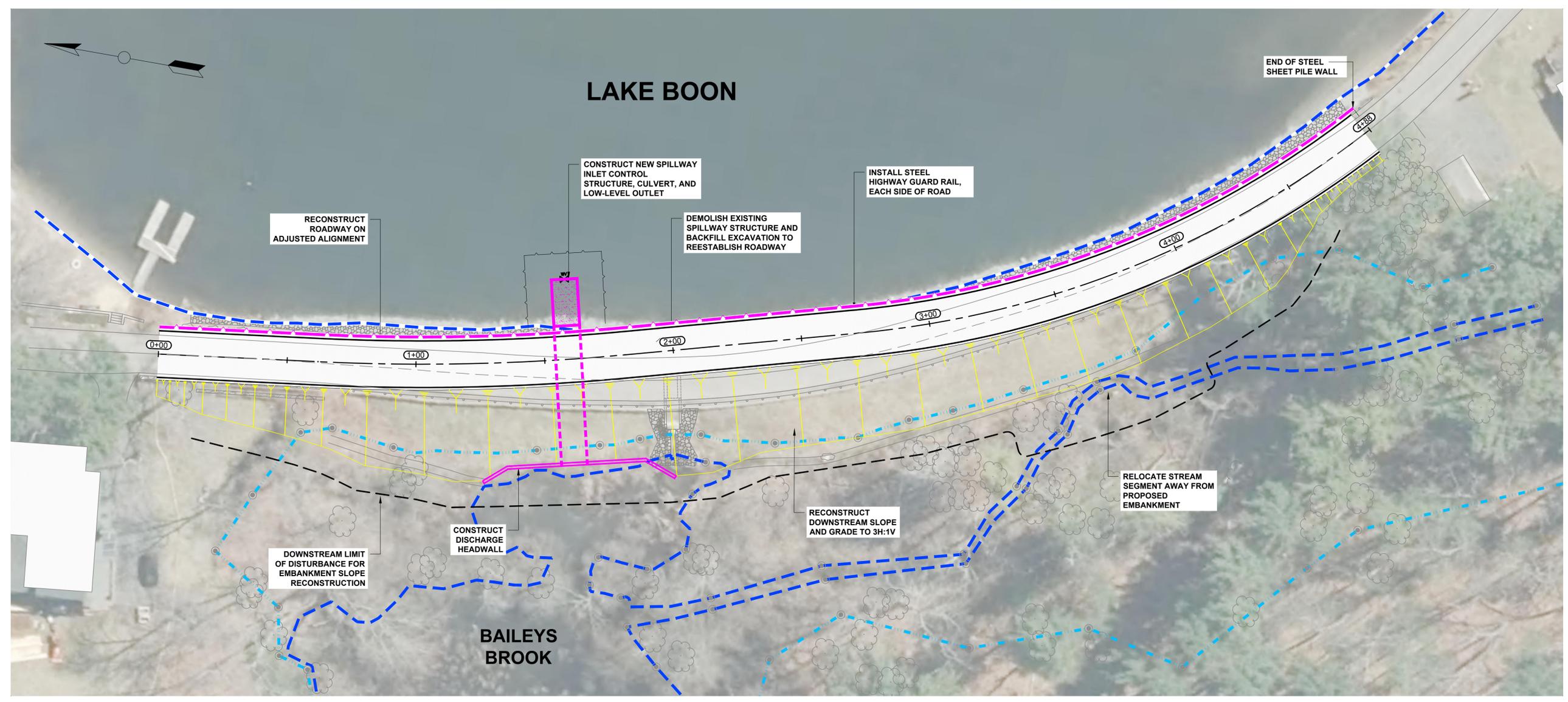
**ILLUSTRATION OF CLEARANCE REQUIRED FOR FIXED-MAST PILING INSTALLATION EQUIPMENT**



**CONCRETE BEAM CAP CONSTRUCTED OVER SHEET PILE WALL (ARLINGTON RESERVOIR DAM, 2005)**



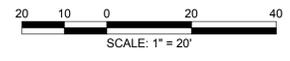
**CONCRETE BEAM CAP UNDER CONSTRUCTION (ARLINGTON RESERVOIR DAM, 2005)**



**PHASE 2 CONSTRUCTION OVERVIEW:**

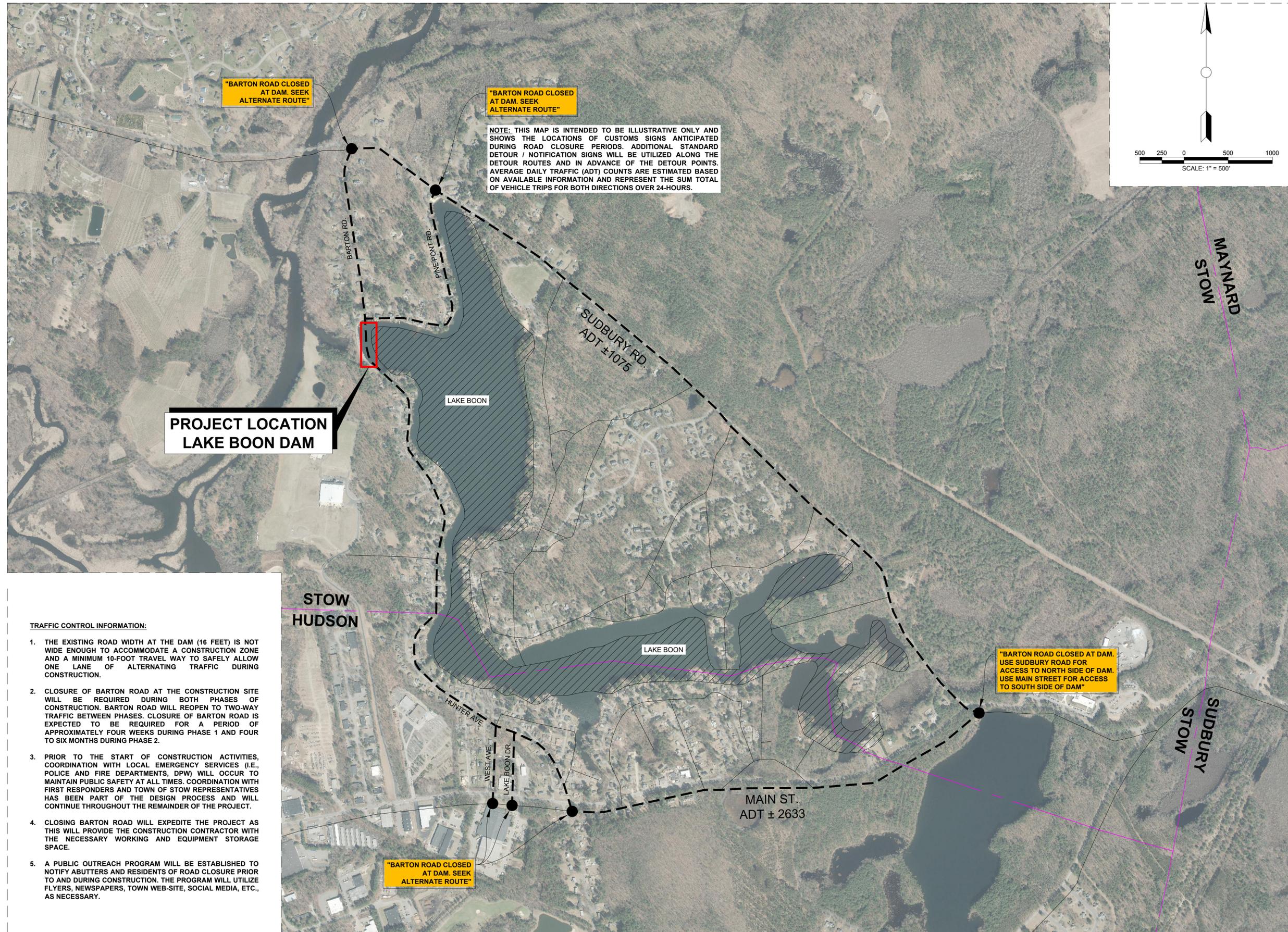
1. CONSTRUCT NEW SPILLWAY.
2. DIVERT FLOW FROM EXISTING SPILLWAY TO NEW SPILLWAY.
3. DEMOLISH EXISTING SPILLWAY AND CLOSE RESULTING GAP IN EMBANKMENT.
4. RECONSTRUCT DOWNSTREAM EMBANKMENT SLOPE AND PERFORM ASSOCIATED SITE IMPROVEMENTS.
5. RECONSTRUCT ROADWAY ALONG ADJUSTED ALIGNMENT, FOLLOWING NEW SHEET PILE WALL.

**PHASE 2 PLAN**



**PRELIMINARY  
NOT FOR CONSTRUCTION**

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**PROJECT LOCATION  
 LAKE BOON DAM**

**NOTE: THIS MAP IS INTENDED TO BE ILLUSTRATIVE ONLY AND SHOWS THE LOCATIONS OF CUSTOMS SIGNS ANTICIPATED DURING ROAD CLOSURE PERIODS. ADDITIONAL STANDARD DETOUR / NOTIFICATION SIGNS WILL BE UTILIZED ALONG THE DETOUR ROUTES AND IN ADVANCE OF THE DETOUR POINTS. AVERAGE DAILY TRAFFIC (ADT) COUNTS ARE ESTIMATED BASED ON AVAILABLE INFORMATION AND REPRESENT THE SUM TOTAL OF VEHICLE TRIPS FOR BOTH DIRECTIONS OVER 24-HOURS.**

**TRAFFIC CONTROL INFORMATION:**

1. THE EXISTING ROAD WIDTH AT THE DAM (16 FEET) IS NOT WIDE ENOUGH TO ACCOMMODATE A CONSTRUCTION ZONE AND A MINIMUM 10-FOOT TRAVEL WAY TO SAFELY ALLOW ONE LANE OF ALTERNATING TRAFFIC DURING CONSTRUCTION.
2. CLOSURE OF BARTON ROAD AT THE CONSTRUCTION SITE WILL BE REQUIRED DURING BOTH PHASES OF CONSTRUCTION. BARTON ROAD WILL REOPEN TO TWO-WAY TRAFFIC BETWEEN PHASES. CLOSURE OF BARTON ROAD IS EXPECTED TO BE REQUIRED FOR A PERIOD OF APPROXIMATELY FOUR WEEKS DURING PHASE 1 AND FOUR TO SIX MONTHS DURING PHASE 2.
3. PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, COORDINATION WITH LOCAL EMERGENCY SERVICES (I.E., POLICE AND FIRE DEPARTMENTS, DPW) WILL OCCUR TO MAINTAIN PUBLIC SAFETY AT ALL TIMES. COORDINATION WITH FIRST RESPONDERS AND TOWN OF STOW REPRESENTATIVES HAS BEEN PART OF THE DESIGN PROCESS AND WILL CONTINUE THROUGHOUT THE REMAINDER OF THE PROJECT.
4. CLOSING BARTON ROAD WILL EXPEDITE THE PROJECT AS THIS WILL PROVIDE THE CONSTRUCTION CONTRACTOR WITH THE NECESSARY WORKING AND EQUIPMENT STORAGE SPACE.
5. A PUBLIC OUTREACH PROGRAM WILL BE ESTABLISHED TO NOTIFY ABUTTERS AND RESIDENTS OF ROAD CLOSURE PRIOR TO AND DURING CONSTRUCTION. THE PROGRAM WILL UTILIZE FLYERS, NEWSPAPERS, TOWN WEB-SITE, SOCIAL MEDIA, ETC., AS NECESSARY.

**"BARTON ROAD CLOSED AT DAM. USE SUDBURY ROAD FOR ACCESS TO NORTH SIDE OF DAM. USE MAIN STREET FOR ACCESS TO SOUTH SIDE OF DAM"**

**"BARTON ROAD CLOSED AT DAM. SEEK ALTERNATE ROUTE"**

**PRELIMINARY  
 NOT FOR CONSTRUCTION**

Drawing Title:  
**TRAFFIC CONTROL SCHEMATIC**

Sheet Number:  
**5 of 5**