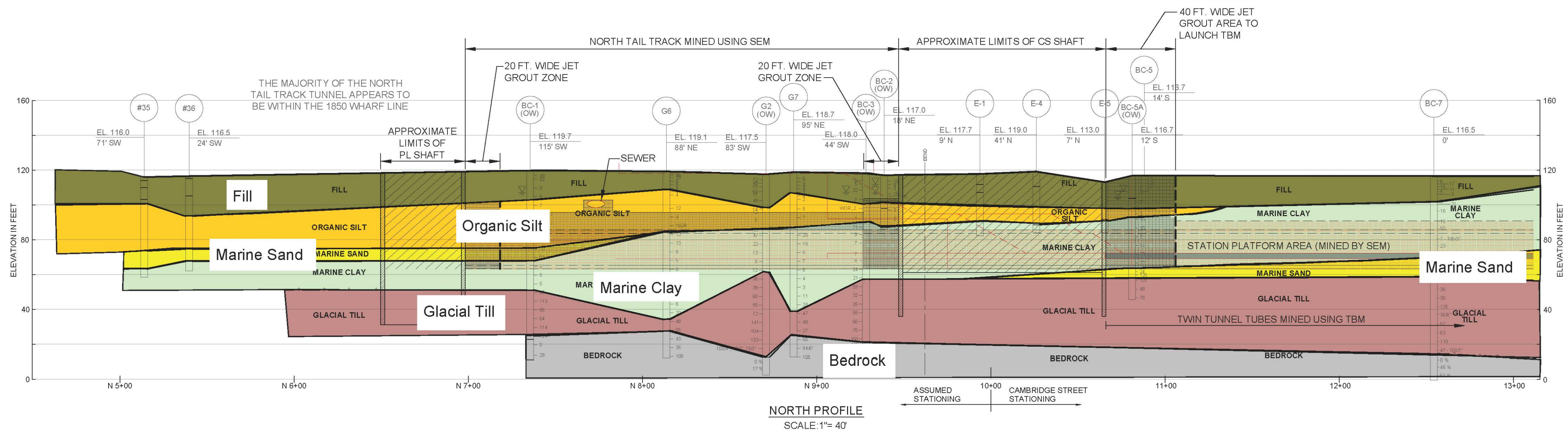


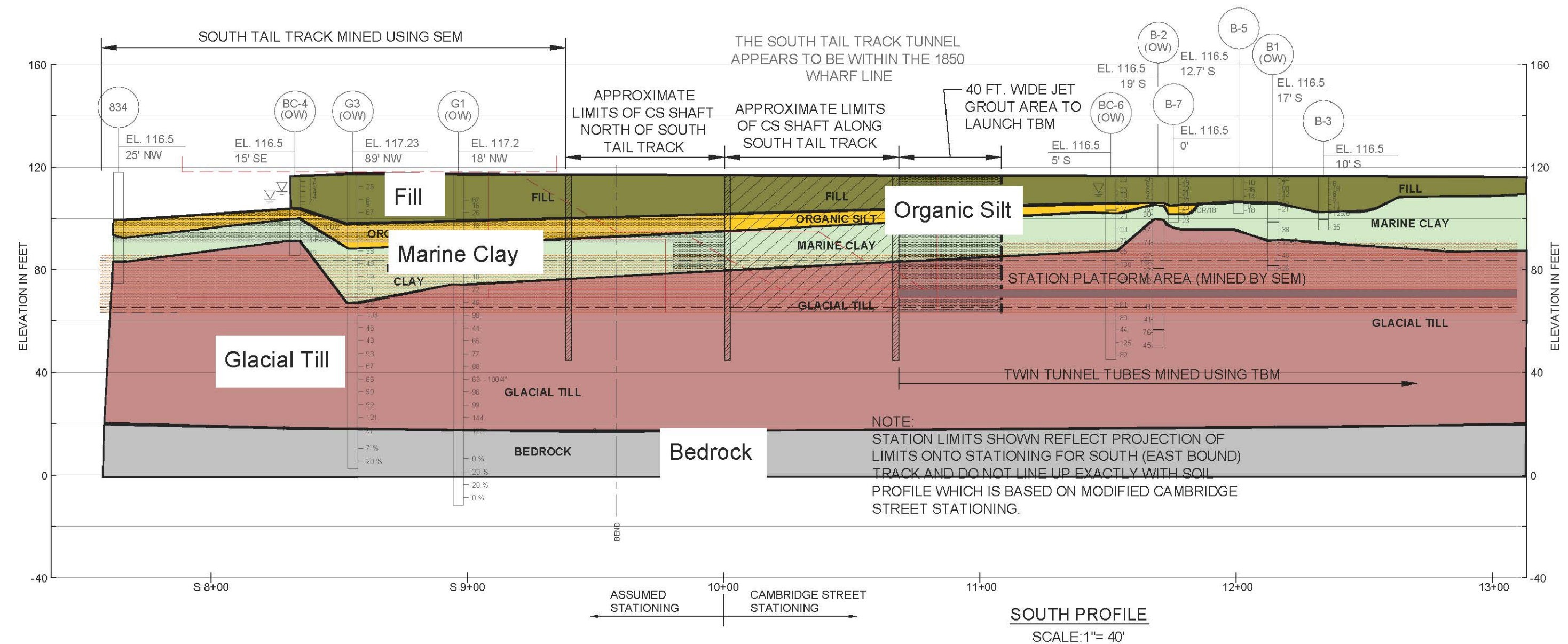
CONSTRUCTABILITY STUDY
RED LINE/BLEU LINE CONNECTOR
BOSTON, MASSACHUSETTS

APPENDIX B

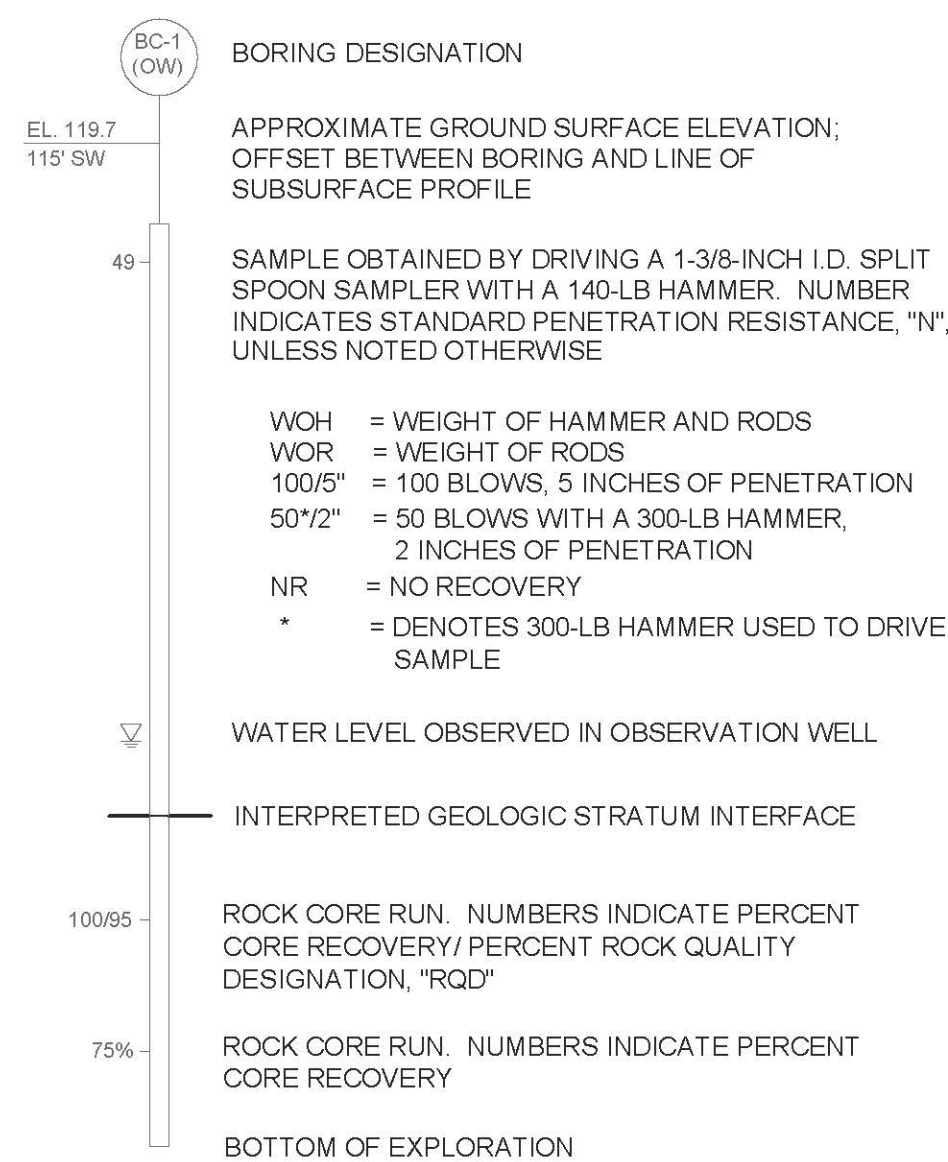
GEOTECHNICAL PROFILE



- Bedrock
- Fill
- Organic Silt
- Marine Clay
- Glacial Till
- Glacial Moraine
- Marine Sand



LEGEND:

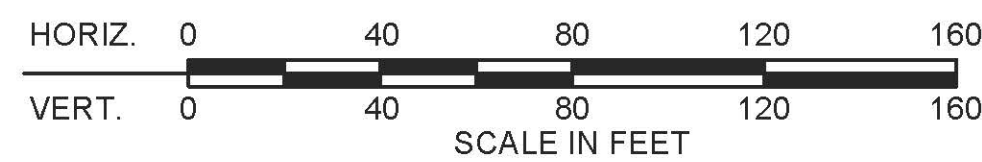


NOTES:

- REFER TO SUBSURFACE EXPLORATION LOCATION PLAN FOR THE LOCATION OF NORTH AND SOUTH PROFILES.
- TEST BORINGS INCLUDED ON THE NORTH AND SOUTH PROFILE PLAN WERE CONDUCTED BY HALEY & ALDRICH AND OTHERS PRIOR TO THIS STUDY. HALEY & ALDRICH CANNOT BE RESPONSIBLE FOR THE TEST BORING DATA PROVIDED BY OTHERS.
- THE GROUND SURFACE ELEVATION AT SEVERAL TEST BORING LOCATIONS WAS NOT REPORTED. FOR INFORMATIONAL PURPOSES, THE DATA HAVE BEEN PRESENTED ASSUMING A GROUND SURFACE ELEVATION SIMILAR TO THAT OF NEARBY TEST BORINGS.
- SUBSURFACE PROFILES WERE DRAWN BY PROJECTING TEST BORING INFORMATION TO THE CLOSEST OF THE TWO PROFILE LINES ON THE NORTH AND SOUTH SIDES OF CAMBRIDGE STREET.
- SUBSURFACE PROFILES DEPICT THE GENERAL GEOLOGIC CONDITIONS AT THE SITE AND ARE BASED ON INTERPRETATION OF DATA ENCOUNTERED IN THE EXPLORATIONS. LINES REPRESENTING INTERFACES BETWEEN STRATA ON THE PROFILE ARE BASED UPON INTERPOLATION BETWEEN ADJACENT BORINGS. THE BORING STICK SHOWS THE ACTUAL SEQUENCE OF STRATA ENCOUNTERED AT THAT LOCATION. ACTUAL SOIL AND ROCK CONDITIONS AND INTERFACES BETWEEN EXPLORATIONS MAY VARY SIGNIFICANTLY FROM THOSE INDICATED ON THE PROFILES.
- ELEVATIONS ARE IN FEET AND REFER TO MBTA DATUM, WHEREIN EL. 0.0 IS 105.62 FT BELOW NATIONAL GEODETIC VERTICAL DATUM OF 1929.
- THE HORIZONTAL DATUM IS THE NORTH AMERICAN DATUM OF 1983.
- THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING THROUGH A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D., 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES. THE SAMPLER IS NORMALLY DRIVEN 3 (FOR 18-INCH LONG SAMPLER) OR 4 (FOR 24-INCH LONG SAMPLER) SUCCESSIVE 6-INCH INCREMENTS. THE TOTAL NUMBER OF BLOWS REQUIRED TO ADVANCE THE SAMPLER BETWEEN THE 6 TO 18 INCH SAMPLING INCREMENTS IS THE STANDARD PENETRATION RESISTANCE, "N".
- RQD REFERS TO THE ROCK QUALITY DESIGNATION WHICH IS A MODIFIED CORE RECOVERY PERCENTAGE IN WHICH ALL PIECES OF SOUND CORE OVER 4 INCHES LONG ARE SUMMED AND DIVIDED BY THE LENGTH OF THE CORE RUN.
- REFER TO THE HALEY & ALDRICH GEOTECHNICAL DATA REPORT (2009) FOR MORE DETAILED SOIL AND ROCK STRATUM DESCRIPTIONS AND THE TEST BORING LOGS FOR DETAILED SAMPLE DESCRIPTIONS.
- APPROXIMATE LOCATIONS OF 1795 WHARF LINE, AND 1850 WHARF LINE OBTAINED FROM "PLAN OF BOSTON PROPER SHOWING CHANGES IN STREET AND WHARF LINES, 1795-1895," BY CHARLES C. PERKINS - SURVEYOR IN CHARGE OF CITY PROPER SURVEYORS, DATED 31 JANUARY 1895, SCALE: 1 IN. = 400 FT.
- GROUNDWATER ELEVATIONS MEASURED BY GZA FROM MARCH 1987 THROUGH OCTOBER 1987. THESE ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

- LIMITS OF PROPOSED TUNNEL
- LIMITS OF PROPOSED SHAFTS
- LIMITS OF STATION PLATFORM
- JET GROUT SOIL IMPROVEMENT LIMITS

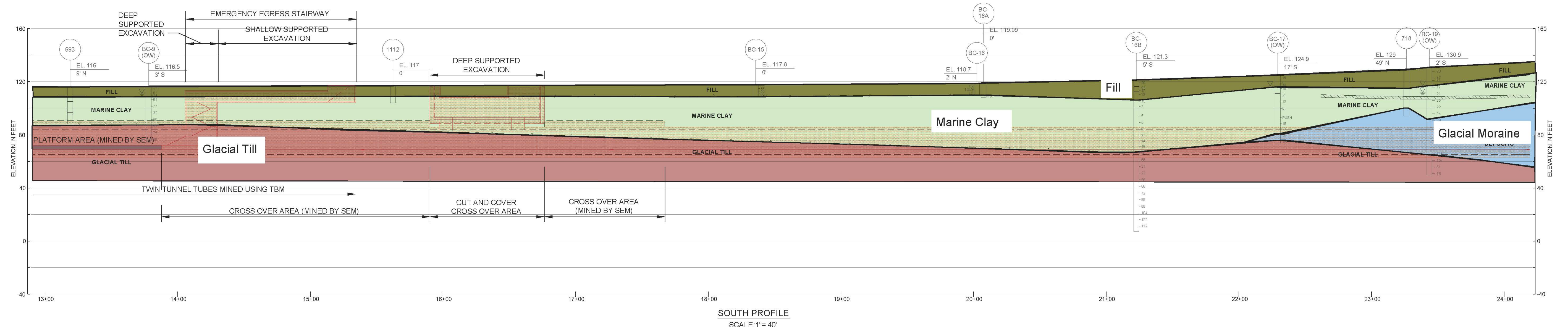
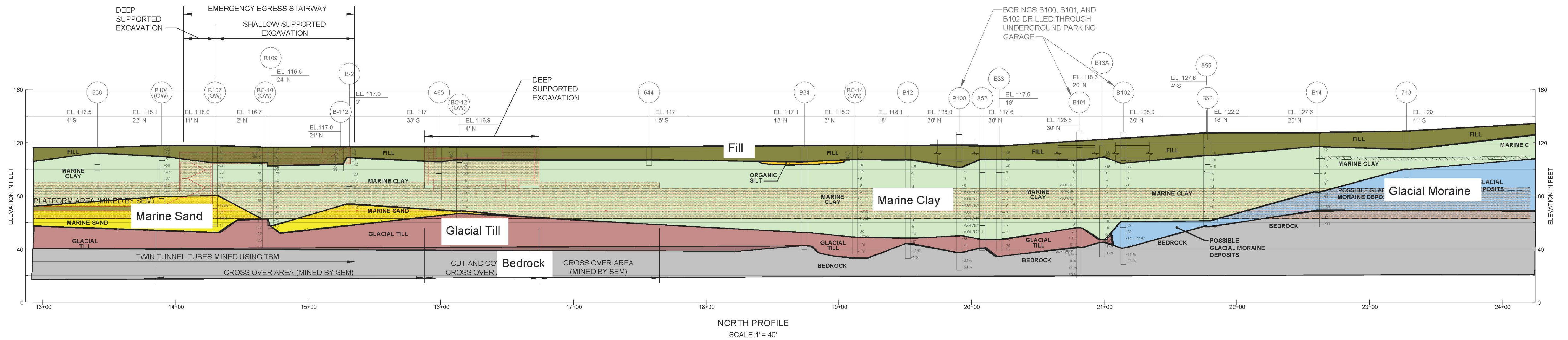


HALEY & ALDRICH

RED LINE BLUE LINE CONNECTOR PROJECT
CAMBRIDGE STREET
BOSTON, MASSACHUSETTS

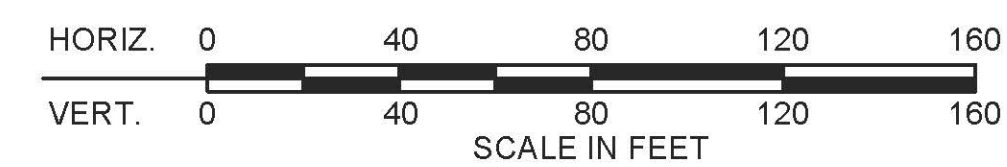
PROFILE -
TUNNEL ALTERNATIVE NO.1
ELIMINATION OF BOWDOIN STATION
SHEET 1 OF 4
SCALE: AS SHOWN
JANUARY 2010

FIGURE 6



- Bedrock
- Fill
- Organic Silt
- Marine Clay
- Glacial Till
- Glacial Moraine
- Marine Sand

NOTE:
1. REFER TO FIGURE 6 FOR LEGEND AND NOTES.



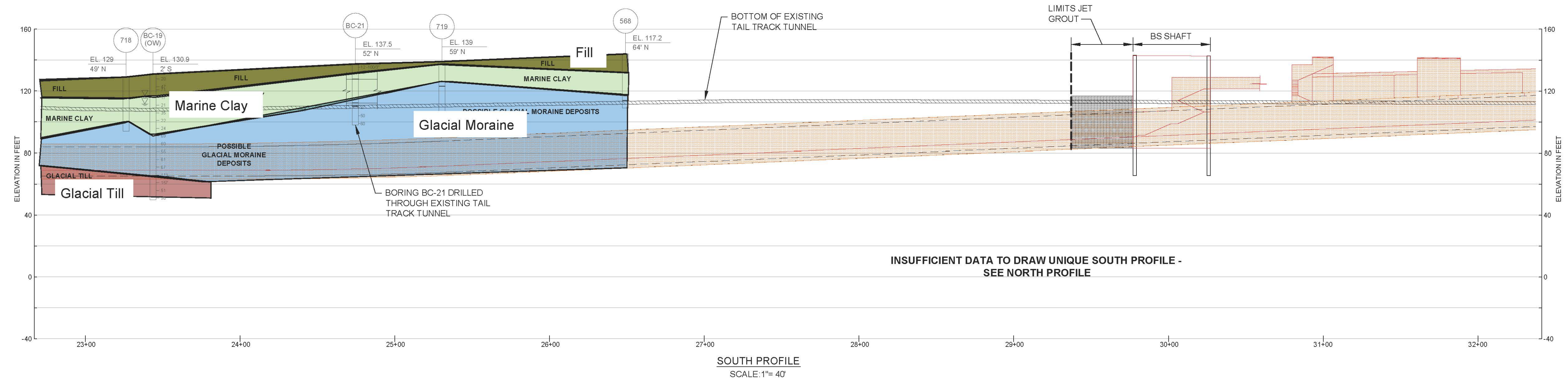
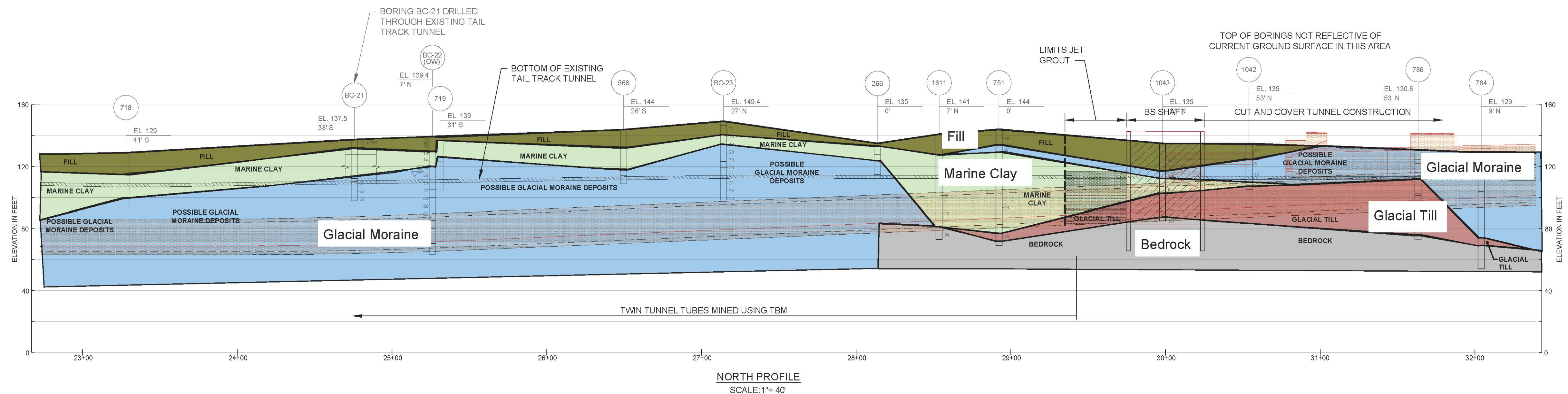
HALEY & ALDRICH

RED LINE BLUE LINE CONNECTOR PROJECT
CAMBRIDGE STREET
BOSTON, MASSACHUSETTS

**PROFILE -
TUNNEL ALTERNATIVE NO.1
ELIMINATION OF BOWDOIN STATION
SHEET 2 OF 4**

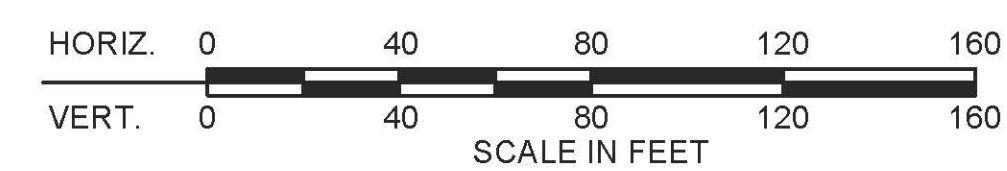
SCALE: AS SHOWN
JANUARY 2010

FIGURE 7



- Bedrock
- Fill
- Organic Silt
- Marine Clay
- Glacial Till
- Glacial Moraine
- Marine Sand

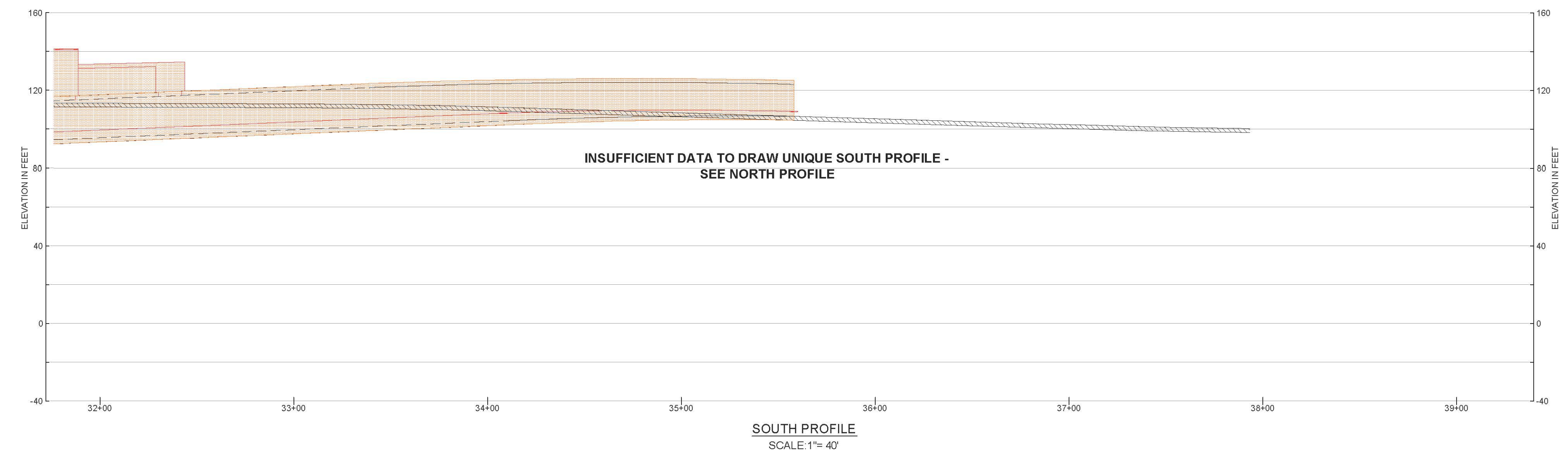
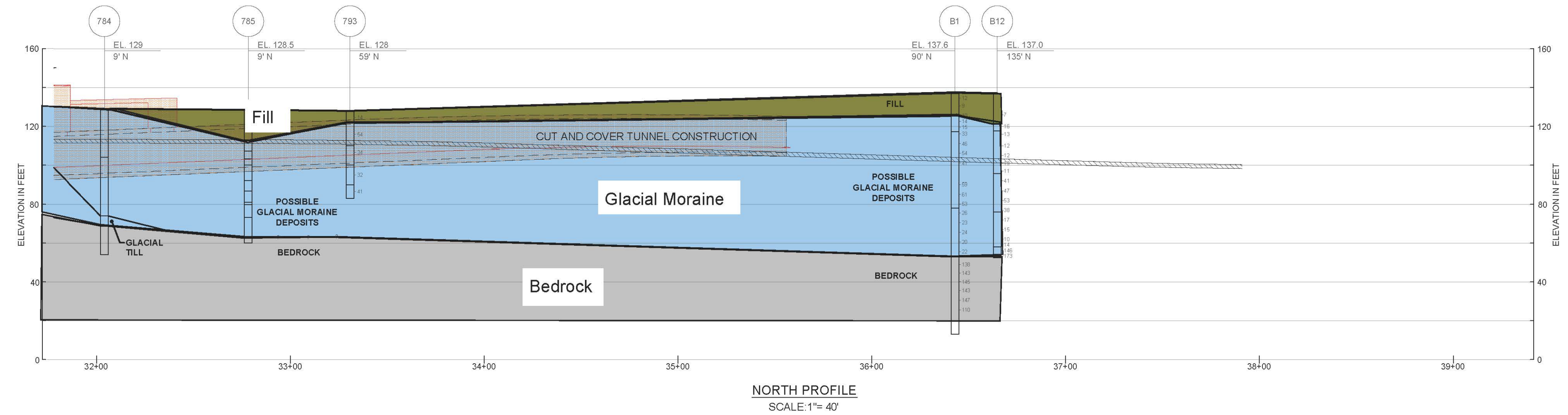
NOTE:
1. REFER TO FIGURE 6 FOR LEGEND AND NOTES.



HALEY & ALDRICH RED LINE BLUE LINE CONNECTOR PROJECT
CAMBRIDGE STREET
BOSTON, MASSACHUSETTS

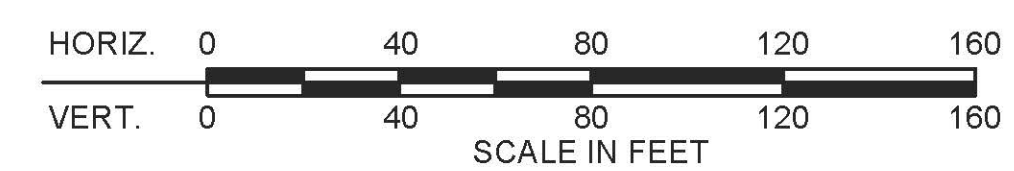
**PROFILE -
TUNNEL ALTERNATIVE NO.1
ELIMINATION OF BOWDOIN STATION
SHEET 3 OF 4**
SCALE: AS SHOWN
JANUARY 2010

FIGURE 8



- Bedrock
- Fill
- Organic Silt
- Marine Clay
- Glacial Till
- Glacial Moraine
- Marine Sand

NOTE:
1. REFER TO FIGURE 6 FOR LEGEND AND NOTES.



HALEY & ALDRICH

RED LINE BLUE LINE CONNECTOR PROJECT
CAMBRIDGE STREET
BOSTON, MASSACHUSETTS

**PROFILE -
TUNNEL ALTERNATIVE NO.1
ELIMINATION OF BOWDOIN STATION
SHEET 4 OF 4**

SCALE: AS SHOWN
JANUARY 2010

FIGURE 9