

Date	Description	No.
11/07/16	REVISION DUE TO VAULT FILLING PROCEDURE	3
08/03/16	ADDITION OF CORE INTERNAL BRACING CONNECTION DETAILS	2
03/11/16	REVISION DUE TO CHANGE OF EXCAVATION LEVEL AND VAULTS	1

REVISIONS

SIGNATURE: ALAN POEPPEL 11/07/2016
PROFESSIONAL ENGINEER NY Lic. No. 0802201

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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan International LLC
Collectively known as Langan

Project

RIVERSIDE CENTER BUILDING 3

10 RIVERSIDE BLVD.
BLOCK NO. 1171, LOT NO. 155 & 158

NEW YORK NEW YORK

Drawing Title

SUPPORT OF EXCAVATION PLAN

Project No. 170275403	Drawing No.
Date 11/01/2016	SOE-101.02
Scale 1" = 20'	
Drawn By RK	Checked By JD
Submission Date 11/01/2016	Sheet 2 of 13



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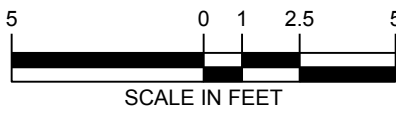
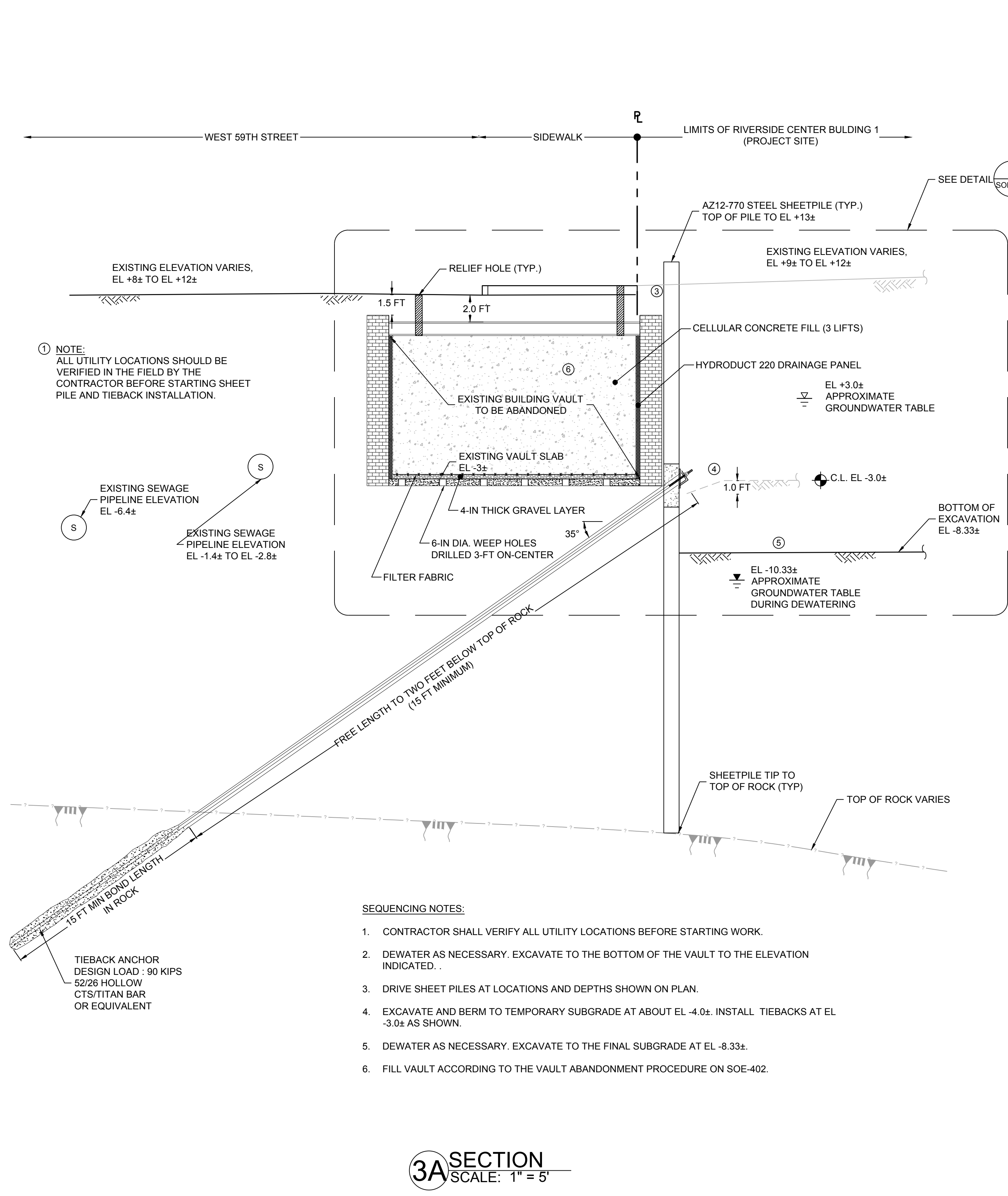
Signature of Alan R. Poeppel, Professional Engineer NY Lic. No. 0802201, dated 11/07/2016.

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Project: **RIVERSIDE CENTER BUILDING 3**
10 RIVERSIDE BLVD.
BLOCK No. 1171, LOT No. 155 & 158
NEW YORK NEW YORK
Drawing Title: **SECTIONS**

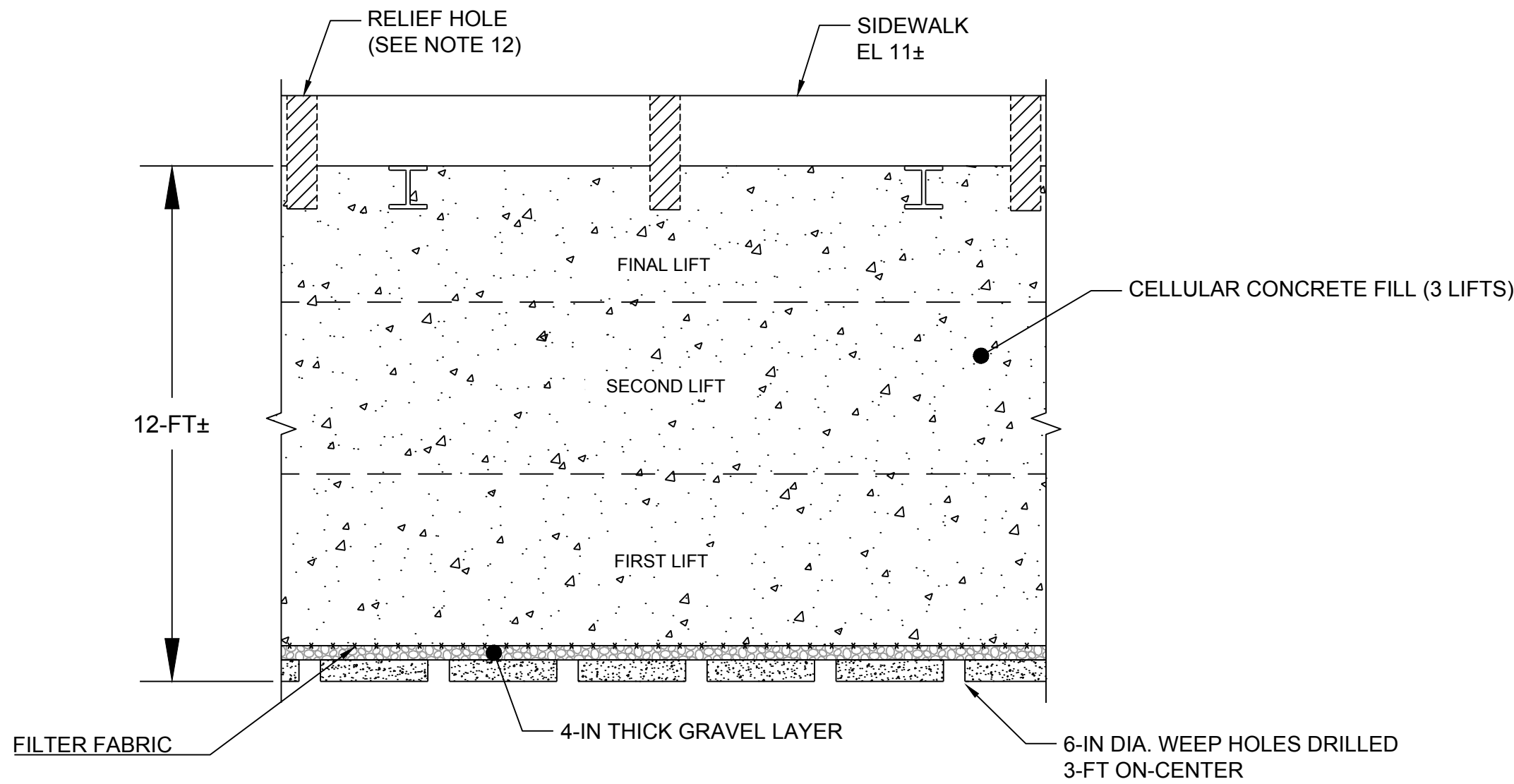
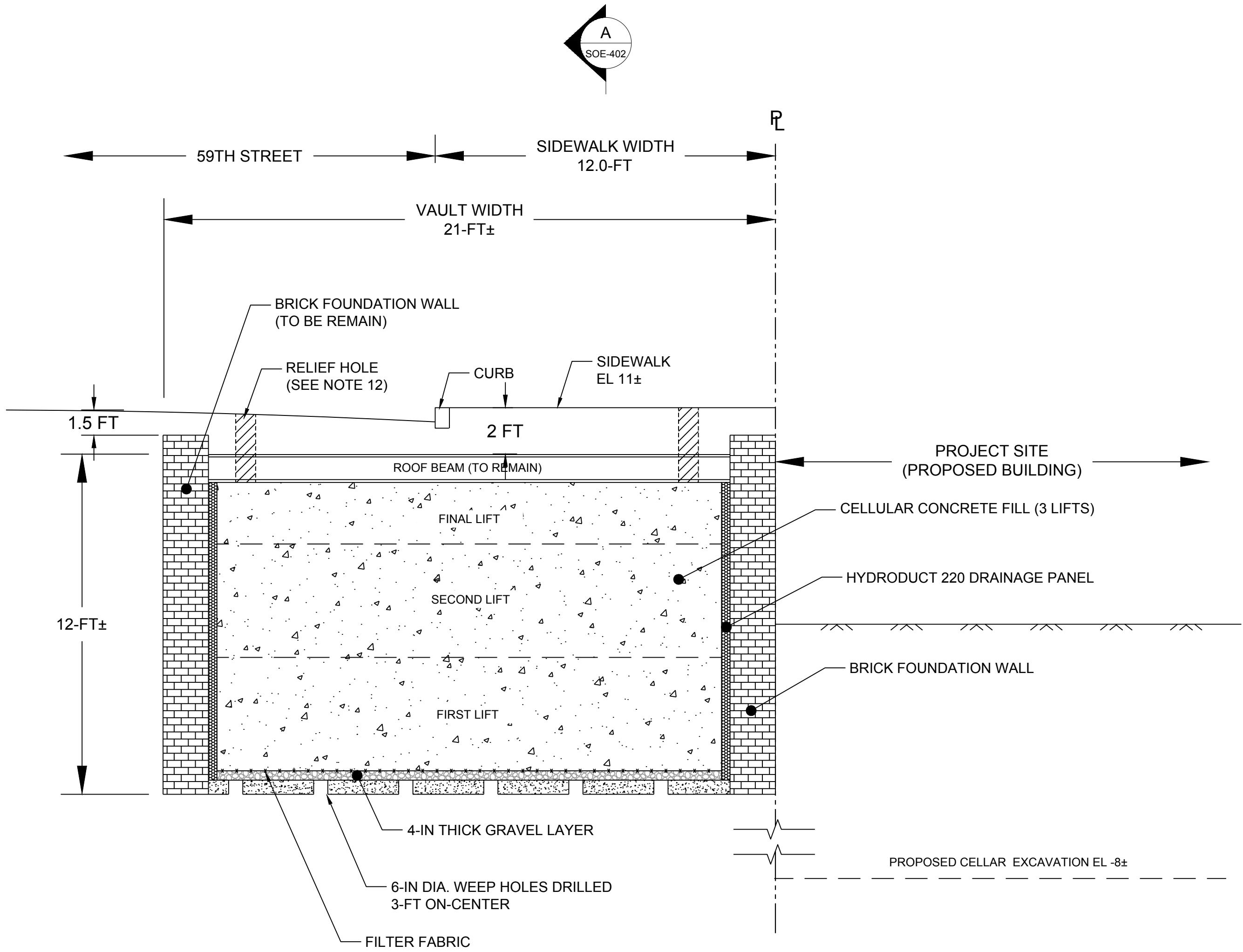
Project No. 170275403	Drawing No.
Date 11/01/2016	SOE-304.02
Scale 1" = 5'	
Drawn By RK Checked By JD	
Submission Date 11/01/2016	

ELEVATION (FT NAVD88)



VAULT ABANDONMENT PROCEDURE

1. VERTICALLY SHORE THE DAMAGED ROOF BEAMS EXTERNALLY (BY OTHERS) AND ASSESS STRUCTURAL STABILITY PRIOR TO ENTERING THE VAULT.
2. DEWATER THE VAULT FOLLOWING WATER SAMPLE COLLECTION.
3. ASSESS VAULT CONDITIONS AND DOCUMENT THE EXTENTS OF THE VAULT. PROBE THE SOUTH WALL OF THE VAULT TO OBSERVE EXTERNAL CONDITIONS.
4. FOLLOW ENVIRONMENTAL REMEDIATION PROCEDURES DESCRIBED IN THE OER RAWP, DATED 18 SEPTEMBER 2015, PREPARED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, AND LANDSCAPE ARCHITECTURE, DPC (LANGAN), AND ENVIRONMENTAL SPECIFICATIONS (SECTION 31 23 19) IF THE WATER IS CONTAMINATED.
5. CREATE AN ACCESS OPENING ALONG SIDEWALK AND EXISTING FOUNDATION WALL SO THAT EXISTING TANKS INSIDE THE VAULT CAN BE REMOVED. ACCESS OPENING WILL REQUIRE EXISTING VAULT ROOF STEEL FRAMING TO BE VERTICALLY SHORED AND CUT BACK.
6. EMPTY AND REMOVE ANY ENCOUNTERED FUELOIL UNDERGROUND STORAGE TANKS (UST) FOLLOWING PROCEDURES DESCRIBED IN THE OER RAWP, APPROVED DATED 18 SEPTEMBER 2015 PREPARED BY LANGAN, AND ENVIRONMENTAL SPECIFICATIONS (SECTION 02 61 13).
7. SEAL ANY HORIZONTAL UTILITY PENETRATIONS INTO THE VAULT WALL.
8. DRILL VERTICAL WEEP-HOLES INTO THE FLOOR-SLAB OF THE VAULT, SIX INCHES IN DIAMETER, THREE FEET ON-CENTER.
9. INSTALL HYDRODUCT 220 DRAINAGE PANEL ALONG THE VAULT WALLS.
10. BACKFILL THE VAULT FLOOR WITH A FOUR-INCH-THICK LAYER OF GRAVEL. PLACE FILTER FABRIC ON TOP OF THE GRAVEL LAYER.
11. INSTALL PRE-ENGINEERED DOKA WALL FORMS AT THE WEST END OF THE VAULT TO PREVENT CELLULAR CONCRETE FROM ENTERING THE ADJACENT CON-ED VAULT.
12. DRILL (6) RELIEF HOLES THROUGH VAULT ROOF. (1) AT EACH OF THE (4) CORNERS TO BE FILLED AND (2) AT THE NORTH AND SOUTH EDGE OF THE MIDDLE OF THE VAULT AREA.
13. TEMPORARILY PATCH THE EXISTING FOUNDATION WALL ALONG PROPERTY LINE THAT WAS REMOVED TO FACILITATE EXISTING TANK REMOVAL. PATCH SHALL CONSIST OF FORMWORK UP TO TOP OF SIDEWALK ELEVATION.
14. PLACE THE FIRST 4 FEET- TO 5 FEET-HIGH CELLULAR CONCRETE LIFT FROM ONE OR MORE OF THE RELIEF HOLES, AS NECESSARY. CHUTE OR ELEPHANT TRUNK PLACEMENT IS ACCEPTABLE.
15. ONCE THE FIRST LIFT HAS HARDENED, PLACE THE SECOND 4 FEET- TO 5 FEET-HIGH CELLULAR CONCRETE LIFT FROM ONE OF THE RELIEF HOLES. CHUTE OR ELEPHANT TRUNK PLACEMENT IS ACCEPTABLE.
16. ONCE THE SECOND LIFT HAS HARDENED, FILL THE REMAINING VOID SPACE BETWEEN THE SECOND LIFT AND THE VAULT ROOF BY PUMPING IN CELLULAR CONCRETE FROM THE EASTERN MOST RELIEF HOLE (AT HIGHEST ELEVATION). CELLULAR CONCRETE SHALL BE PUMPED UNTIL CELLULAR CONCRETE FLOWS THROUGH EACH RELIEF HOLE. EACH RELIEF HOLE SHALL BE PLUGGED IMMEDIATELY AFTER CELLULAR CONCRETE FLOWS OUT OF IT. REPEAT PLUGGING UNTIL CELLULAR CONCRETE HAS FLOWED OUT OF EACH HOLE.
17. TEMPORARILY PATCH OPENINGS IN THE SIDEWALK AND STREET WITH 4,000 PSI CONCRETE.
18. ONCE THE CELLULAR CONCRETE HAS FULLY HYDRATED, CUT THE STEEL BEAMS AND REMOVE THE NORTH WALL OF THE VAULT. DRIVE SHEET PILES, AS PER SUPPORT OF EXCAVATION DRAWINGS.
19. REPLACE SIDEWALK BEFORE OPENING THE SIDEWALK TO THE PUBLIC, PER APPROVED BUILDERS PAVEMENT PLAN.



SECTION A

6 VAULT ABANDONMENT DETAILS AND PROCEDURE
SCALE: N.T.S.



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