30 April 2026

Aaron G. Fischer, PE
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233

Re: Proposed Deviation from Source Removal Work Plan Rev.1
155 3rd Street (Block: 462 Lot: 12)
Brooklyn, NY
BCP Site No. C224336
Langan Project No.: 170390002

Dear Mr. Fischer:

Langan is submitting this letter, on behalf of Third Street Owner LLC and 155 Third St., LLC (the Participants), regarding the source removal work at 155 3rd Street in Brooklyn, New York. Source removal has progressed in accordance with the approved 2 October 2025 Source Removal Work Plan. However, as a direct result of the conditions described in this letter and as verbally communicated to you, source removal has been stopped because it is no longer technically feasible or safely implementable (as defined in DER-10 Technical Guidance for Site Investigation and Remediation, Chapter 4 Remedy Selection).

Langan is the Engineer of Record (EOR) for the existing anchored bulkhead (Kenneth Huber, P.E. signatory) and the ongoing remediation work (Gerald Nicholls, P.E. signatory). As such, Langan reviewed source removal progress and the site-specific monitoring data to assess the progress towards the remedial action objectives while protecting the bulkhead and adjoining public infrastructure.

BACKGROUND

The anchored bulkhead was constructed in 2017 under an Administrative Order on Consent with USEPA. The anchored bulkhead is comprised of NZ19 steel sheet pile with tiebacks spaced every 13.8 feet (ft) connected to discontinuous NZ19 deadmen (three sheet piles per tieback). The steel sheet pile bulkhead was installed immediately seaward of a historic timber crib bulkhead. As-builts drawings of the bulkhead system are provided in Attachment A.

The remediation within the "bulkhead zone" (area between the bulkhead and deadmen) consists of a series of 4 to 5 foot diameter source removal columnar excavations between the tiebacks. Each column is completed by drilling a steel casing to 30.5 ft below grade, cleaning out soil within

the casing with an auger, filling the casing with Controlled Low Strength Material (CLSM) and gravel, and removing the casing. There were 107 source removal columns originally proposed.

A monitoring program was implemented during construction. The monitoring program consisted of optical (survey) monitoring points along the top of the bulkhead (about el 6) and on the face of the 3rd Street bridge abutment and wingwall adjacent to the site. Monitoring points were surveyed weekly by a Licensed Surveyor.

SOURCE REMOVAL, OPTICAL MONITORING AND RESPONSE ACTIONS SUMMARY

Source Removal and Optical Monitoring Summary

Source removal work began on 28 January 2026. In general, the bulkhead was consistently observed to deflect eastward (towards the canal) during construction of the source removal columns. Most frequently, the deflection was observed to occur while the auger removed soil from within the casing.[1] The timing and location of movement corresponds directly to construction of the source removal columns. During this time, source removal was the only work occurring within the vicinity of the bulkhead. A summary of observed movement during the source removal work is provided in Attachment B.

By March 10th, one of the monitoring points along the top of the bulkhead was observed to have deflected nearly 2 inches. Work was stopped on 11 March due to the movement. Work resumed on 16 March with the following modifications to the source removal column work and monitoring program:

1. In each bay (between tie rods), start with source removal columns furthest from the deadman and move progressively closer to the deadman;
2. Complete only one source removal column in a bay at a time. Fully backfill that location before starting another;
3. Complete each source removal column on the same day it was started; and
4. Increase frequency of optical monitoring to daily.

Work was stopped again on 17 March 2026 due to continued movement of the bulkhead. Specifically, three points along the top of the bulkhead had deflected eastward by up an additional ½-inch.

Langan recommended that all tieback/deadman connections be exposed and tieback be tested by performing a pull-off test from the back of the deadmen. The tiebacks were exposed and tested from 20 to 25 March. Results of all tests demonstrated that tension in the tiebacks was well below the allowable capacity, indicating tie backs were not failing.

Work resumed on 26 March with the following additional modifications to the source removal column work and monitoring program:

[1] Although on two occasions, deflection was observed when the casing was being drilled to depth.

1. Increase frequency of survey monitoring to several times a day at key intervals of construction, including casing advancement, augering, backfilling, and extraction;
2. Delay augering out the last 15 ft of soil within the casing until the concrete truck is on site, ready to backfill with CLSM; and
3. CLSM is to be placed from the bottom of the casing up, using an elephant trunk concrete chute.

However, work was stopped again on 26 March due to movement in both the bulkhead and at the 3rd Street NYCDOT property. Specifically, during construction of one source removal column, three points along the top of the bulkhead deflected eastward by up to ½-inch, and the closest monitoring point on the 3rd Street bridge wing wall indicated 7/8-inch of settlement. All work was halted and the New York City Department of Transportation (NYCDOT) was notified.

After meeting with NYCDOT on 30 March 2026 and receiving their approval to continue with source removal for locations more than 40 ft from the NYCDOT property, work resumed again on 2 April. Langan recommended further modifications to the procedures as follows:

1. Increase the density of the CLSM (after discussion with the supplier); and
2. Place CLSM with a tremie tube to the bottom of the casing.

After the above-listed additional controls were implemented, additional movement was documented and all source removal work was stopped on 3 April 2026. Over ¾-inch of additional movement eastward was observed at one point at the top of the bulkhead in one day (two source removal columns). Langan recommended that all source removal work stop and that no further source removal work should be attempted. A total of 75 source removal columns (70%) have been completed of the 107 planned. A plan showing the locations of completed source removal columns is provided as Attachment C.

In-Situ Geochemical Stabilization Summary

In addition to the source removal performed, substantial remediation has been performed within the bulkhead area, consisting of a shallow 2-foot excavation and two in situ geochemical stabilization (ISGS) pilot studies. As shown on Attachment C, the ISGS pilot studies generally overlap with the primary area that source removal was limited due to the technical infeasibility described herein.

CONCLUSIONS

After multiple attempts to adjust remediation procedures to minimize bulkhead and abutment movement and damage, it has become clear to Langan that the source removal work cannot be completed without imposing significant risk on the stability of the bulkhead and abutment. As such, Langan has determined that it would be unsafe to continue to implement source removal at this site and, as the Engineer of Record for the bulkhead and source removal, Langan can no longer recommend moving forward with any further source removal columns between the bulkhead and the deadmen. The Source Removal Work Plan has been implemented to the extent feasible and the remaining 37 source removal columns cannot be completed. We note that the target source material is ubiquitous below and beyond the remedial extents. The balance of the

remedy prescribed in the Remedial Action Work Plan will continue, with the addition of two recovery wells in the area not subject to source removal as depicted in Attachment C. USEPA has also been informed of our concerns and determination regarding source removal at this site.

Should you have any questions or need additional information, I can be reached at 212-479-5415 or via email at khuber@langan.com.

Sincerely,

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.

Kenneth A. Huber, PE, WEDG
Associate

Gerald F. Nicholls

Gerald Nicholls, PE, CHMM
Principal

Enclosure(s): Attachment A – Bulkhead As-Built Drawings
Attachment B – Optical Monitoring Plots
Attachment C – Remedial Progress Plan (within Bulkhead Area)

cc: L. Gorton, R.S. Deyette (NYSDEC); B. Carr, V. Sacks (USEPA);
F. Dubinsky, M. Albert (Monadnock); D. Yudelson (SPR); P. McMahon (Langan)

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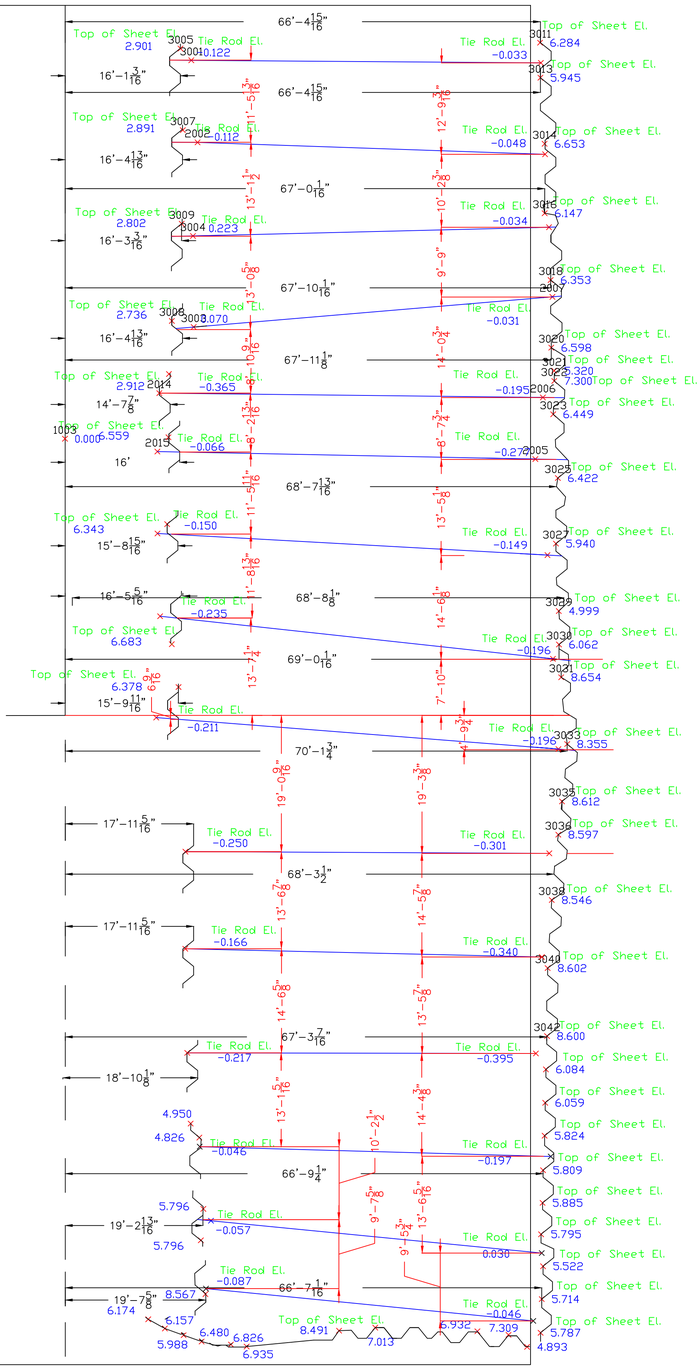
ATTACHMENT A – BULKHEAD AS-BUILT DRAWINGS

Existing Building



NO.	DATE	DESCRIPTION	APPR'D

REVISIONS

DRAWN E.B.
CHKD. E.B.
SCALE 1" = 10'

NEW YORK CONCRETE CORP
708 SHARROTS ROAD
STATEN ISLAND, NY 10309
(718) 967-3720

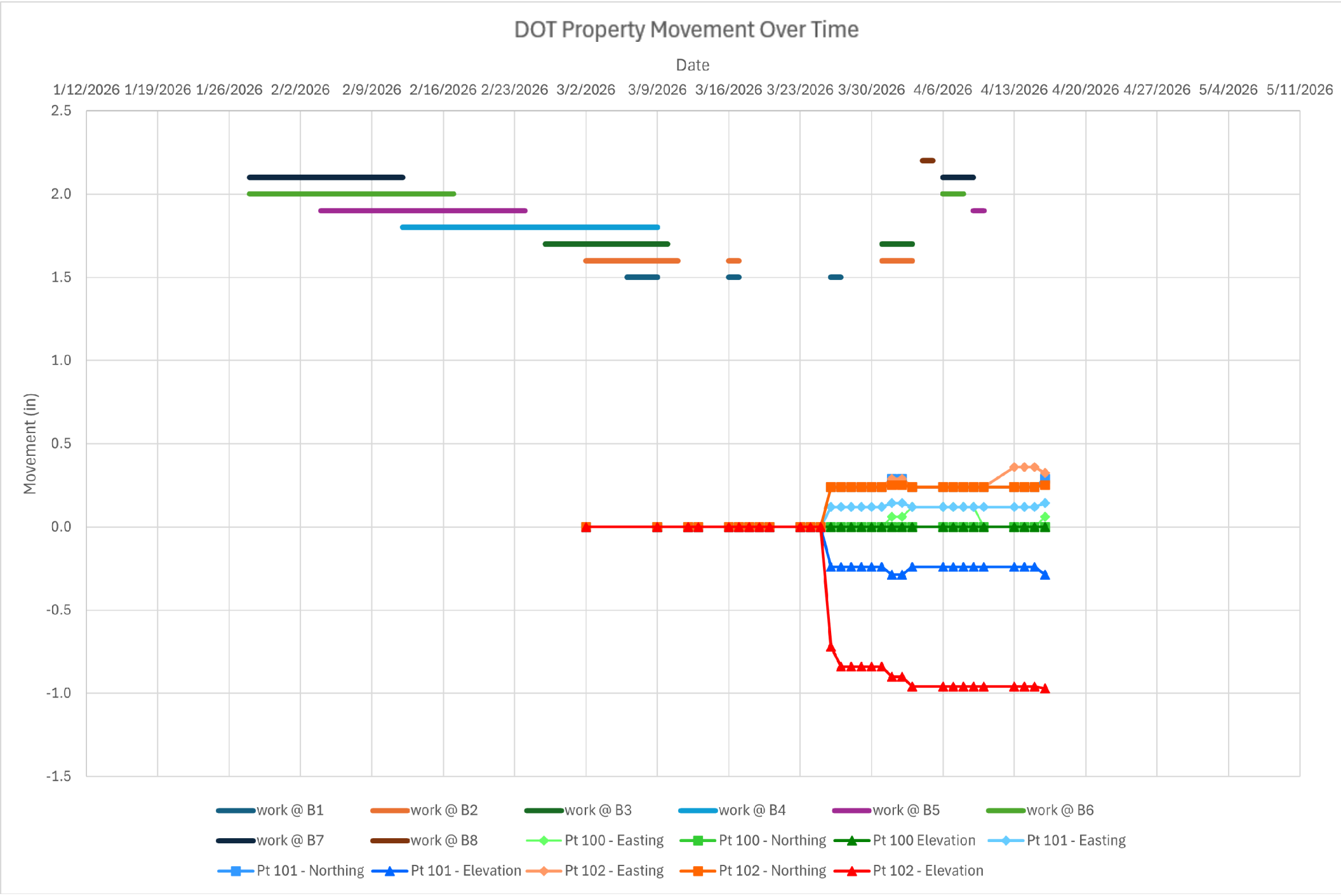
155 3rd Street
Brooklyn, NY
Monadnock Construction

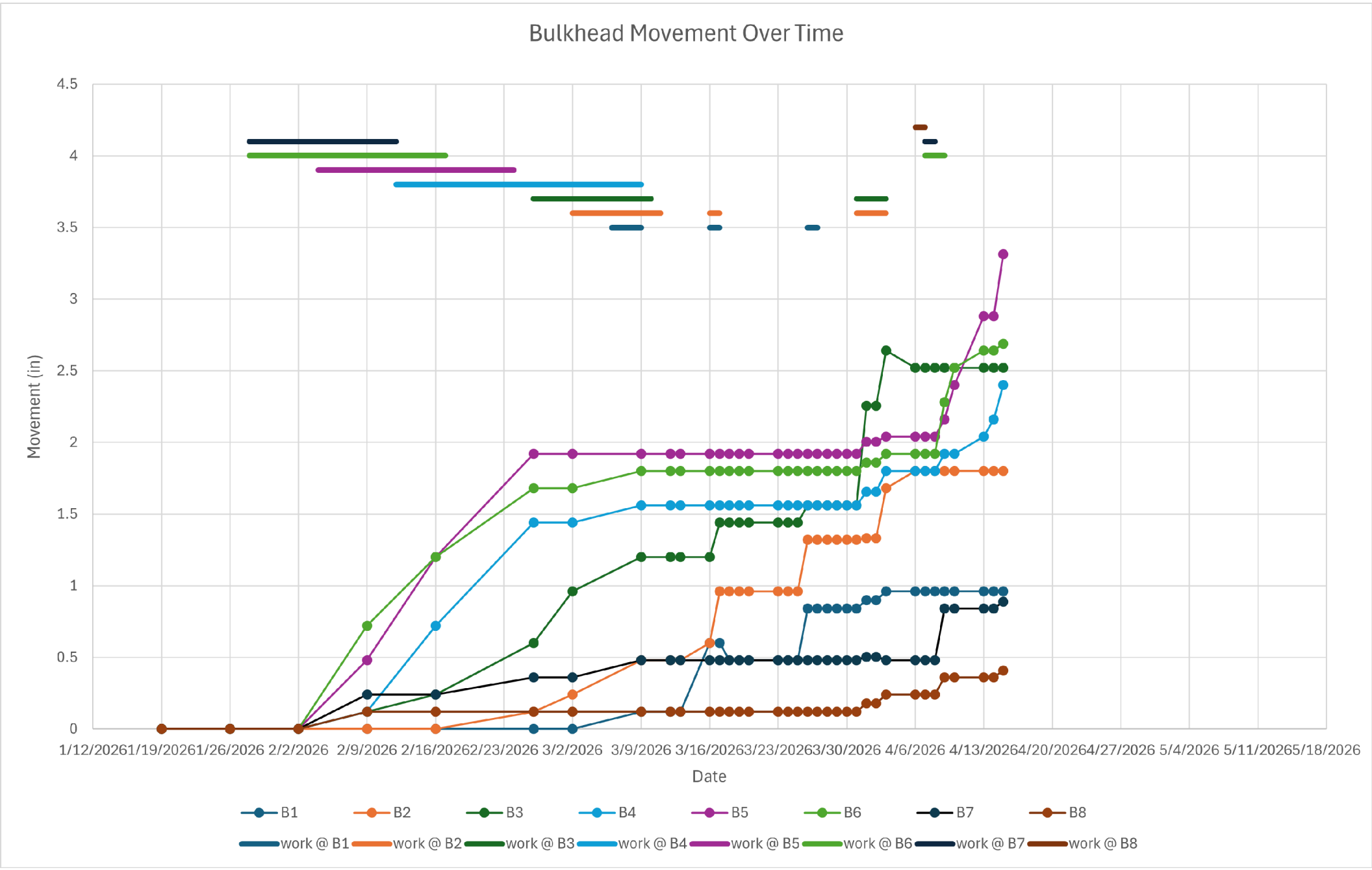
As Built 100% Complete

Bulkhead Repair

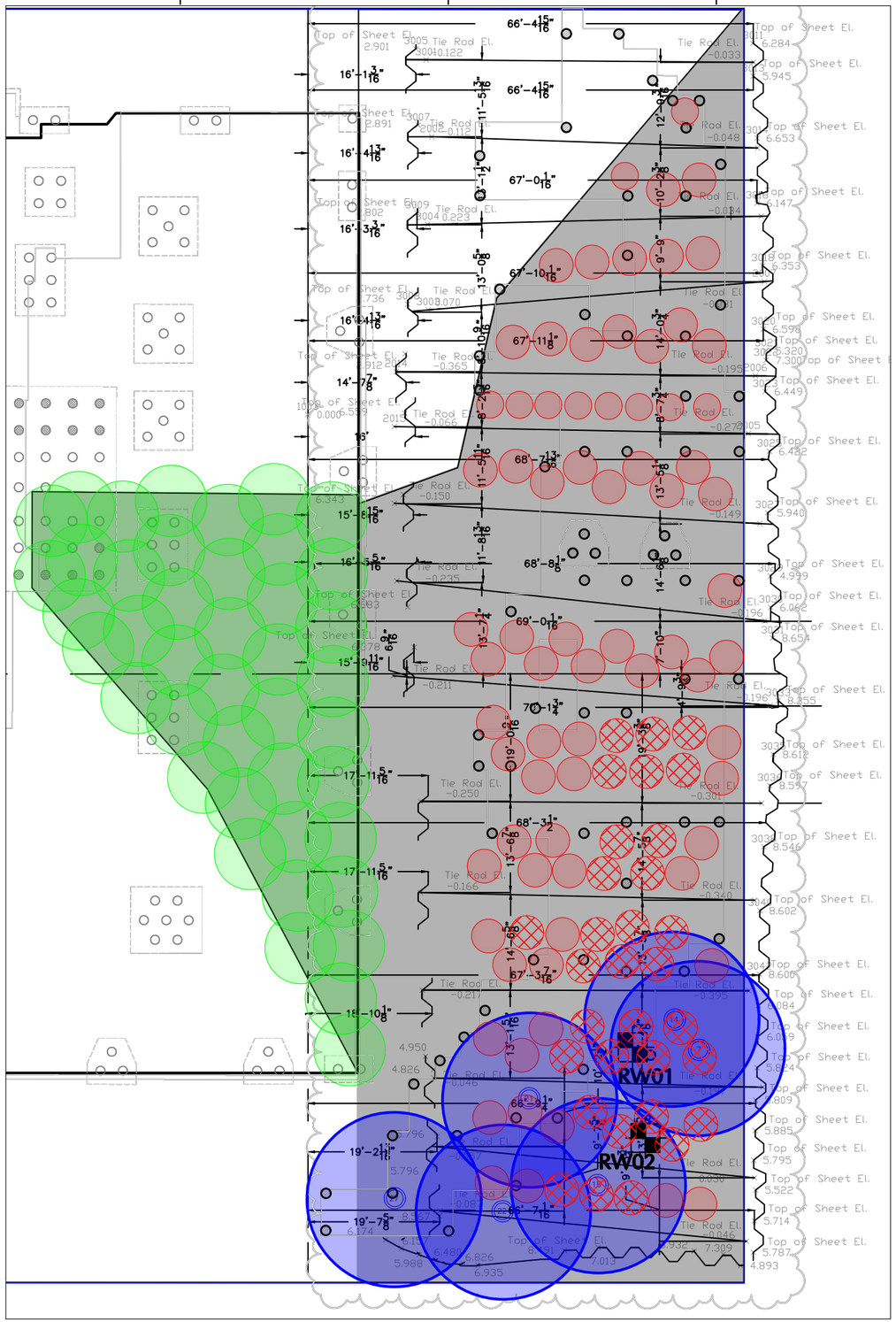
DATE 07/14/17
SHEET
AB - 03

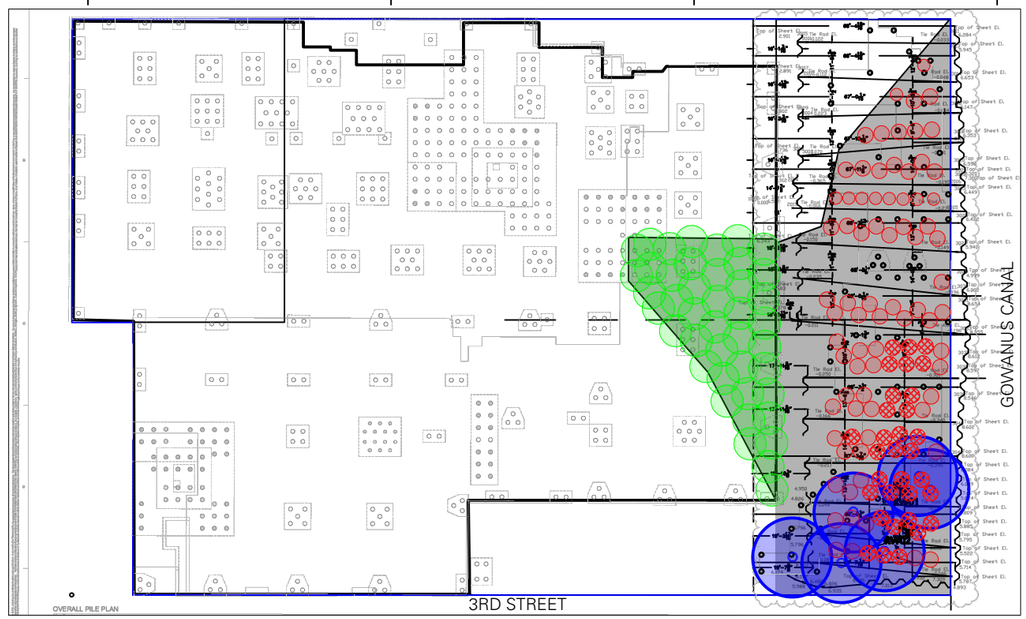
ATTACHMENT B – OPTICAL MONITORING PLOTS


DOT Property Movement Over Time
Date
1/12/2026 1/19/2026 1/26/2026 2/2/2026 2/9/2026 2/16/2026 2/23/2026 3/2/2026 3/9/2026 3/16/2026 3/23/2026 3/30/2026 4/6/2026 4/13/2026 4/20/2026 4/27/2026 5/4/2026 5/11/2026
Movement (in)
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
work @ B1
work @ B2
work @ B3
work @ B4
work @ B5
work @ B6
work @ B7
work @ B8
Pt 100 - Easting
Pt 100 - Northing
Pt 100 Elevation
Pt 101 - Easting
Pt 101 - Northing
Pt 101 - Elevation
Pt 102 - Easting
Pt 102 - Northing
Pt 102 - Elevation


Bulkhead Movement Over Time
Movement (in)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
1/12/2026 1/19/2026 1/26/2026 2/2/2026 2/9/2026 2/16/2026 2/23/2026 3/2/2026 3/9/2026 3/16/2026 3/23/2026 3/30/2026 4/6/2026 4/13/2026 4/20/2026 4/27/2026 5/4/2026 5/11/2026 5/18/2026
Date
B1
B2
B3
B4
B5
B6
B7
B8
work @ B1
work @ B2
work @ B3
work @ B4
work @ B5
work @ B6
work @ B7
work @ B8

ATTACHMENT C – REMEDIAL PROGRESS PLAN
(WITHIN BULKHEAD AREA)





SITE PLAN

SCALE: 1"=50'

LEGEND:

- APPROXIMATE SITE BOUNDARY
- PROPOSED BUILDING FOOTPRINT
- APPROXIMATE EXTENT OF MGP IMPACTS
- APPROXIMATE LOCATION OF ISS COLUMNS
- APPROXIMATE LOCATION OF COMPLETED SOURCE REMOVAL COLUMNS
- APPROXIMATE LOCATION OF UNCOMPLETED SOURCE REMOVAL COLUMNS
- APPROXIMATE LOCATION OF ISGS INJECTION POINTS
- APPROXIMATE LOCATION OF ISGS ROI
- APPROXIMATE LOCATION OF FDP ESPLANADE PILES
- RW01 — APPROXIMATE RECOVERY WELL LOCATION

20 0 5 10 20

SCALE: 1 INCH = 20 FEET

NOTES:

1. BASE MAP IS TAKEN FROM "OVERALL PILE PLAN", PREPARED BY DATTNER ARCHITECTS, DATED MARCH 12, 2024 AND THE WATERFRONT FINAL REPORT, PREPARED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPING ARCHITECTURE AND GEOLOGY, D.P.C. (LANGAN), DATED MARCH 21, 2018.
2. EL = ELEVATION
3. ISS = IN-SITU STABILIZATION/SOLIDIFICATION
4. ISGS = IN-SITU GEOCHEMICAL STABILIZATION
5. ROI = RADIUS OF INFLUENCE
6. FDP = FULL DISPLACEMENT PILES
7. MGP = MANUFACTURED GAS PLANT
8. INSTALLATION OF BULKHEAD SHEET PILES, DEADMEN, AND TIE RODS WERE COMPLETED IN AUGUST 2017.
9. THE EXTENT OF TREATMENT AREAS ARE BASED ON THE FINDINGS OF THE REMEDIAL INVESTIGATION REPORT, PREPARED BY LANGAN, JULY 10, 2023.
10. THE TREATMENT AREA WILL EXTEND TO A MINIMUM OF EL -23±.

LANGAN
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Project	141 3RD STREET BLOCK No. 462, LOT No. 12 BROOKLYN NEW YORK
Figure Title	REMEDIAL PROGRESS PLAN
Project No.	170390001
Date	04/21/2026
Drawn By	GD
Checked By	GN
Figure No.	1

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Filename: \\langan.com\data\NY\data0\170390001\Cadd Data - 170390001\SheetFiles_Environmental\Engineering Control Progress\2026.04.21 - 141 Third Street Remedial Progress.dwg Date: 3/12/2024 Time: 11:00 User: hbluestone Style Table: Langan.stb Layout: Layout1