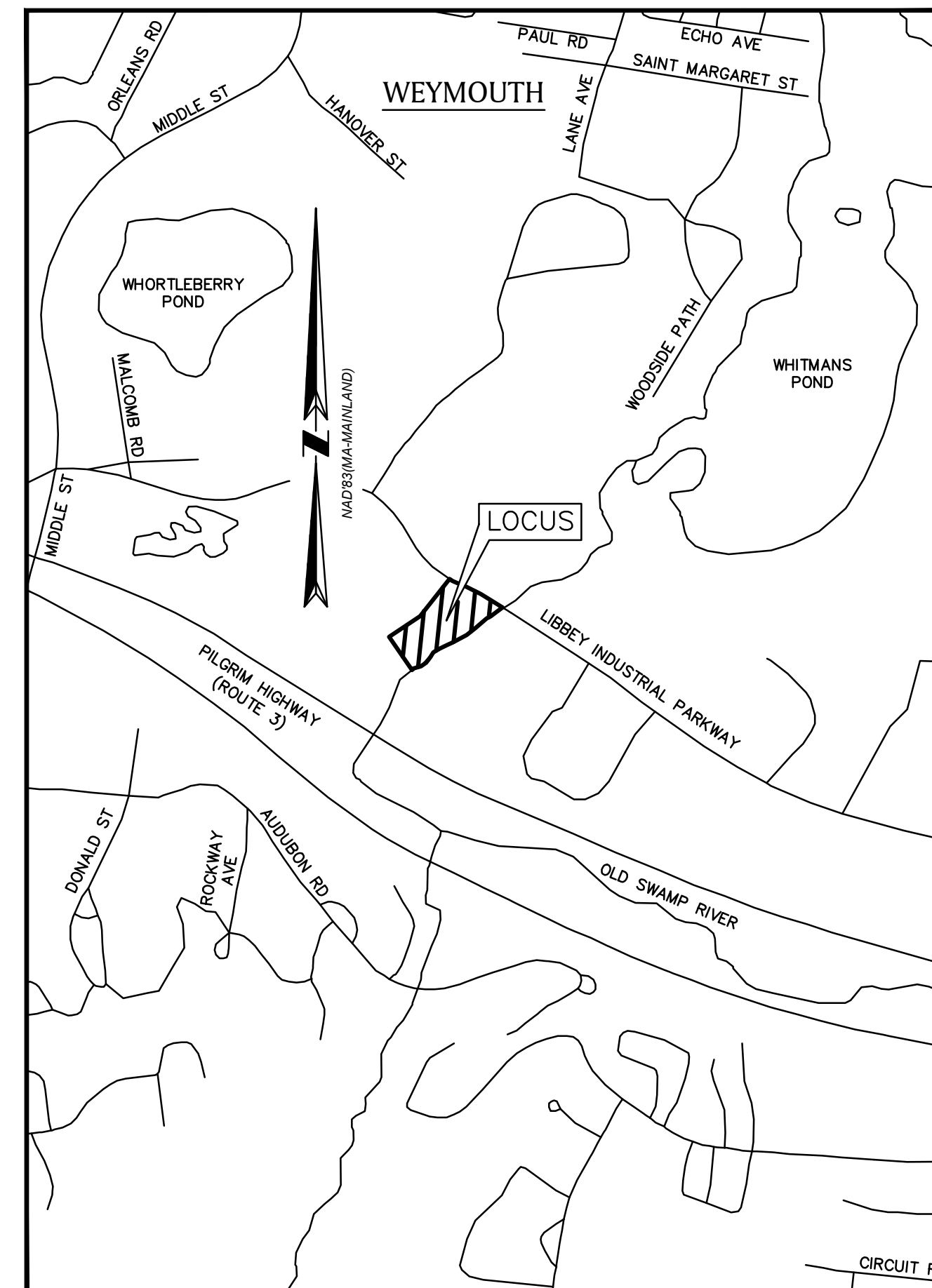


BASE MAPPING AND FIELD DATA COLLECTION OLD SWAMP RIVER AND SNUP

LIBBEY INDUSTRIAL PARKWAY
WEYMOUTH, MA

JUNE 30, 2022

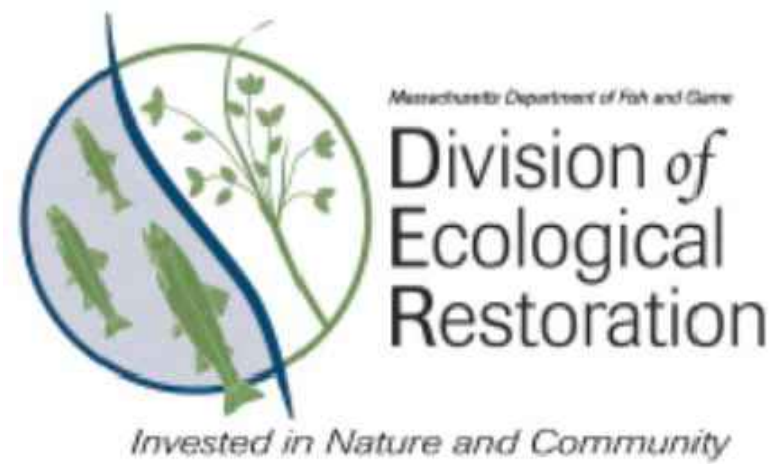


LOCUS MAP

250 0 500 1000 1500 feet
SCALE: 1" = 500'±

INDEX OF DRAWINGS

- 1 Title Sheet
- 2 Existing Conditions Plan
- 3 Bathymetric Plan, Long Profile and Sediment Mapping
- 4-5 Channel and Pond Sections



PREPARED FOR:

MASSACHUSETTS DIVISION OF
ECOLOGICAL RESTORATION
251 CAUSEWAY ST., STE 400,
BOSTON, MA 02114

PREPARED
BY:



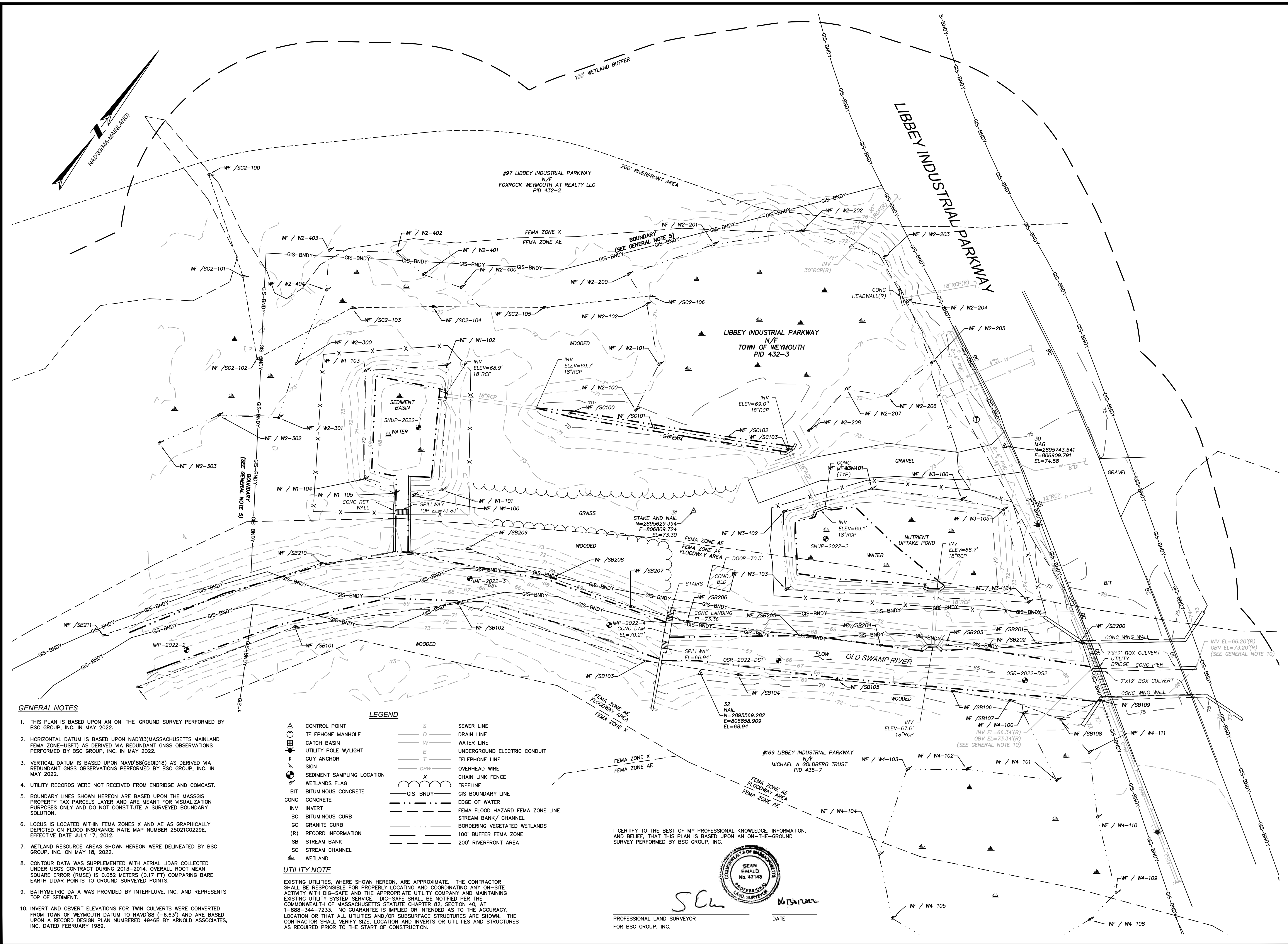
33 Waldo Street
Worcester, Massachusetts
01608

508 792 4500

&



220 Concord Avenue, 2nd Floor
Cambridge, MA 02136
617.714.5537
www.interfluve.com



- GENERAL NOTES**
- THIS PLAN IS BASED UPON AN ON-THE-GROUND SURVEY PERFORMED BY BSC GROUP, INC. IN MAY 2022.
 - HORIZONTAL DATUM IS BASED UPON NAD'83(MASSACHUSETTS MAINLAND FEMA ZONE-USFT) AS DERIVED VIA REDUNDANT GNSS OBSERVATIONS PERFORMED BY BSC GROUP, INC. IN MAY 2022.
 - VERTICAL DATUM IS BASED UPON NAVD'88(GEOD18) AS DERIVED VIA REDUNDANT GNSS OBSERVATIONS PERFORMED BY BSC GROUP, INC. IN MAY 2022.
 - UTILITY RECORDS WERE NOT RECEIVED FROM ENBRIDGE AND COMCAST.
 - BOUNDARY LINES SHOWN HEREON ARE BASED UPON THE MASSGIS PROPERTY TAX PARCELS LAYER AND ARE MEANT FOR VISUALIZATION PURPOSES ONLY AND DO NOT CONSTITUTE A SURVEYED BOUNDARY SOLUTION.
 - LOCUS IS LOCATED WITHIN FEMA ZONES X AND AE AS GRAPHICALLY DEPICTED ON FLOOD INSURANCE RATE MAP NUMBER 25021C0229E, EFFECTIVE DATE JULY 17, 2012.
 - WETLAND RESOURCE AREAS SHOWN HEREON WERE DELINEATED BY BSC GROUP, INC. ON MAY 18, 2022.
 - CONTOUR DATA WAS SUPPLEMENTED WITH AERIAL LIDAR COLLECTED UNDER USGS CONTRACT DURING 2013-2014. OVERALL ROOT MEAN SQUARE ERROR (RMSE) IS 0.052 METERS (0.17 FT) COMPARING BARE EARTH LIDAR POINTS TO GROUND SURVEYED POINTS.
 - BATHYMETRIC DATA WAS PROVIDED BY INTERFLUVE, INC. AND REPRESENTS TOP OF SEDIMENT.
 - INVERT AND OBVERT ELEVATIONS FOR TWIN CULVERTS WERE CONVERTED FROM TOWN OF WEYMOUTH DATUM TO NAVD'88 (-6.63') AND ARE BASED UPON A RECORD DESIGN PLAN NUMBERED 49466 BY ARNOLD ASSOCIATES, INC. DATED FEBRUARY 1989.

LEGEND

| | | | |
|------|----------------------------|--------------|----------------------------------|
| ▲ | CONTROL POINT | — S — | SEWER LINE |
| ⊙ | TELEPHONE MANHOLE | — D — | DRAIN LINE |
| ⊕ | CATCH BASIN | — W — | WATER LINE |
| ⊕ | UTILITY POLE W/LIGHT | — E — | UNDERGROUND ELECTRIC CONDUIT |
| ⊕ | GUY ANCHOR | — T — | TELEPHONE LINE |
| ⊕ | SIGN | — OHW — | OVERHEAD WIRE |
| ⊕ | SEDIMENT SAMPLING LOCATION | — X — | CHAIN LINK FENCE |
| ⊕ | WETLANDS FLAG | — T — | TREELINE |
| BIT | BITUMINOUS CONCRETE | — GIS-BNDY — | GIS BOUNDARY LINE |
| CONC | CONCRETE | — E — | EDGE OF WATER |
| INV | INVERT | — F — | FEMA FLOOD HAZARD FEMA ZONE LINE |
| BC | BITUMINOUS CURB | — S — | STREAM BANK / CHANNEL |
| GC | GRANITE CURB | — B — | BORDERING VEGETATED WETLANDS |
| (R) | RECORD INFORMATION | — 100' — | 100' BUFFER FEMA ZONE |
| SB | STREAM BANK | — 200' — | 200' RIVERFRONT AREA |
| SC | STREAM CHANNEL | | |
| W | WETLAND | | |

UTILITY NOTE

EXISTING UTILITIES, WHERE SHOWN HEREON, ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY LOCATING AND COORDINATING ANY ON-SITE ACTIVITY WITH DIG-SAFE AND THE APPROPRIATE UTILITY COMPANY AND MAINTAINING EXISTING UTILITY SYSTEM SERVICE. DIG-SAFE SHALL BE NOTIFIED PER THE COMMONWEALTH OF MASSACHUSETTS STATUTE CHAPTER 82, SECTION 40, AT 1-888-344-7233. NO GUARANTEE IS IMPLIED OR INTENDED AS TO THE ACCURACY, LOCATION OR THAT ALL UTILITIES AND/OR SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION AND INVERTS OR UTILITIES AND STRUCTURES AS REQUIRED PRIOR TO THE START OF CONSTRUCTION.

I CERTIFY TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN IS BASED UPON AN ON-THE-GROUND SURVEY PERFORMED BY BSC GROUP, INC.

SEAN EWALD
No. 47143
PROFESSIONAL LAND SURVEYOR

PROFESSIONAL LAND SURVEYOR
FOR BSC GROUP, INC.

DATE

EXISTING CONDITIONS PLAN

LIBBEY INDUSTRIAL PARKWAY
IN
WEYMOUTH MASSACHUSETTS
(NORFOLK COUNTY)

OLD SWAMP RIVER

JUNE 30, 2022

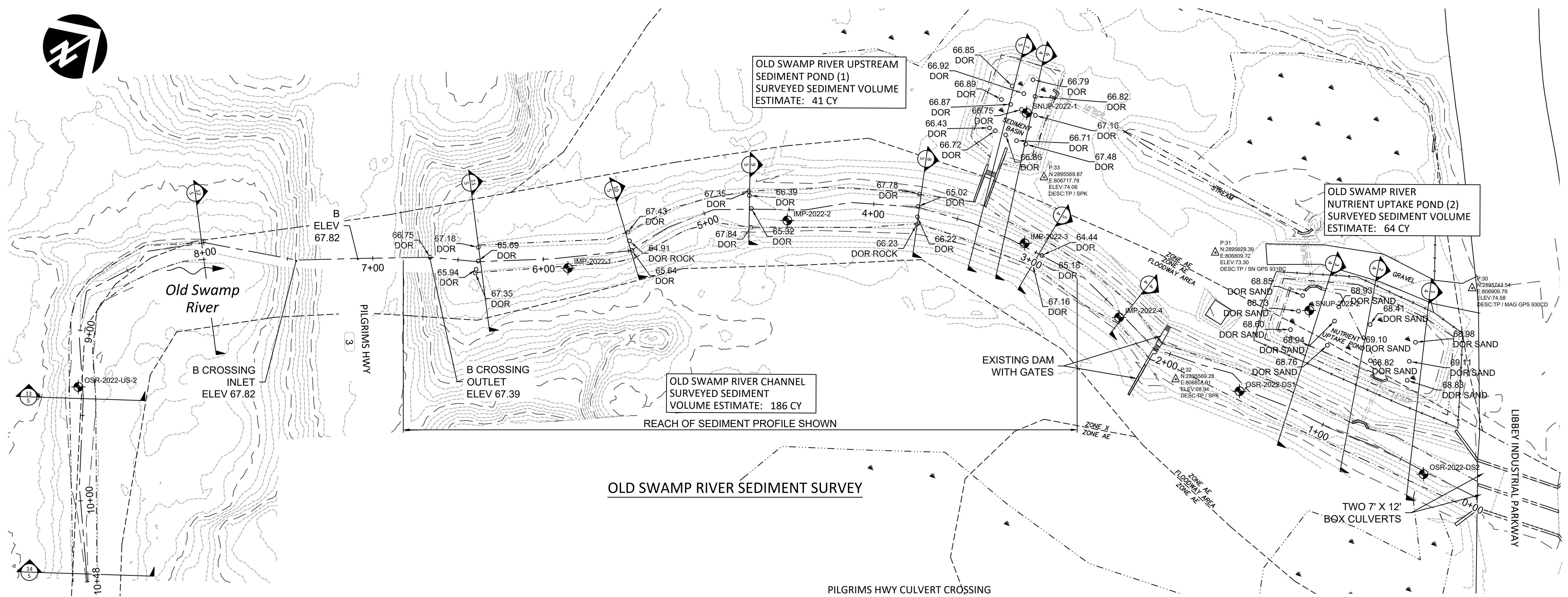
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BOSTON, MA 02114

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Cambridge, MA 02136
617.714.5537
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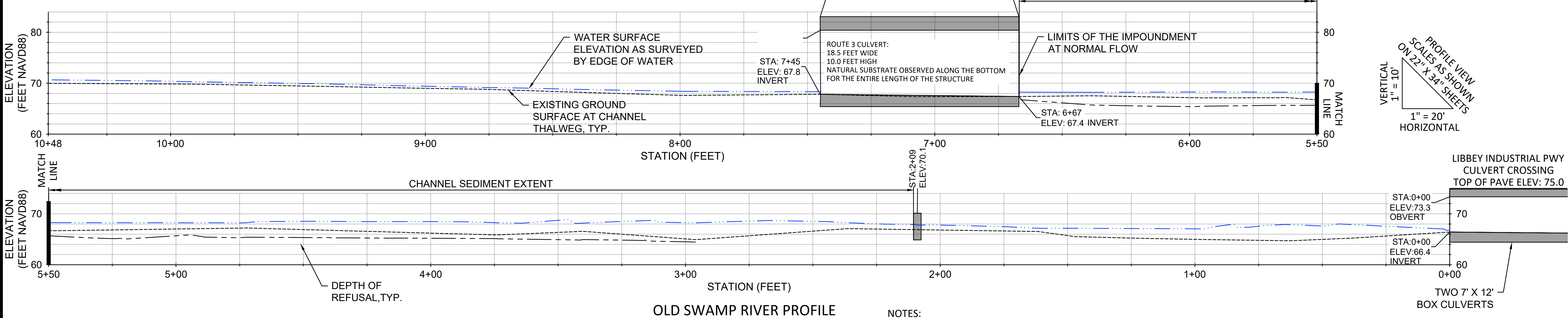
803 Summer Street
Boston, Massachusetts
02127
617 896 4300

© 2022 BSC Group, Inc.
SCALE: 1" = 20'
0 2.5 5 10 METERS
0 10 20 40 FEET

| | |
|---------------|--------------------------------|
| PROJ. MGR.: | S.BONIN |
| FIELD: | J.PINTAVALLE, B.SNEESBY |
| CALC./DESIGN: | — |
| DRAWN: | S.BONIN |
| CHECK: | S.EWALD |
| FILE: | P: 8999300\SD\F\8999300EC3.DWG |
| DWG: | 8999300EC3 |
| SHEET | |
| JOB. NO: | 8-9993.00 |
| | 2 OF 5 |



OLD SWAMP RIVER SEDIMENT SURVEY



OLD SWAMP RIVER PROFILE

- LEGEND**
- 67.35 DOR: SEDIMENT PROBE LOCATION. DEPTH OF REFUSAL REPRESENTS THE ELEVATION OF THE BOTTOM OF THE SEDIMENT LAYER IN FEET NAVD 88
 - : EDGE OF WATER
 - IMP-2022-2: SEDIMENT SAMPLE LOCATIONS
 - : EXISTING 5 FT CONTOUR
 - : EXISTING 1 FT CONTOUR

- NOTES:**
1. THIS PLAN IS BASED UPON AN ON-THE-GROUND SURVEY PERFORMED BY BSC GROUP, INC IN MAY 2022 AND AN ON-THE-GROUND BATHYMETRIC AND CHANNEL SURVEY PERFORMED BY INTER-FLUVE, INC IN MAY AND JUNE 2022.
 2. THE EXISTING GROUND SURFACE REPRESENTS THE TOP OF THE SEDIMENT. THE DEPTH OF REFUSAL REPRESENTS THE BOTTOM OF THE SEDIMENT AT THE SAME LOCATION.
 3. "DOR": DEPTH OF REFUSAL. THE VALUES ASSOCIATED WITH THESE POINTS ARE PRESENTED HERE AS ELEVATIONS IN FEET NAVD88.
 4. "B": BED. REFERS TO THE ELEVATION OF THE STREAMBED, SHOWN ON THE PLAN AT THE INLET, OUTLET AND INTERIOR OF THE ROUTE 3 CROSSING.
 5. THE EDGE OF WATER SHOWN IN PLAN VIEW AND THE WATER SURFACE SHOWN IN THE PROFILE WAS MEASURED IN THE FIELD ON MAY 11, 2022.
 6. THE DIMENSIONS OF THE ROUTE 3 CULVERT (MassDOT W32032 8LS) WERE MEASURED IN THE FIELD.

BATHYMETRIC PLAN, LONG PROFILE, AND SEDIMENT MAPPING

LIBBEY INDUSTRIAL PARKWAY

IN WEYMOUTH MASSACHUSETTS (NORFOLK COUNTY)

OLD SWAMP RIVER AND SEDIMENT NUTRIENT UPTAKE PONDS (SNUP)

JUNE 30, 2022

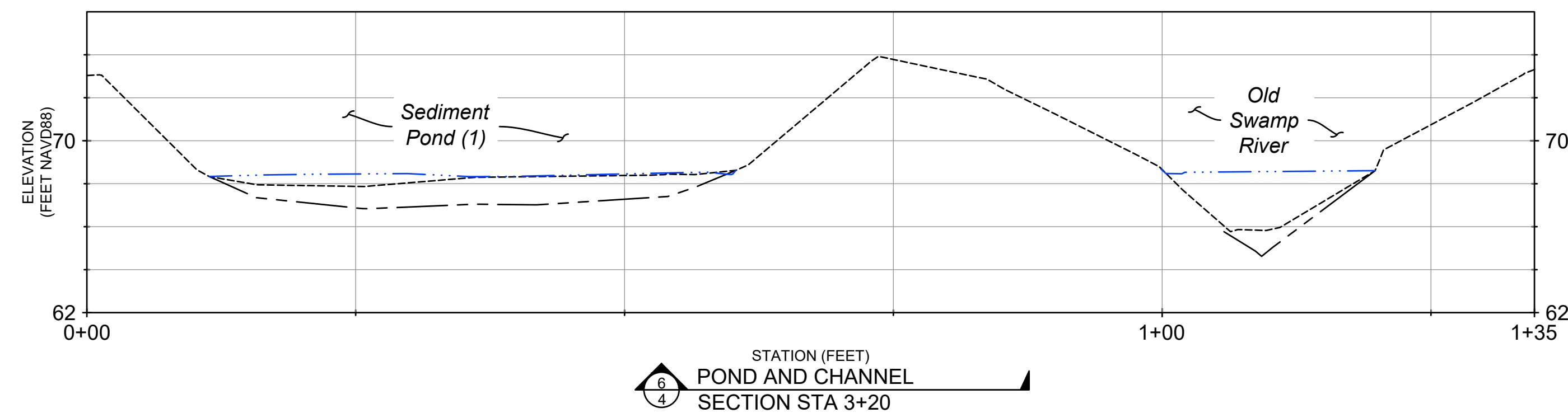
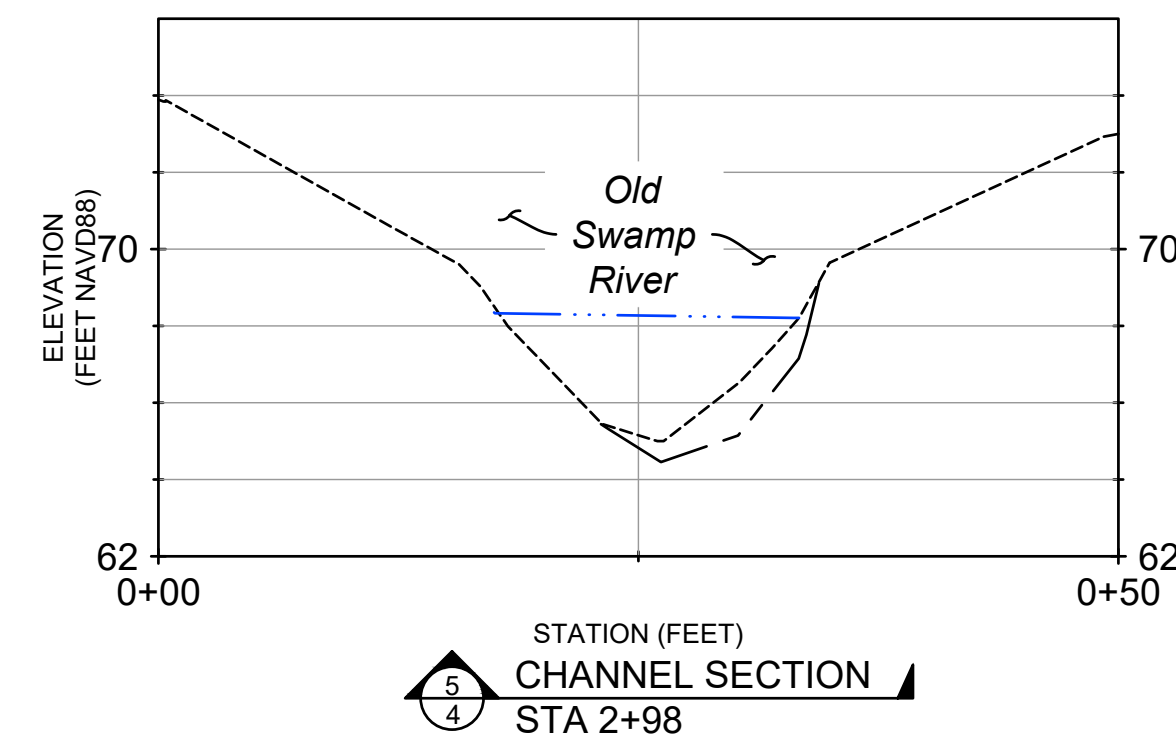
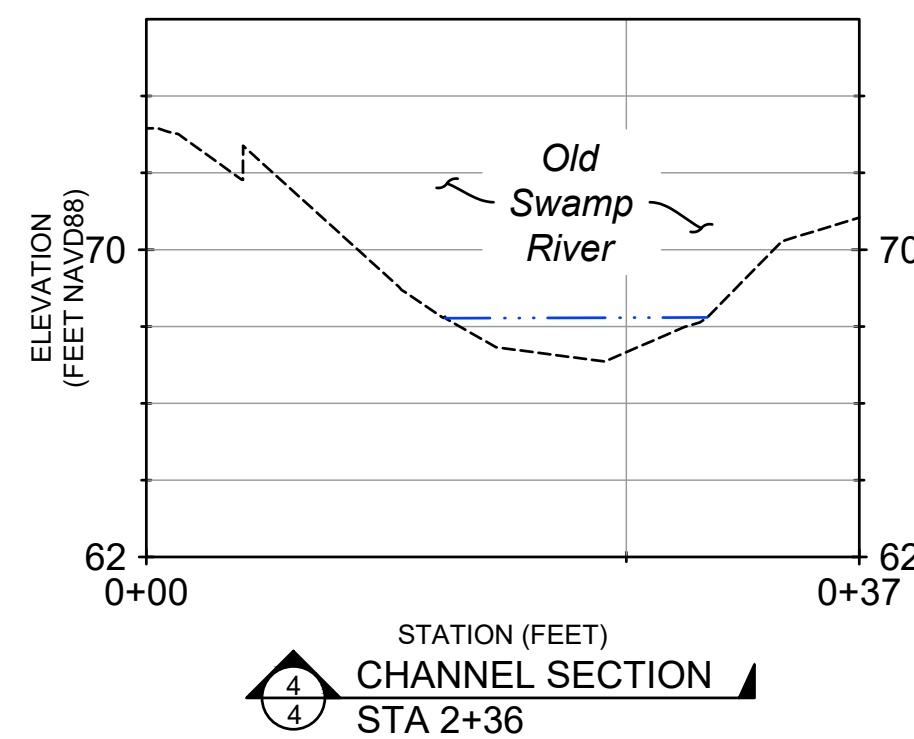
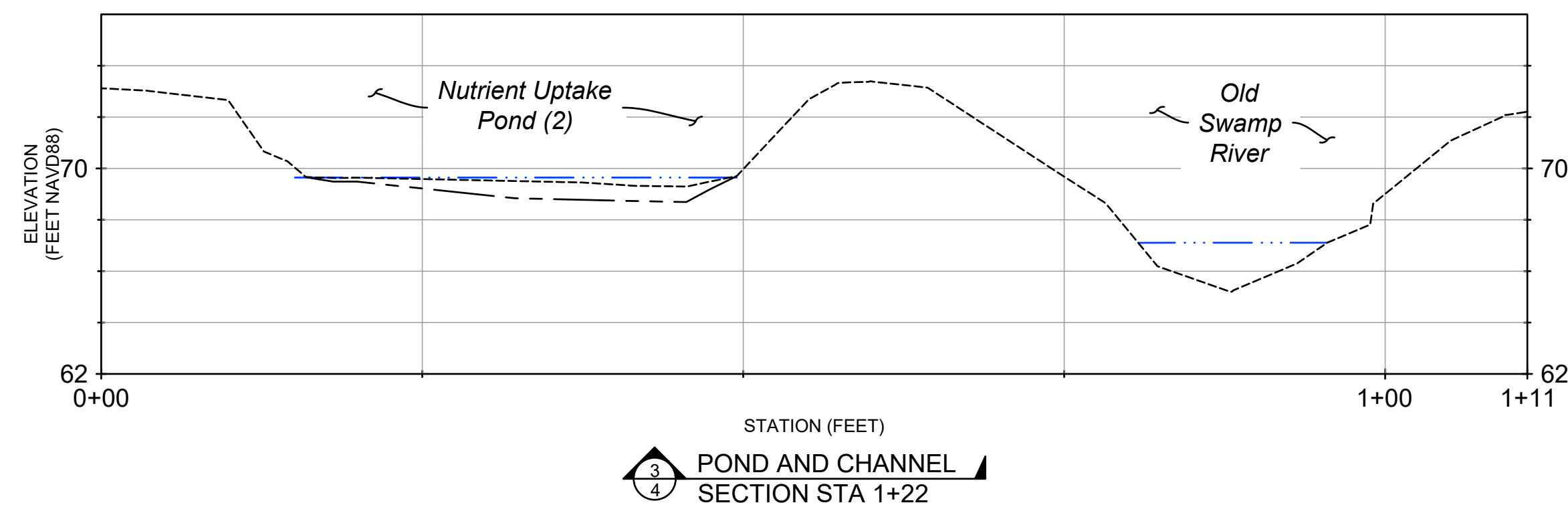
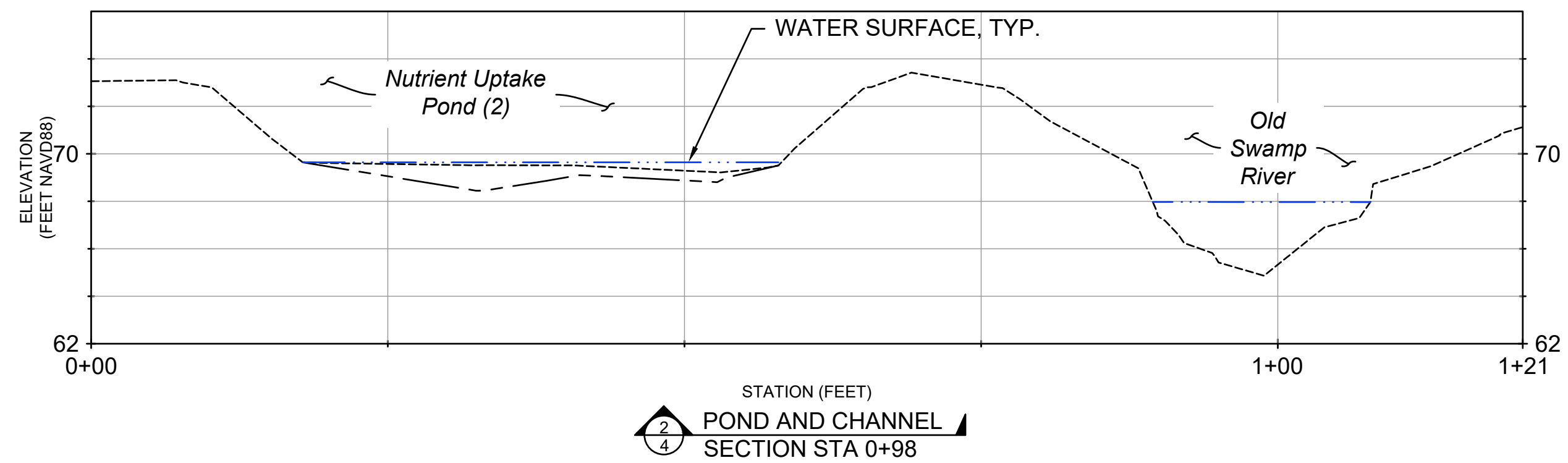
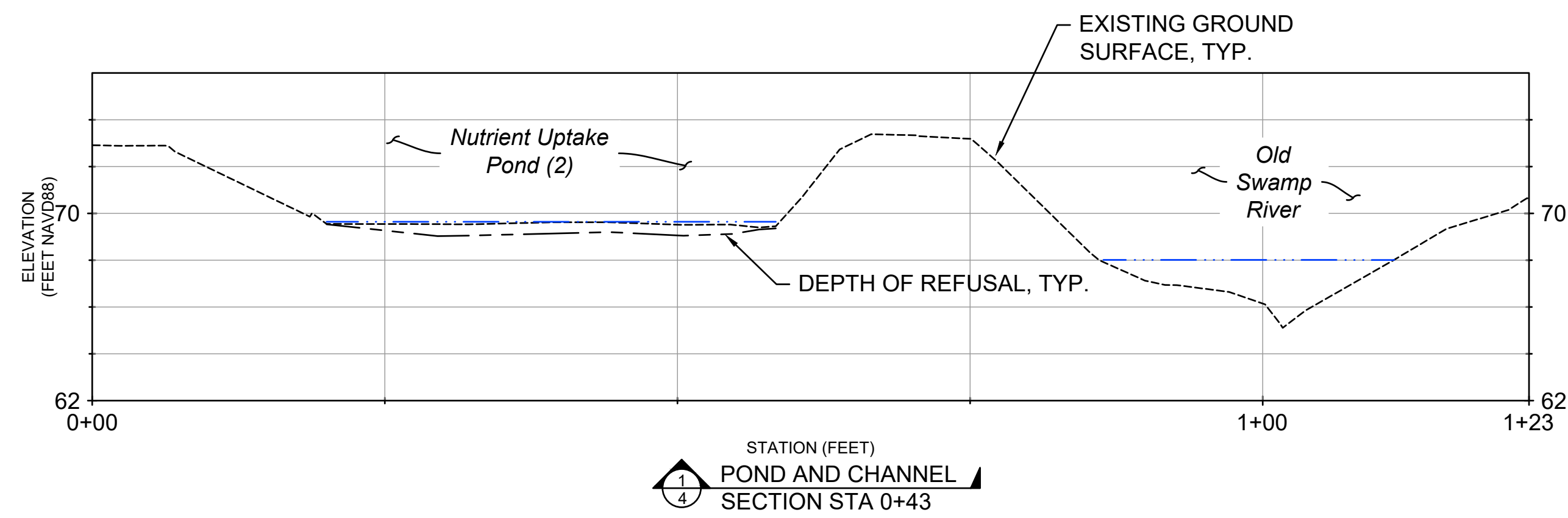
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BOSTON, MA 02114

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Worcester, Massachusetts
01608
508 792 4500

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PLAN VIEW HORIZONTAL SCALE: 1" = 30'
0 3.75 7.5 15 METERS
0 15 30 60 FEET

| | |
|--------------------------------------|--------|
| PROJ. MGR.: S.WIDING | |
| FIELD: N.SMITH, M.BRUNFELT, N.NELSON | |
| CALC./DESIGN: S.WIDING, S.JOHNSON | |
| DRAWN: S.JOHNSON | |
| CHECK: S.WIDING | |
| FILE: N:\DERMaldenOldSwamp_220511\ | |
| DWG.: WEYMOUTH | SHEET |
| JOB. NO: 8-9993.00 | 3 OF 5 |



LEGEND

- EXISTING GROUND
- - - - - DEPTH OF REFUSAL
- WATER SURFACE

NOTES:

1. SECTIONS ARE ORIENTED TO FACE DOWNSTREAM.
2. THE EXISTING GROUND REPRESENTED ON THESE SECTIONS IS DERIVED FROM A FIELD SURVEY COLLECTED BY INTER-FLUVE, INC. ON MAY 11, 2022 FOR THE PURPOSE OF DEFINING THE BATHYMETRY AND THICKNESS OF SEDIMENT.
3. THE EXISTING GROUND SURFACE REPRESENTS THE ELEVATION OF THE EARTHEN SURFACE AT THE BED OF THE POND OR RIVER. THE DEPTH OF REFUSAL REPRESENTS THE ELEVATION OF THE BOTTOM OF THE SEDIMENT LAYER AT THE SAME LOCATION.
4. OUTSIDE OF THE CHANNEL AND POND AREAS, THE SECTIONS PRESENTED ON THIS SHEET INCLUDE TOPOGRAPHIC DATA THAT WAS COLLECTED BY BSC GROUP OBTAINED AS PART OF THIS SAME CONTRACT WITH MassDER, AND LIDAR DATA OBTAINED FROM MassGIS (2013-2014).
5. THE WATER SURFACE SHOWN ON THESE SECTIONS WAS MEASURED IN THE FIELD ON MAY 11, 2022.

PROFILE VIEW
 SCALES AS SHOWN
 ON 22" X 34" SHEETS
 VERTICAL
 1" = 5'
 HORIZONTAL
 1" = 10'

CHANNEL AND POND SECTIONS (1 OF 2)

IN
WEYMOUTH MASSACHUSETTS
 (NORFOLK COUNTY)

OLD SWAMP RIVER AND SEDIMENT NUTRIENT UPTAKE PONDS (SNUP)

JUNE 30, 2022

PREPARED FOR:
 MASSACHUSETTS DIVISION OF
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 Cambridge, MA 02136
 617.714.5537
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33 Waldo Street
 Worcester, Massachusetts
 01608
 508 792 4500

© 2021 BSC Group, Inc.
 SECTION HORIZONTAL SCALE: 1" = 10'
 0 1.25 2.5 5 METERS
 0 5 10 20 FEET

PROJ. MGR.: S.WIDING
 FIELD: N.SMITH, M.BRUNFELT, N.NELSON
 CALC./DESIGN: S.WIDING, S.JOHNSON
 DRAWN: S.JOHNSON
 CHECK: S.WIDING
 FILE: N:\DERMaldenOldSwamp_220511\
 DWG.: WEYMOUTH SHEET
 JOB. NO: 8-9993.00 4 OF 5

CHANNEL AND POND SECTIONS (2 OF 2)

IN
WEYMOUTH
MASSACHUSETTS
(NORFOLK COUNTY)

OLD SWAMP RIVER
AND SEDIMENT
NUTRIENT UPTAKE
PONDS (SNUP)

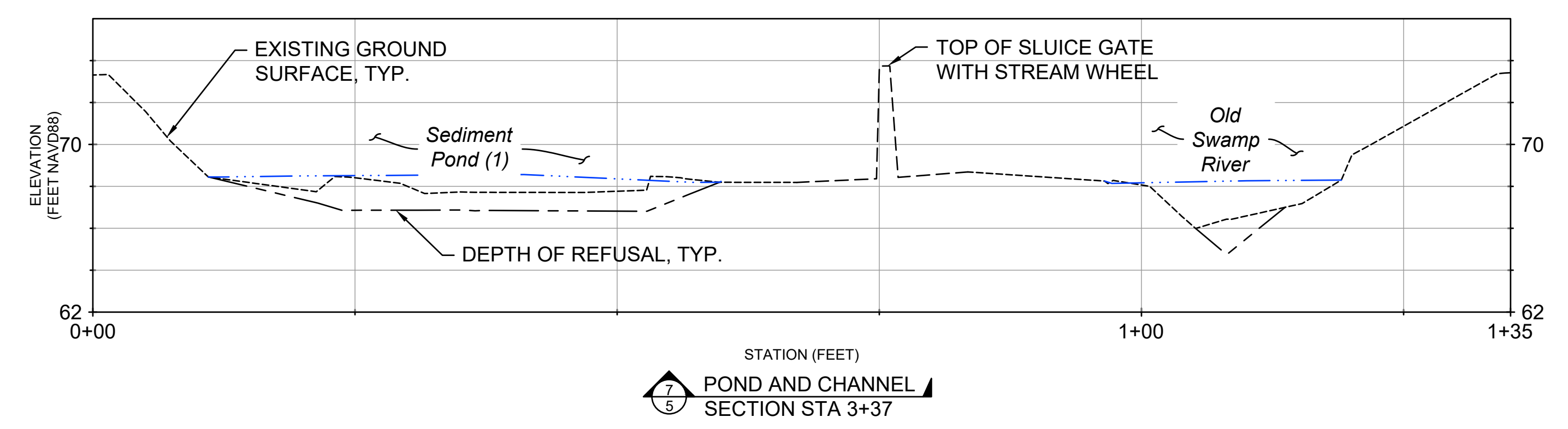
JUNE 30, 2022

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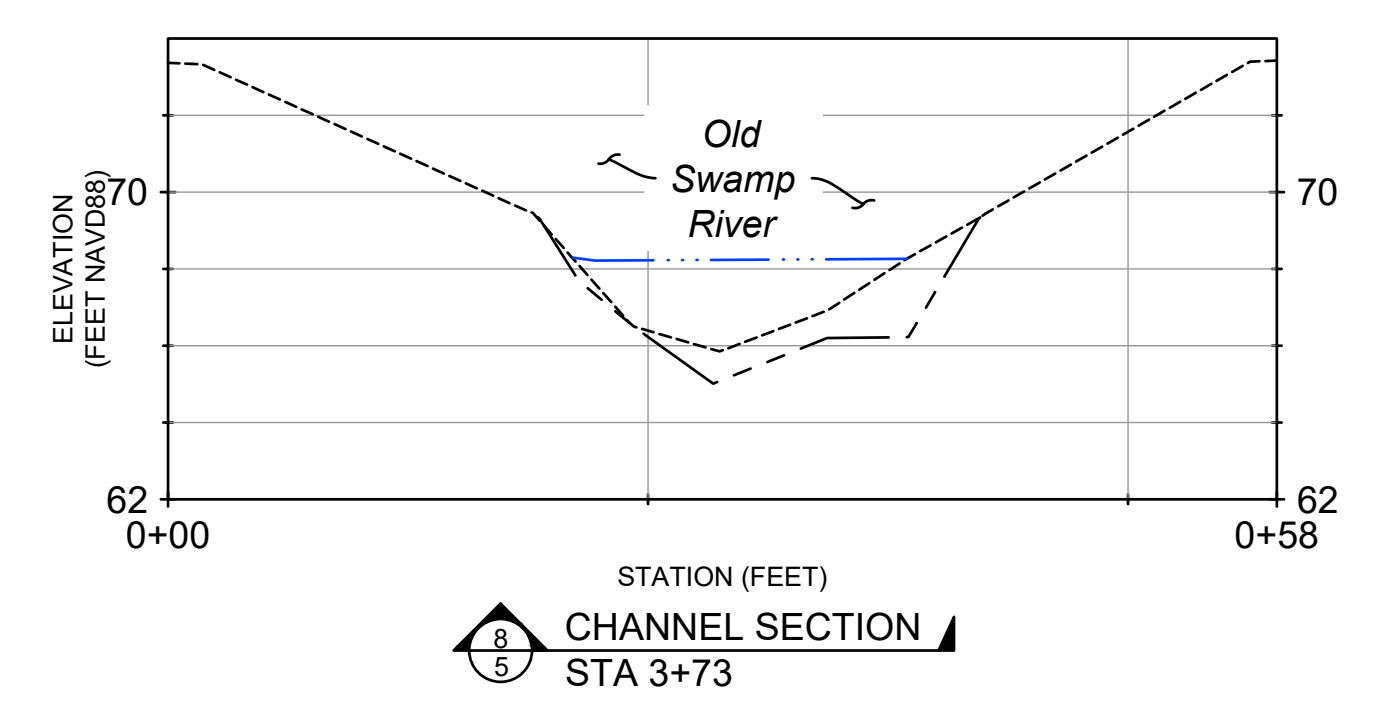
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| © 2021 BSC Group, Inc. | |
| SECTION HORIZONTAL SCALE: | 1" = 10' |
| | |
| PROJ. MGR.: | S.WIDING |
| FIELD: | N.SMITH, M.BRUNFELT, N.NELSON |
| CALC./DESIGN: | S.WIDING, S.JOHNSON |
| DRAWN: | S.JOHNSON |
| CHECK: | S.WIDING |
| FILE: | N:\DERMaldenOldSwamp_220511\ |
| DWG.: | WEYMOUTH SHEET |
| JOB. NO.: | 8-9993.00 5 OF 5 |

PROFILE VIEW
SCALES AS SHOWN
ON 22" X 34" SHEETS
VERTICAL 1" = 5'
HORIZONTAL 1" = 10'

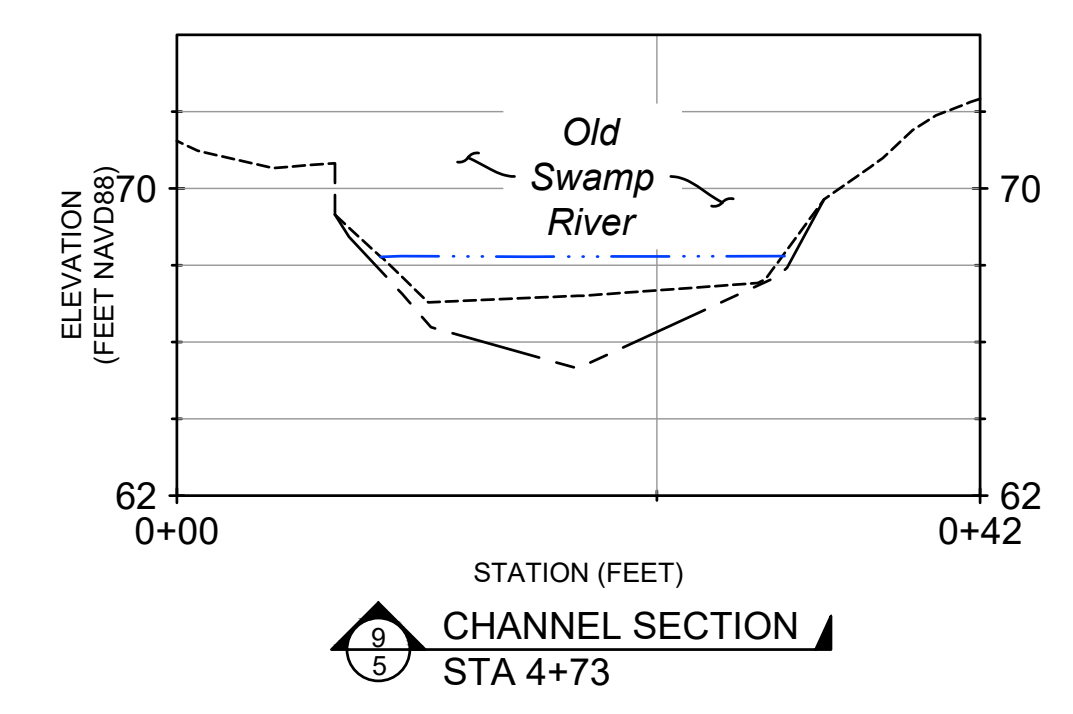


SECTION STA 3+37

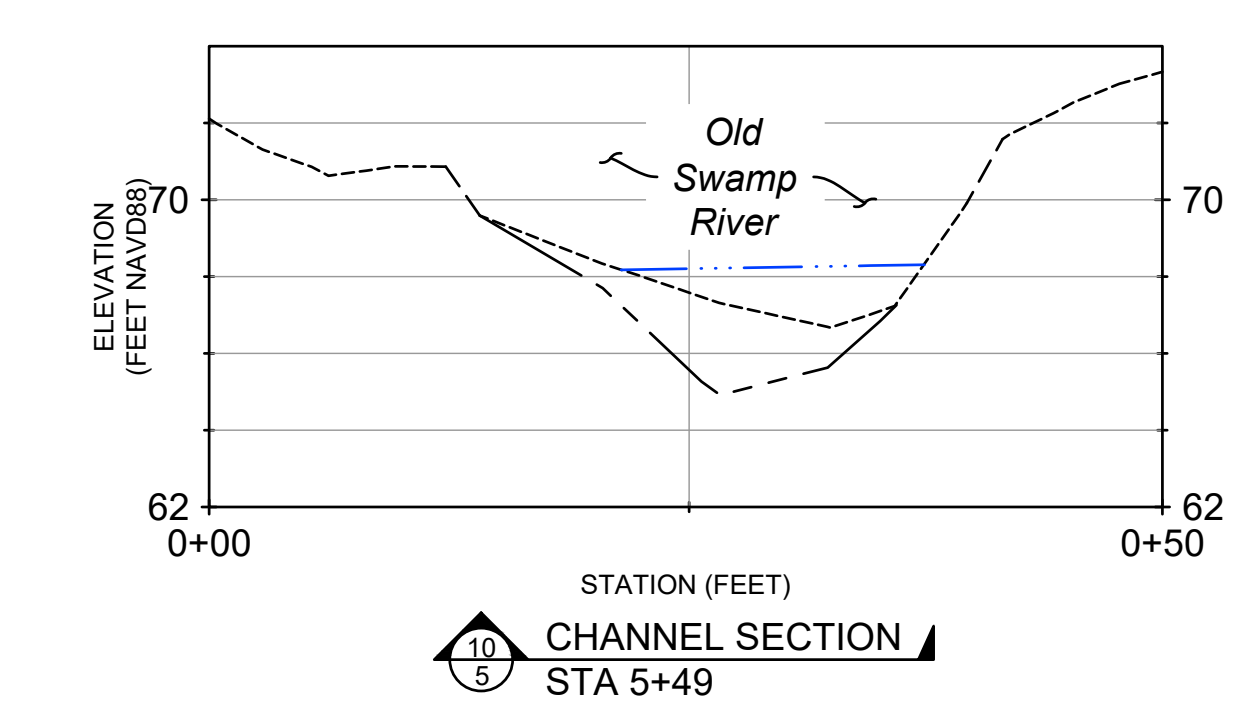
- LEGEND**
- EXISTING GROUND
 - DEPTH OF REFUSAL
 - · — · — WATER SURFACE



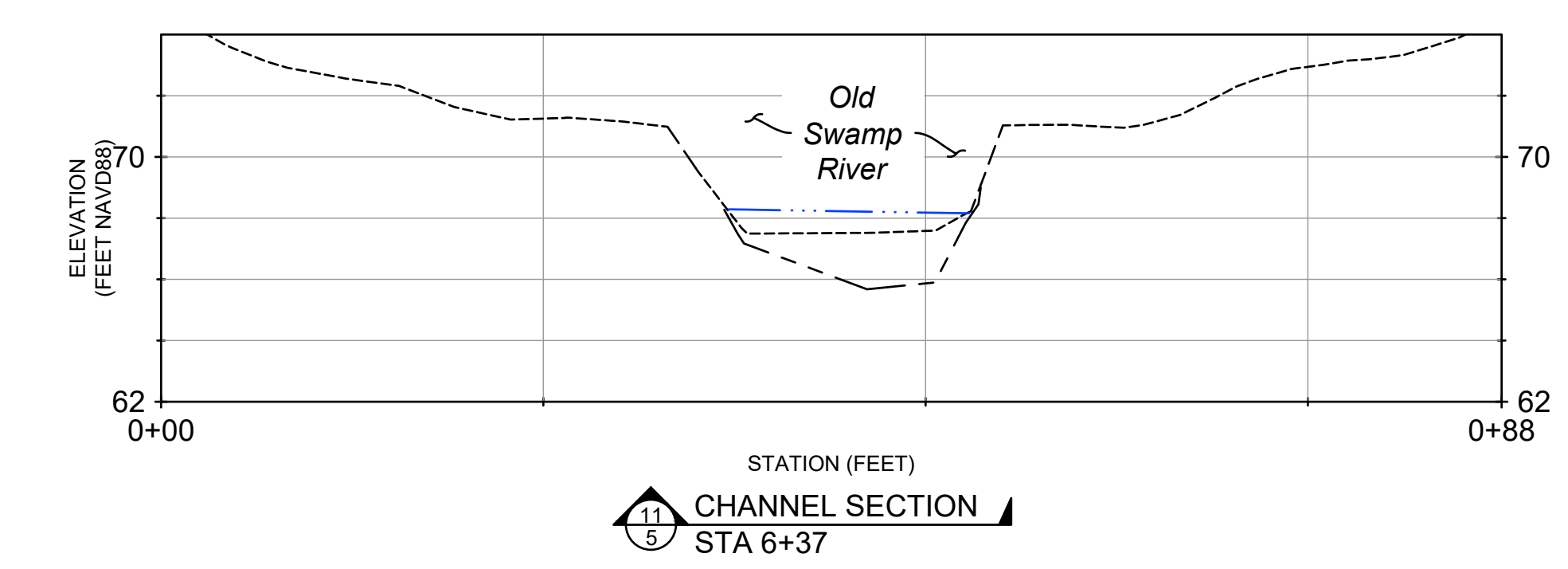
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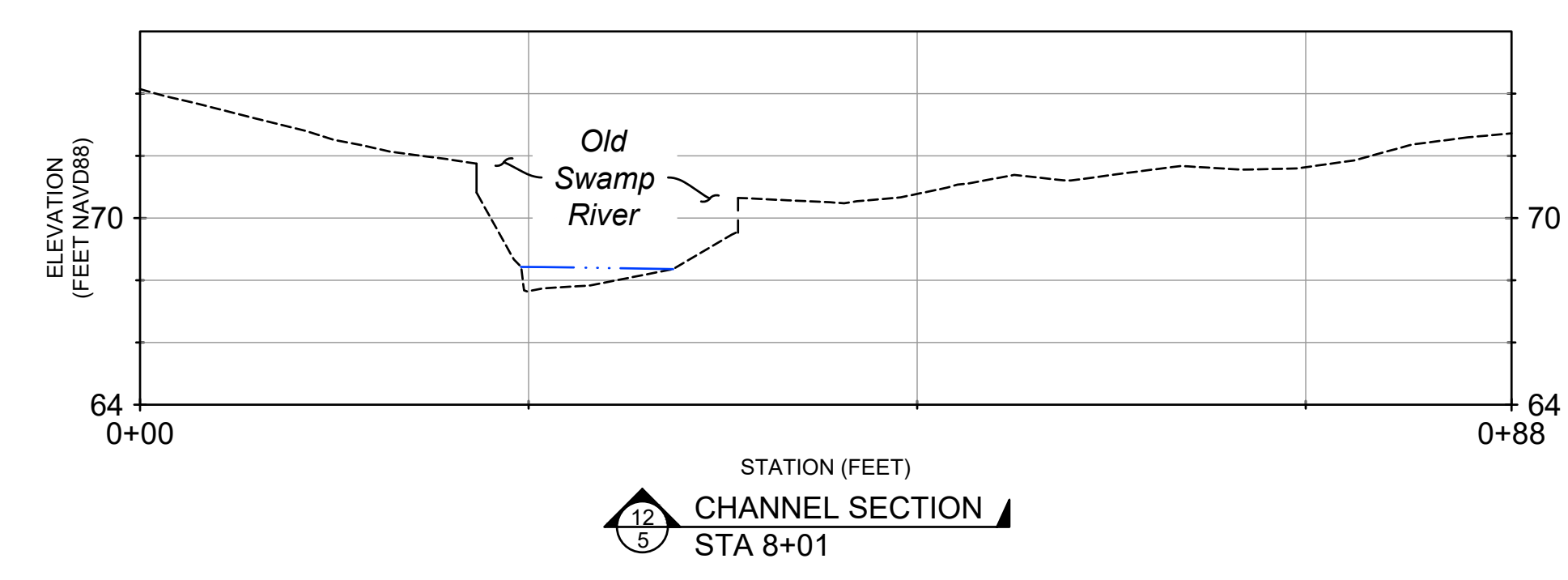
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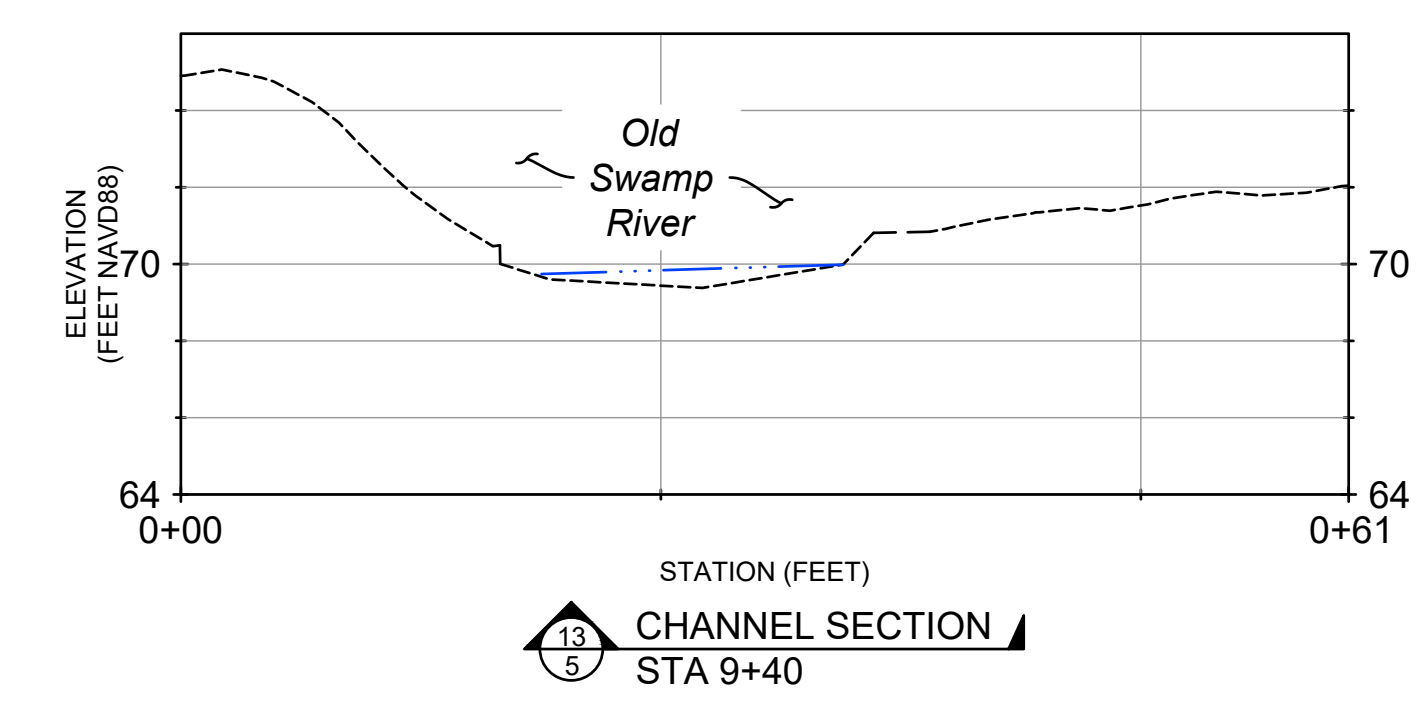
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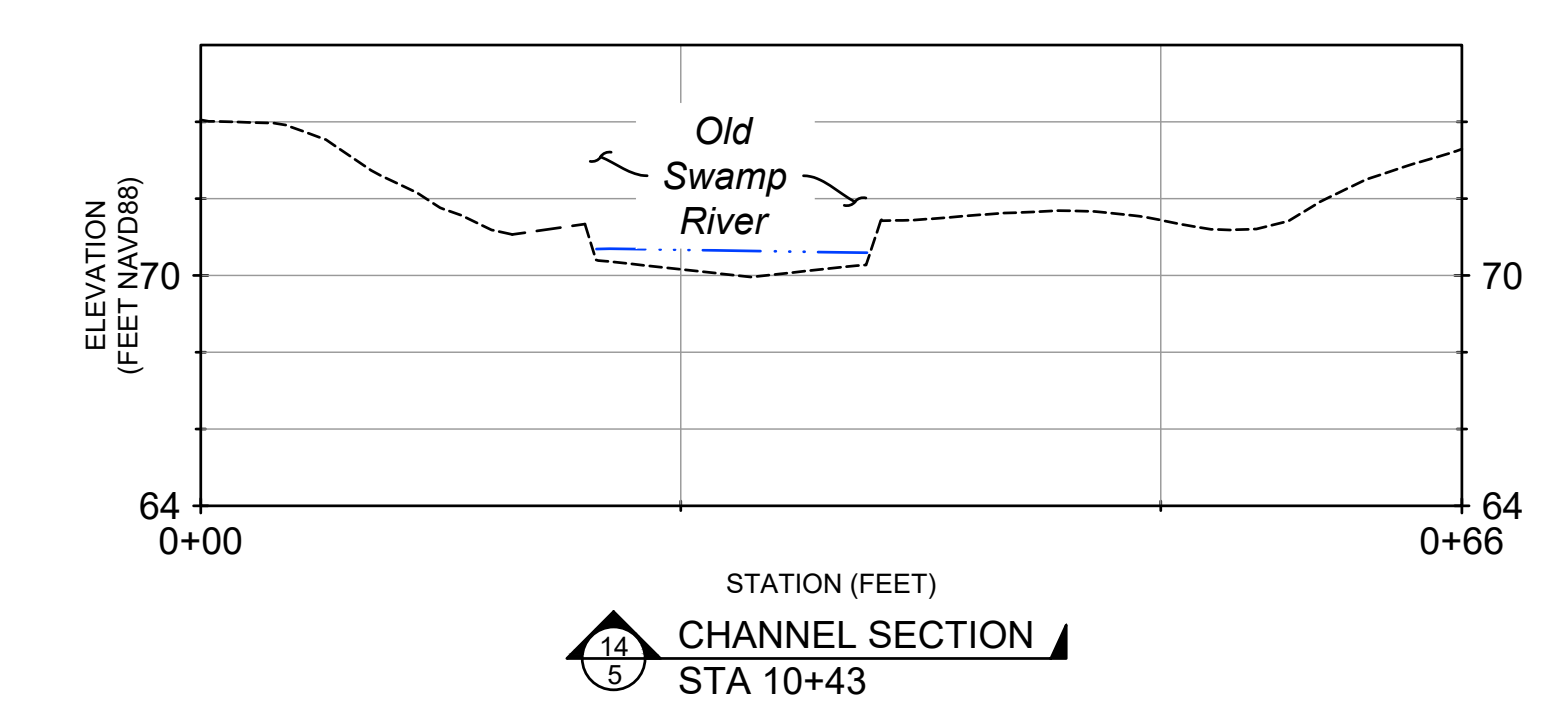
SECTION STA 6+37



SECTION STA 8+01



SECTION STA 9+40



SECTION STA 10+43

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