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# HYDRAULIC PROFILE I

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## LEGEND

A 26.00' HYDRAULIC GRADE LINE (HGL) HGL AT PEAK FLOW B 26.00' HYDRAULIC GRADE LINE (HGL) AT ANNUAL AVERAGE FLOW

### NOTE:

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1. PEAK FLOW WATER SURFACE ELEVATIONS SHOWN ON HYDRAULIC PROFILE ARE BASED ON THE FOLLOWING:

- PEAK FLOW AFTER EQUALIZATION TANKS IS 3.345 MGD, WHICH EQUALS THE ORIGINAL DESIGN MAX DAY FLOW FOR PEASE WWTF. NOTE THAT THE FUTURE (YEAR 2045) MAXIMUM DAY FLOW IS 2.13 MGD. • PEAK FLOW BEFORE EQUALIZATION TANKS IS 4.3 MGD, WHICH EQUALS THE DESIGN PEAK FLOW FOR THE
- HEADWORKS. • PEAK FLOW TO THE OUTFALL DIFFUSER SYSTEM IS 4.535 MGD, INCLUDING THE PEAK EFFLUENT FROM THE NEWINGTON WWTF.
- 2. ANNUAL AVERAGE FLOW CONDITION IS 1.2 MGD FOR PEASE WWTF, AND 1.49 MGD FOR OUTFALL DISCHARGE.
- 3. THE DOWNSTREAM WATER ELEVATION FOR HYDRAULIC ANALYSIS WAS BASED ON THE MEAN HIGHER HIGH WATER WITH A 100-YEAR COASTAL STORM SURGE (12.68' PREDICTED IN YEAR 2075) AS INDICATED BY THE PORTSMOUTH COASTAL RESILIENCE INITIATIVE REPORT: CLIMATE CHANGE VULNERABILITY ASSESSMENT AND ADAPTATION PLAN DATED APRIL 2, 2013.
- 4. ALL ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).



### PROJECT

# PEASE WASTEWATER TREATMENT FACILITY REHABILITATION

135 Corporate Drive Portsmouth, NH 03801

### OWNER

# CITY OF PORTSMOUTH NEW HAMPSHIRE

DEPARTMENT OF PUBLIC WORKS 680 Peverly Hill Road Portsmouth, NH 03801 603-427-1530 tel 603-427-1539 fax http://www.cityofportsmouth.com/publicworks

## ENGINEER

AECOM TECHNICAL SERVICES, INC. 250 APOLLO DRIVE CHELMSFORD, MA 01824 PHONE: (978) 905-2100 www.aecom.com

#### CONSULTANTS

HVAC, PLUMBING, FIRE PROTECTION Petersen Engineering, INC PO Box 4516 Portsmouth, NH 03802 603-436-4233 tel https://www.petersenengineering.com

STORMWATER DESIGN Altus Engineering 133 Court Street Portsmouth, NH 03801 603-433-2335 tel https://www.altus-eng.com

REGISTRATION

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NOTE: This document is preliminary only and is not intended for any purpose except review and comment by the owner and its agents.

### **ISSUE/REVISION**

I/R	DATE	DESCRIPTION

### PROJECT NUMBER

### 60693508

Designed By:	JL
Drawn By:	SAC
Dept Check:	КВ
Proj Check:	EM
Date:	JANUARY 2025
Scale:	AS NOTED

#### DISCIPLINE

GENERAL SHEET TITLE

# HYDRAULIC PROFILE I

SHEET NUMBER

00 G-004



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# EQUALIZATION TANK

A 41.55'

B 41.55'

T.O.C.

• 🗡 HWL •

T.O.C.

EL. 42.40

18" INF TO EQ INV EL 28.404

∟18" SE € EL. 47.25

\_24",SE

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€ EL. 36.50

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SCALE: HORIZONTAL = NONE VERTICAL = 1 : 5

## LEGEND

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A 26.00' HYDRAULIC GRADE LINE (HGL) AT PEAK FLOW B 26.00' HYDRAULIC GRADE LINE (HGL) AT ANNUAL AVERAGE FLOW

## NOTE:

2

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20.00

10.00



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Scale:	AS NOTED

### DISCIPLINE

GENERAL SHEET TITLE

# HYDRAULIC PROFILE II

SHEET NUMBER

00 G-005