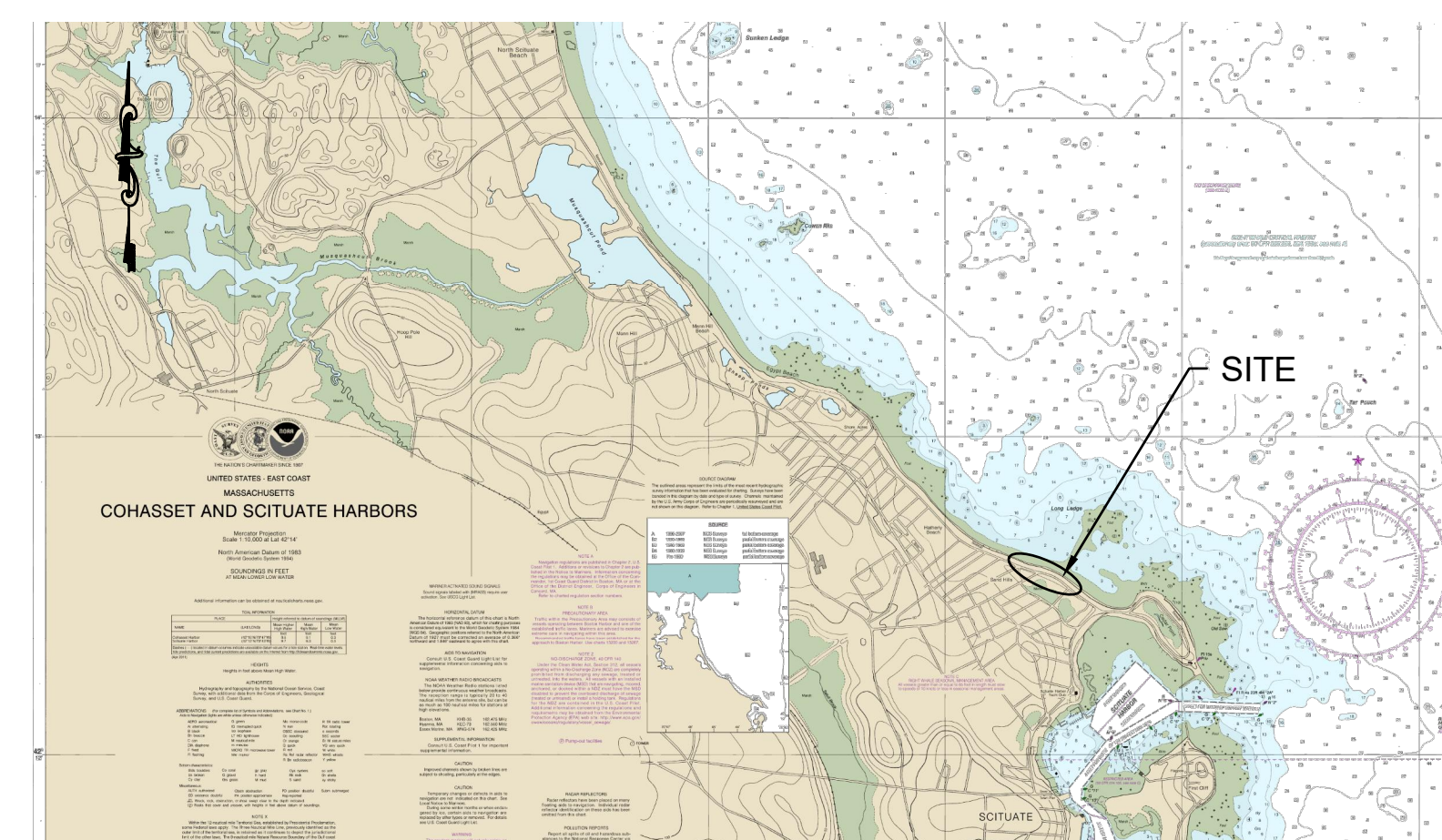


OCEANSIDE DRIVE - KENNETH ROAD TO SCITUATE AVENUE SEAWALL RECONSTRUCTION

SCITUATE, MASSACHUSETTS
NOVEMBER 2022

Prepared for:
TOWN OF SCITUATE, MASSACHUSETTS
ENGINEERING DEPARTMENT
CONTRACT NO. 19-FS-26

Prepared by:
Foth Infrastructure & Environment, LLC



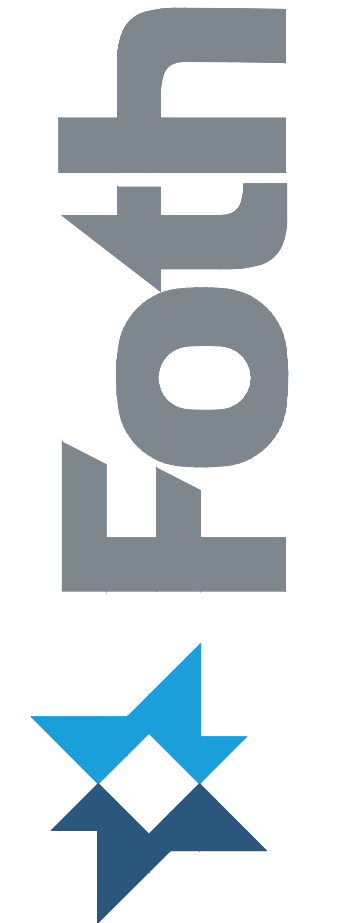
VINCINITY MAP
NOT TO SCALE

SHEET NUMBER	TITLE
G01	COVER SHEET & DRAWING LIST
S01	PROJECT NOTES & EXISTING SITE PLAN 1 OF 2
S02	EXISTING SITE PLAN 2 OF 2
S03	PROPOSED SITE PLAN 1 OF 2
S04	PROPOSED SITE PLAN 2 OF 2
S05	CONSTRUCTION DETAILS 1 OF 2
S06	CONSTRUCTION DETAILS 2 OF 2
S07	PROPOSED CROSS SECTIONS 1 OF 3
S08	PROPOSED CROSS SECTIONS 2 OF 3
S09	PROPOSED CROSS SECTIONS 3 OF 3
S10	PROPOSED BEACH ACCESS PROFILES
S11	SOIL BORING LOGS
S12	CONCRETE CORING LOGS & EXISTING FOUNDATION DETAILS



LOCATION MAP
NO TO SCALE

SEAL AND SIGNATURE (PE NAME) (TITLE) FOTH INFRASTRUCTURE & ENVIRONMENT, LLC	SHEET TITLE COVER SHEET & DRAWING LIST
	SHEET NUMBER G01



TOWN OF SCITUATE, MA
SEAWALL RECONSTRUCTION
OCEANSIDE DRIVE
KENNETH ROAD TO SCITUATE AVENUE

NO.	DATE	DESCRIPTION

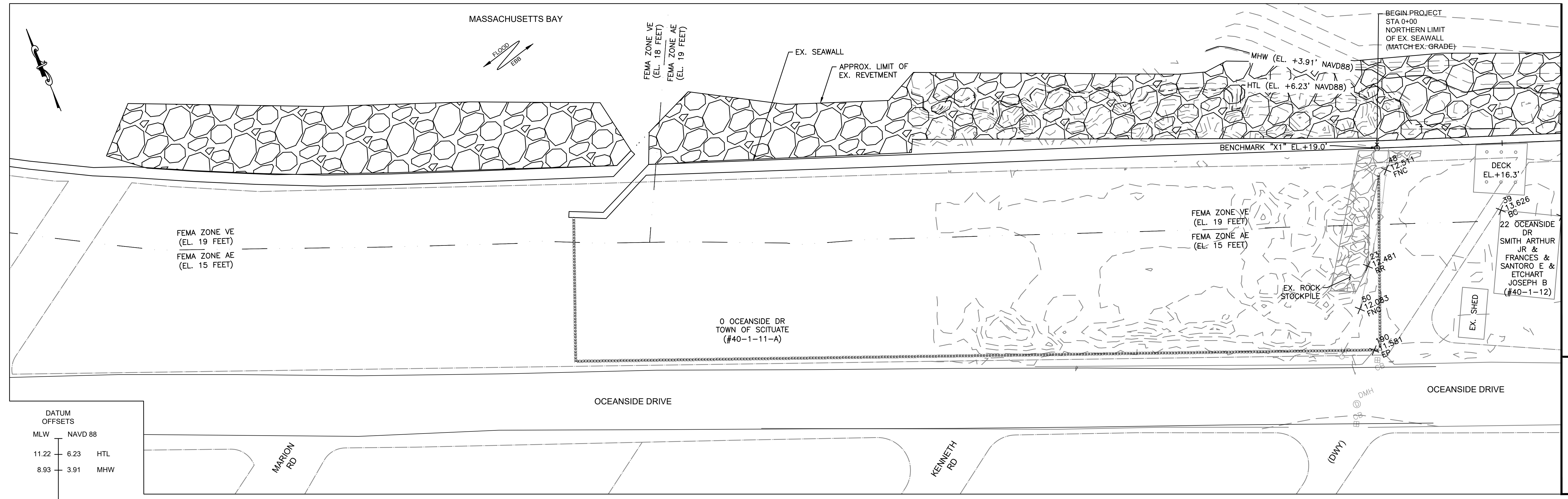
DATE OF PREPARATION		
BY	DATE	

SURVEYED	MC/MC/JH	(SEE NOTES)
DRAWN	JHM/HB	8/8/2020
DESIGNED	AM / AK	10/28/2022
CHECKED	JMP	11/14/2022

SHEET TITLE:
PROJECT NOTES & EXISTING SITE PLAN 1 OF 2

ISSUANCE:
FOR PERMITTING PURPOSES ONLY

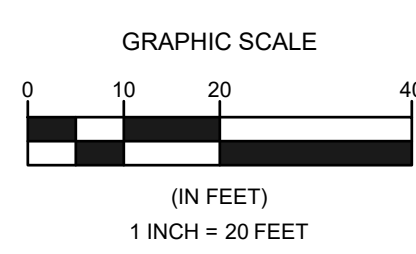
PROJECT NO: 20S001
SHEET NUMBER
S01



DATUM OFFSETS

MLW	NAVD 88	
11.22	6.23	HTL
8.93	3.91	MHW
5.02	0.00	NAVD 88
0.00	-5.02	MLW
-0.32	-5.34	MLLW

OFFSETS TAKEN FROM VDATUM ONLINE ON 6/29/2020 FOR 42.209453N, -70.726878W



LEGEND

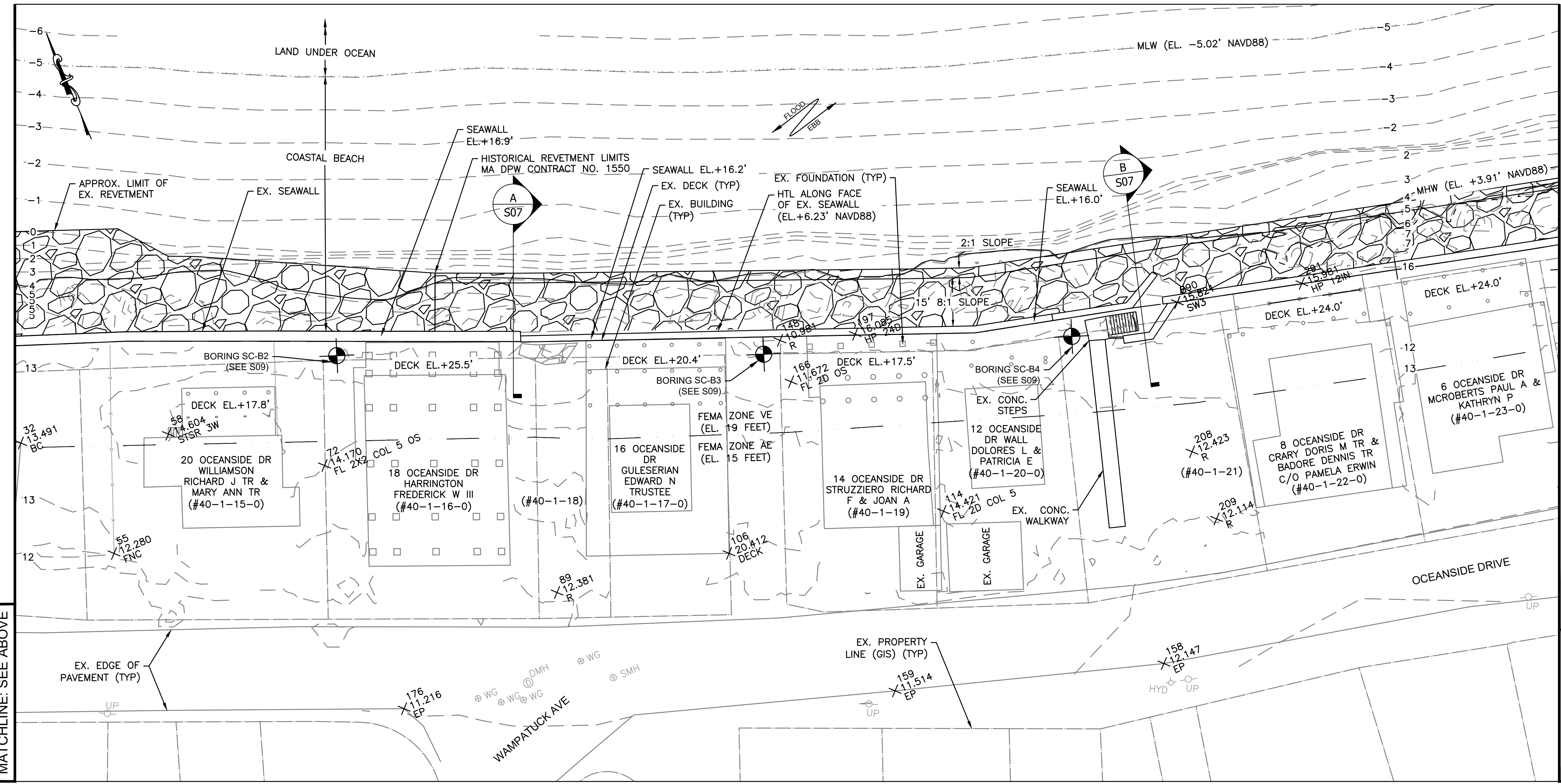
DESCRIPTION	CALLOUT
CATCH BASIN	CB
DRAIN MANHOLE	DMH
WATER GATE	WG
SEWER MANHOLE	SMH
UTILITY POLE	UP
FIRE HYDRANT	HYD
CONCRETE CORE LOCATION	
SOIL BORING LOCATION	
100 YEAR FEMA FLOOD ZONE (FEMA)	
PROPERTY LINE (MASSGIS)	
MEAN LOW WATER (MLW=EL.+3.02)	
MEAN HIGH WATER (MHW=EL.+3.91')	
ANNUAL HIGH TIDE LINE 11/16/2020 (HTL=EL.+6.20')	
CONTOUR	X
EXISTING FENCE LINE	X

SURVEY NOTES:

- PROJECT NAME: KENNETH RD TO SCITUATE AVE SEAWALL REPLACEMENT
- PROJECT NUMBER: 20S001.00
- PLOT SCALE: 1"=20'
- SURVEY DATES: 6/2/2020 (NEXUS DRONE); 6/2/2020, 6/4/2020, 6/26/2020 & 7/2/2020 (RTK TOPO)
- SURVEYORS: M. CAMPAGNONE, M. COUNT, J. HILL
- CORRECTIONS: KEYNET
- WEATHER COND: SUNNY, 75 DEGREES, LIGHT & VARIABLE, SEAS CALM
- PROJECT DATUM: NAVD88
- COORD. SYSTEM: NAD-83, MASSACHUSETTS MAINLAND
- DATA REDUCTION: DRONE: 5x5 GRID ACTUAL VALUE
- BENCHMARK: "X1" SET ON EXISTING SEAWALL ELEVATION +19.0' NAVD88 (+24.02' MLLW)

NOTES:

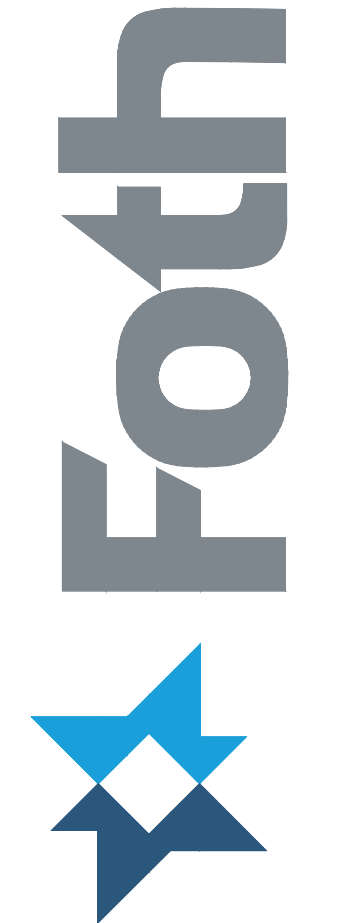
- RESULTS OF TOPOGRAPHY FROM SURVEY DATED 6/2/2020, 6/4/2020, 6/26/2020 AND 7/2/2020 BY FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC. MANUAL DECK TAPING MEASUREMENTS TAKEN ON 6/4/2020 AND 6/26/2020.
- THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS THE RESULTS OF SURVEYS PERFORMED ON THE DATES SHOWN, AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THAT TIME. NO SURVEYS WERE CONDUCTED TO LOCATE PROPERTY LINES.
- DECK AND BUILDING LOCATIONS SHOWN WERE LOCATED DURING RTK TOPOGRAPHY AND HAND TAPING SURVEYS AND SUPPLEMENTED WITH TOWN OF SCITUATE ONLINE ASSESSORS INFORMATION.
- ELEVATIONS ARE IN FEET AND TENTHS, AND REFER TO ELEVATIONS ABOVE NAVD88.
- ELEVATIONS MEASURED BY RTK USING CORRECTIONS FROM VRS-KEYNET.
- COORDINATES ARE BASED ON NAD83 MA-MAINLAND STATE PLANE GRID SYSTEM (US FOOT).
- SITE IS LOCATED IN FEMA ZONES VE EL. = 19FT & AE EL. = 15FT (NAVD88) AS SHOWN ON FIRM 25023C0128L, EFFECTIVE DATE JULY 6, 2021.
- POSSESSION AND USE OF THE MATERIAL CONTAINED ON THESE DRAWINGS IS GRANTED ONLY IN CONNECTION WITH ITS USE AS IT RELATES TO THE TITLED PROJECT, ANY OTHER USE, REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF FOTH.



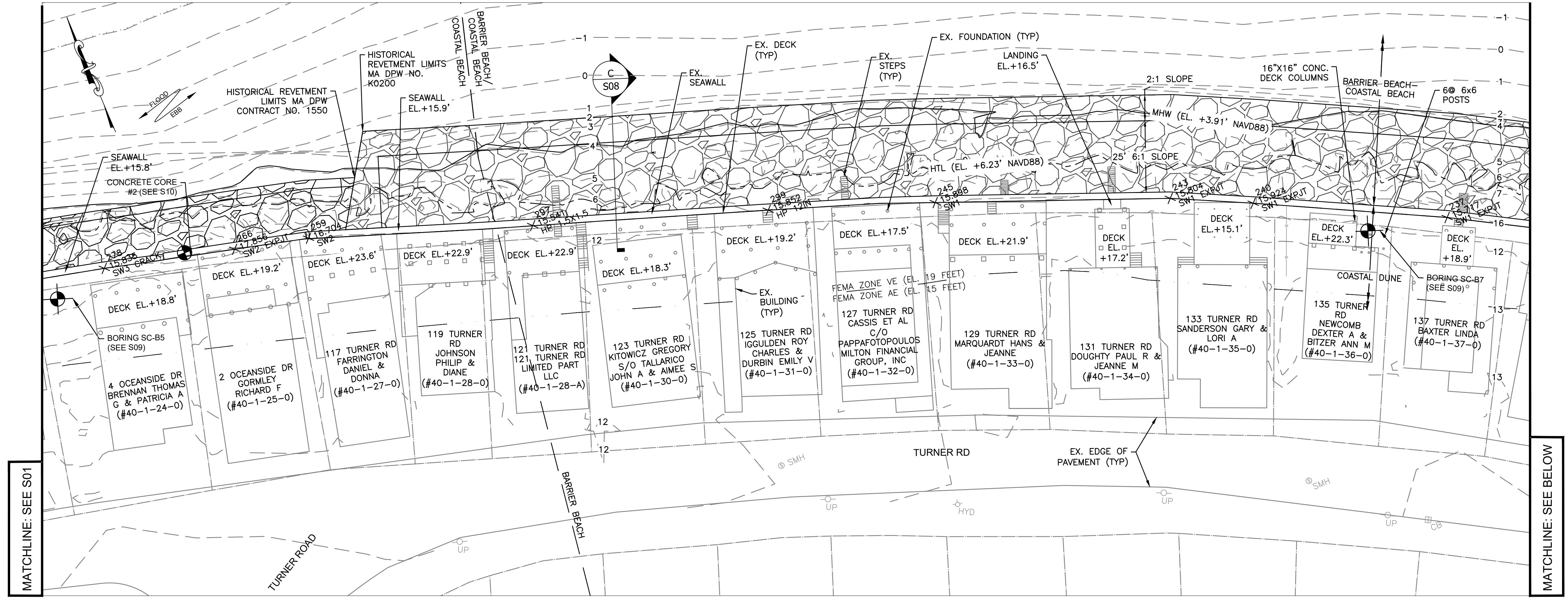
MATCHLINE: SEE ABOVE

MATCHLINE: SEE S02

MATCHLINE: SEE BELOW

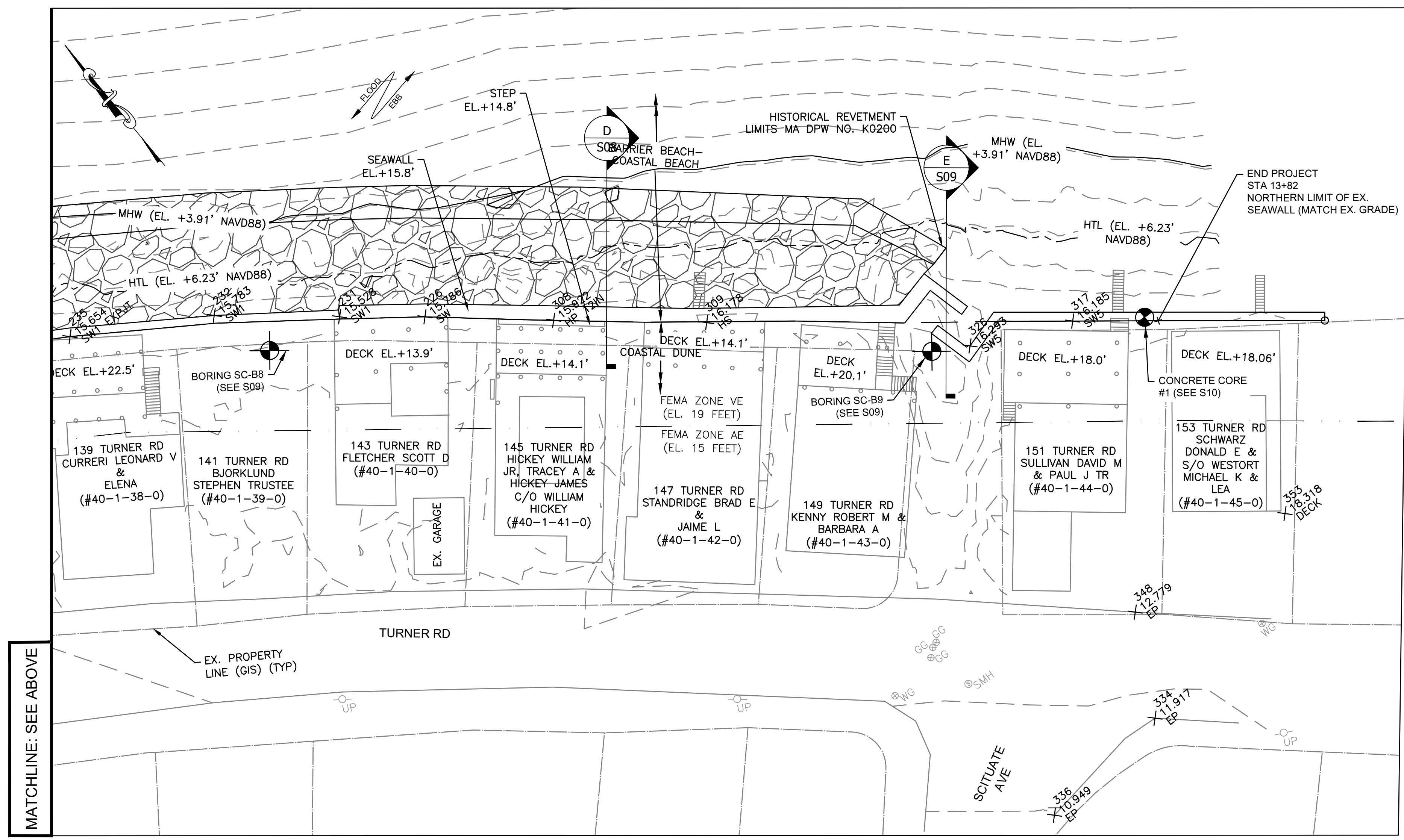


TOWN OF SCITUATE, MA
 SEAWALL RECONSTRUCTION
 OCEANSIDE DRIVE
 KENNETH ROAD TO SCITUATE AVENUE

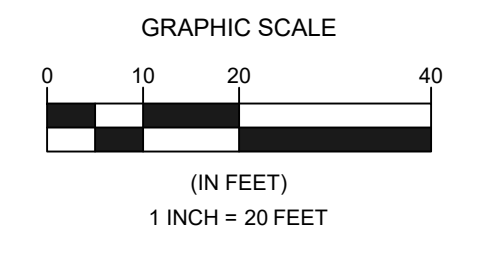


MATCHLINE: SEE S01

MATCHLINE: SEE BELOW



MATCHLINE: SEE ABOVE



REVISIONS	
NO	DESCRIPTION

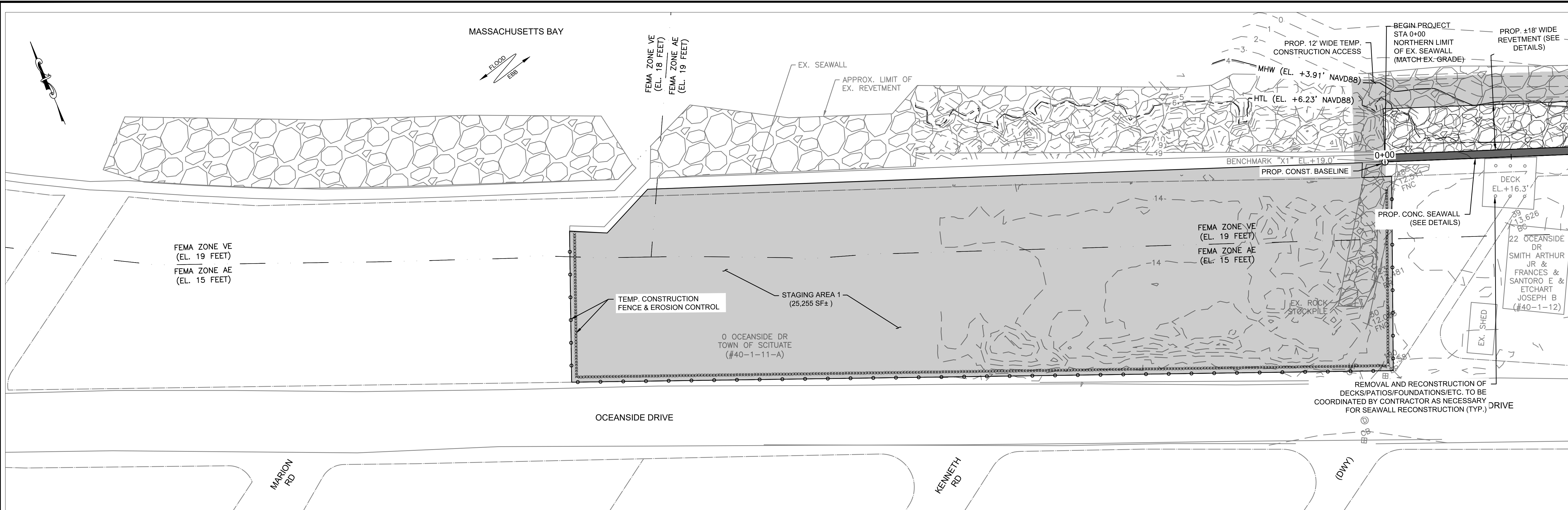
DATE OF PREPARATION	
BY	DATE

SURVEYED	MC/MC/JH	(SEE NOTES)
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DESIGNED	AM / AK	10/28/2022
CHECKED	JMP	11/14/2022

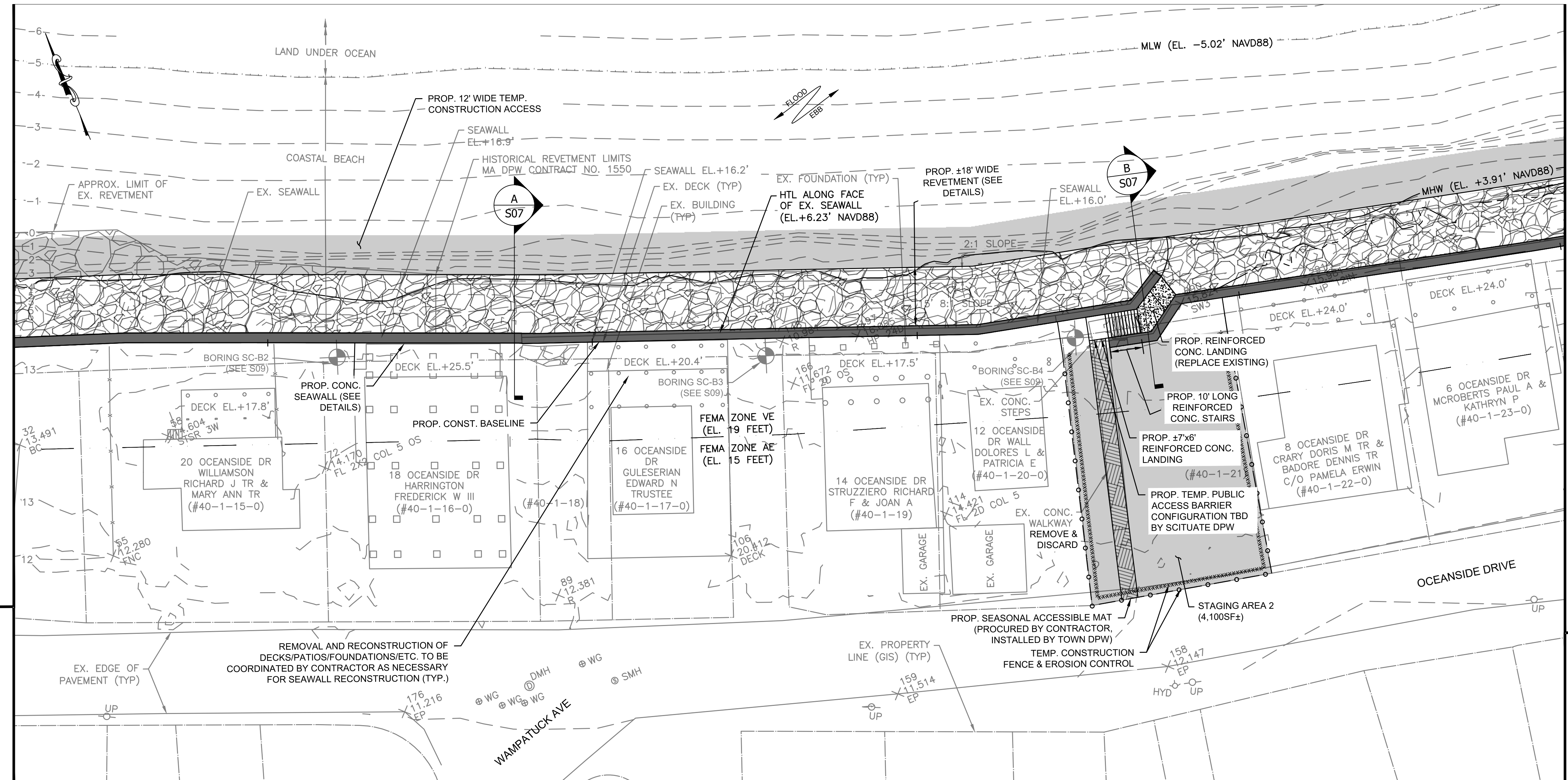
SHEET TITLE:
EXISTING SITE PLAN 2 OF 2

ISSUANCE:
FOR PERMITTING PURPOSES ONLY

PROJECT NO: 20S001
 SHEET NUMBER
S02



MATCHLINE: SEE BELOW



MATCHLINE: SEE ABOVE

MATCHLINE: SEE S04



TOWN OF SCITUATE, MA
SEAWALL RECONSTRUCTION
OCEANSIDE DRIVE
KENNETH ROAD TO SCITUATE AVENUE

REVISIONS	
NO.	DESCRIPTION

DATE OF PREPARATION	
BY	DATE

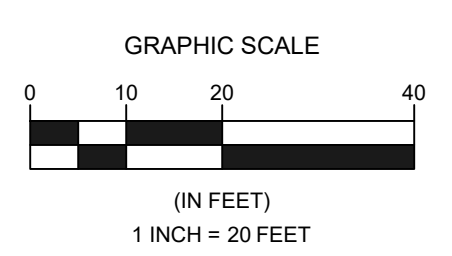
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DESIGNED	AM / AK	10/28/2022
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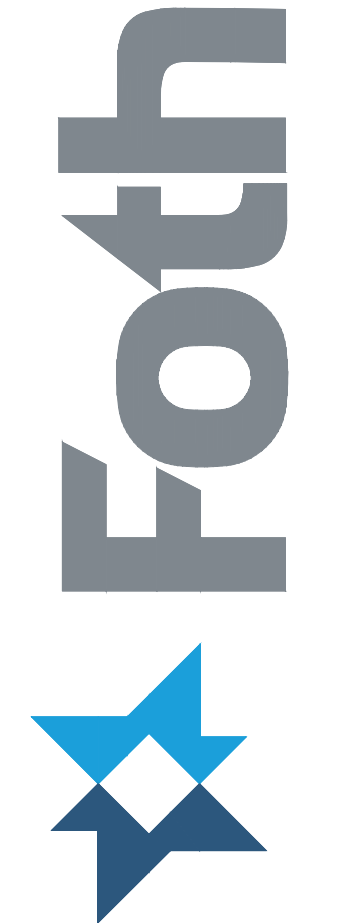
PROPOSED SITE PLAN 1 OF 2

ISSUANCE:
FOR PERMITTING PURPOSES ONLY

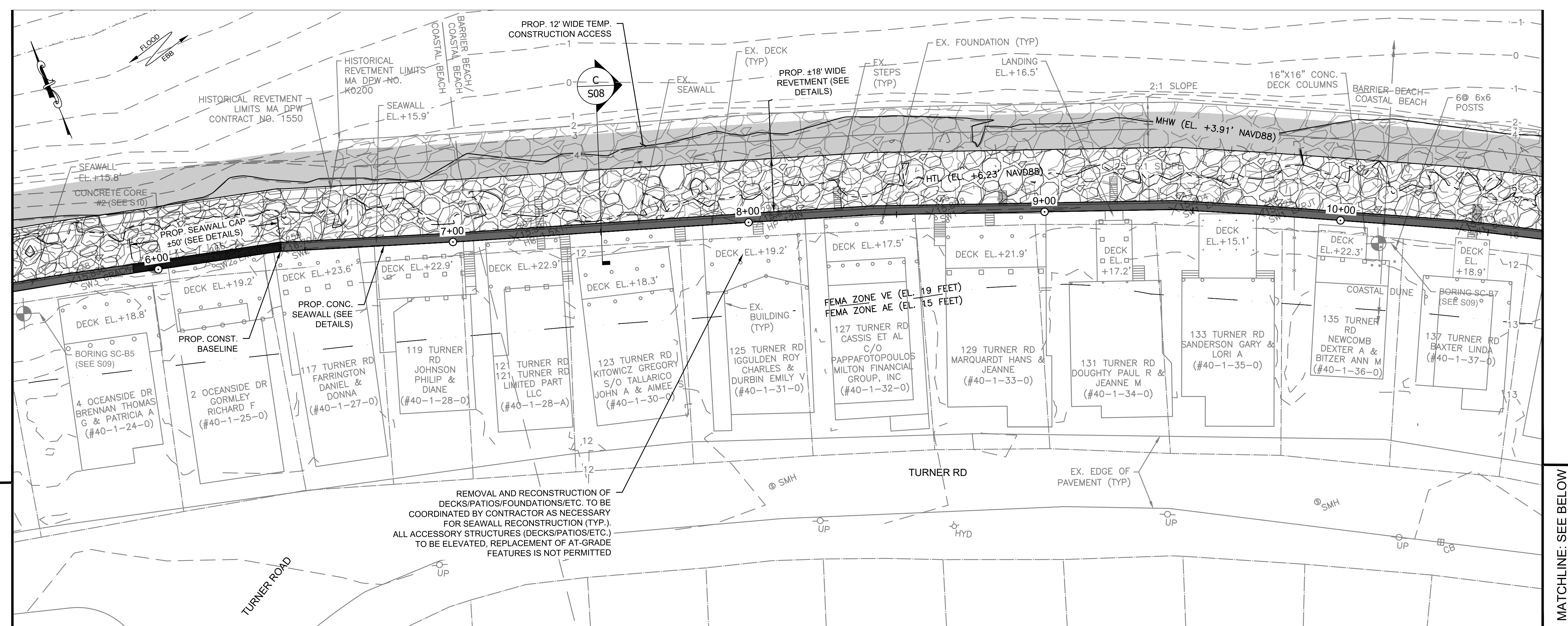
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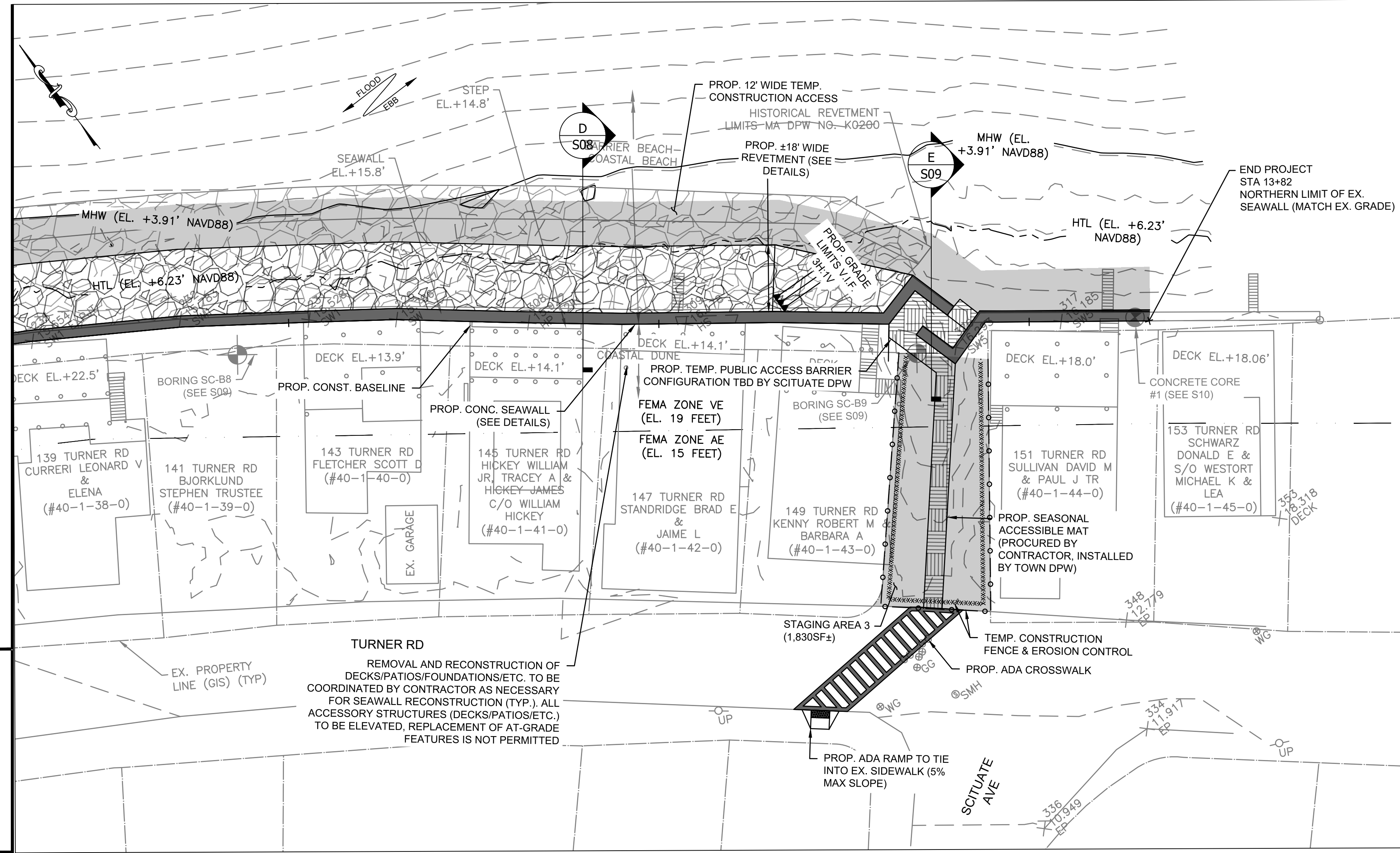


TOWN OF SCITUATE, MA
SEAWALL RECONSTRUCTION
 OCEANSIDE DRIVE
 KENNETH ROAD TO SCITUATE AVENUE

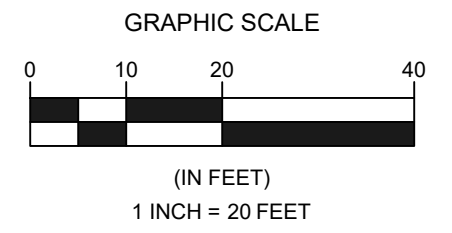


MATCHLINE: SEE S03

MATCHLINE: SEE BELOW



MATCHLINE: SEE ABOVE



REVISIONS	
NO.	DESCRIPTION

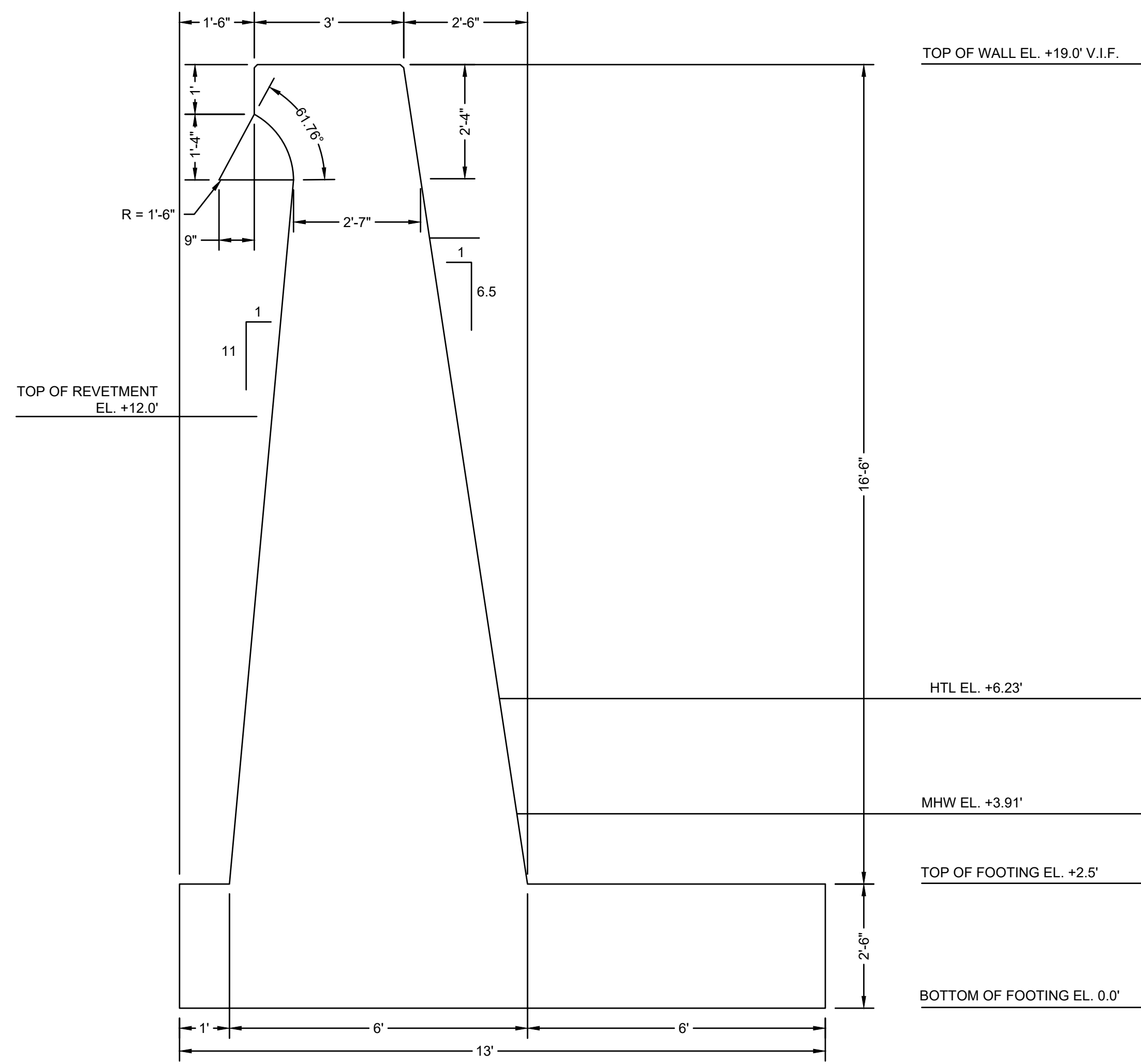
DATE OF PREPARATION		
BY	DATE	

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DRAWN	JHM/HB	8/8/2020
DESIGNED	AM / AK	10/28/2022
CHECKED	JMP	11/4/2022

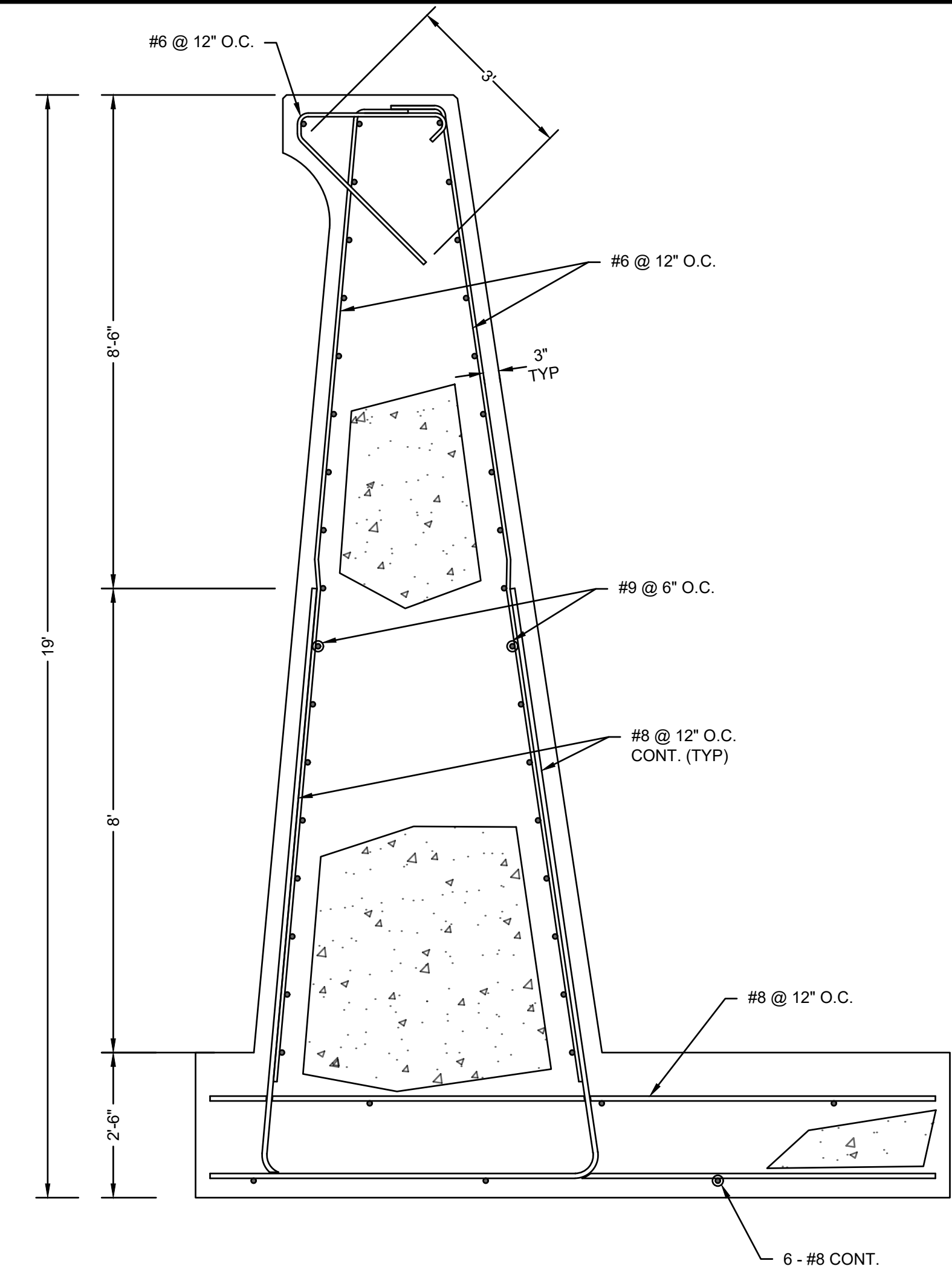
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PROPOSED SITE PLAN 2 OF 2

ISSUANCE:
FOR PERMITTING PURPOSES ONLY

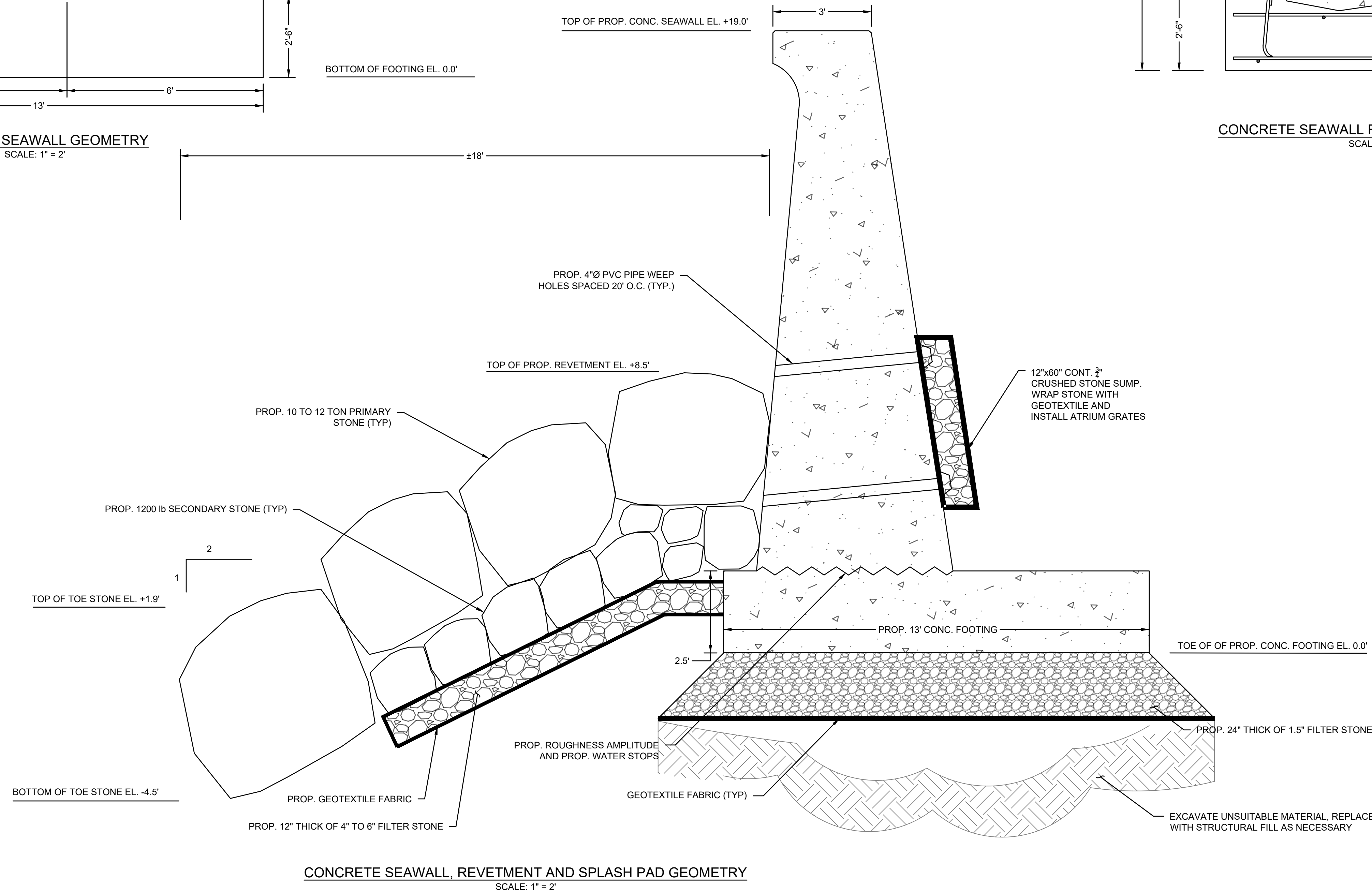
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 SHEET NUMBER
S04



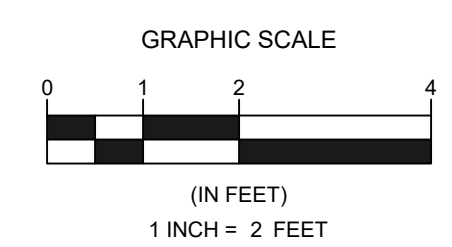
CONCRETE SEAWALL GEOMETRY
SCALE: 1" = 2'



CONCRETE SEAWALL REINFORCEMENT DETAIL
SCALE: 1" = 2'



CONCRETE SEAWALL, REVETMENT AND SPLASH PAD GEOMETRY
SCALE: 1" = 2'

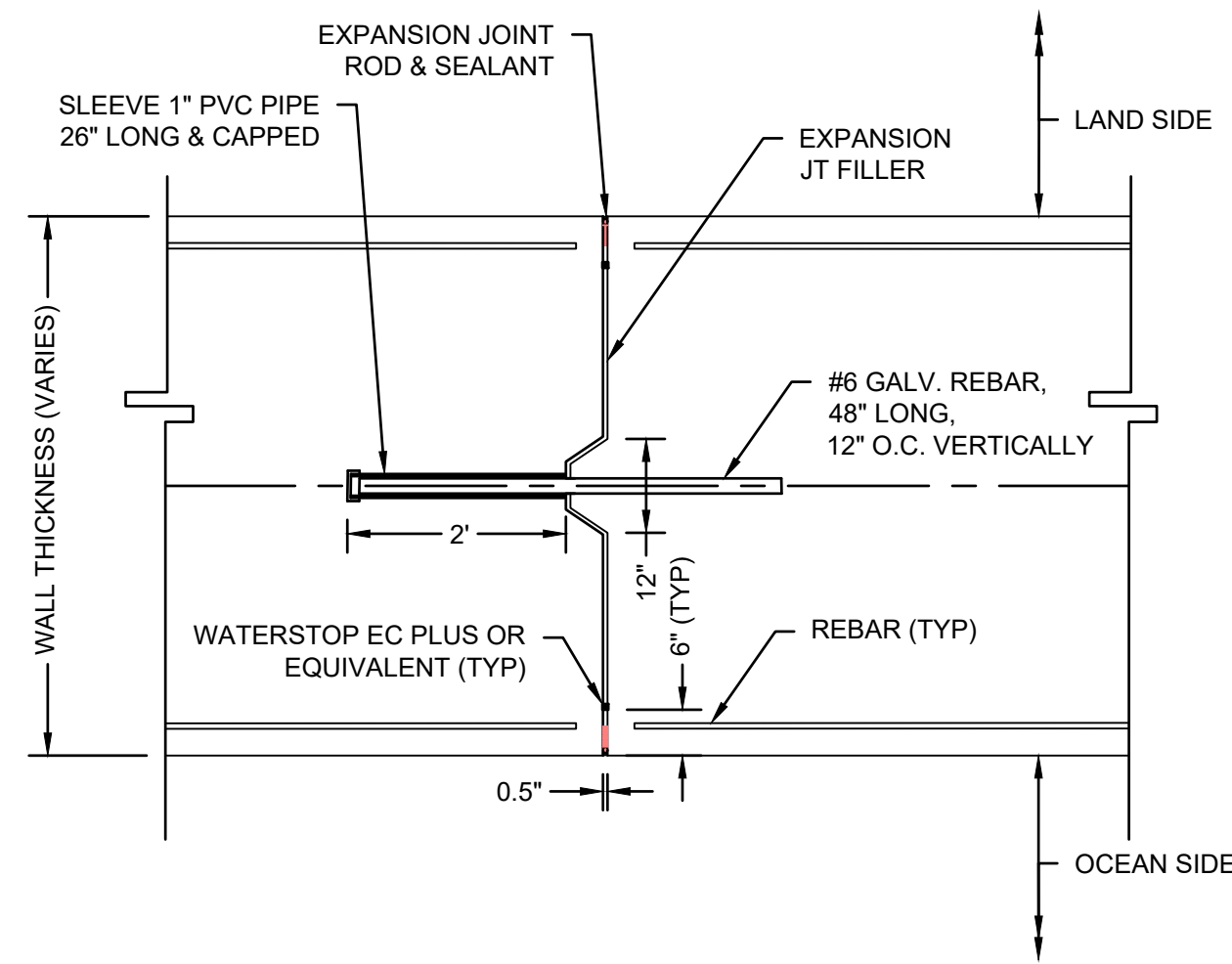


REVISIONS	
NO.	DESCRIPTION

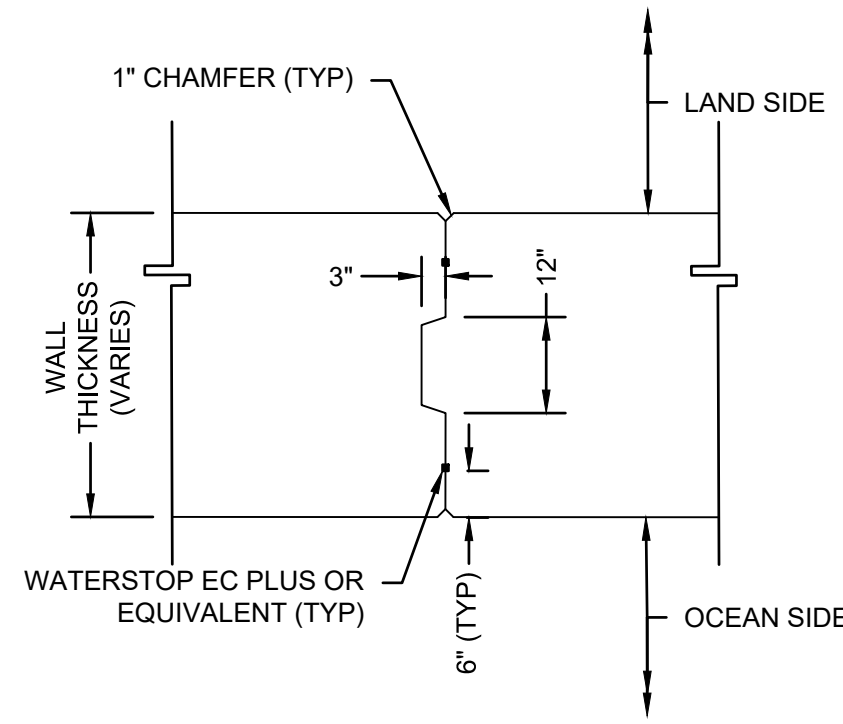
DATE OF PREPARATION		
BY	DATE	

SHEET TITLE:		
CONSTRUCTION DETAILS 1 OF 2		

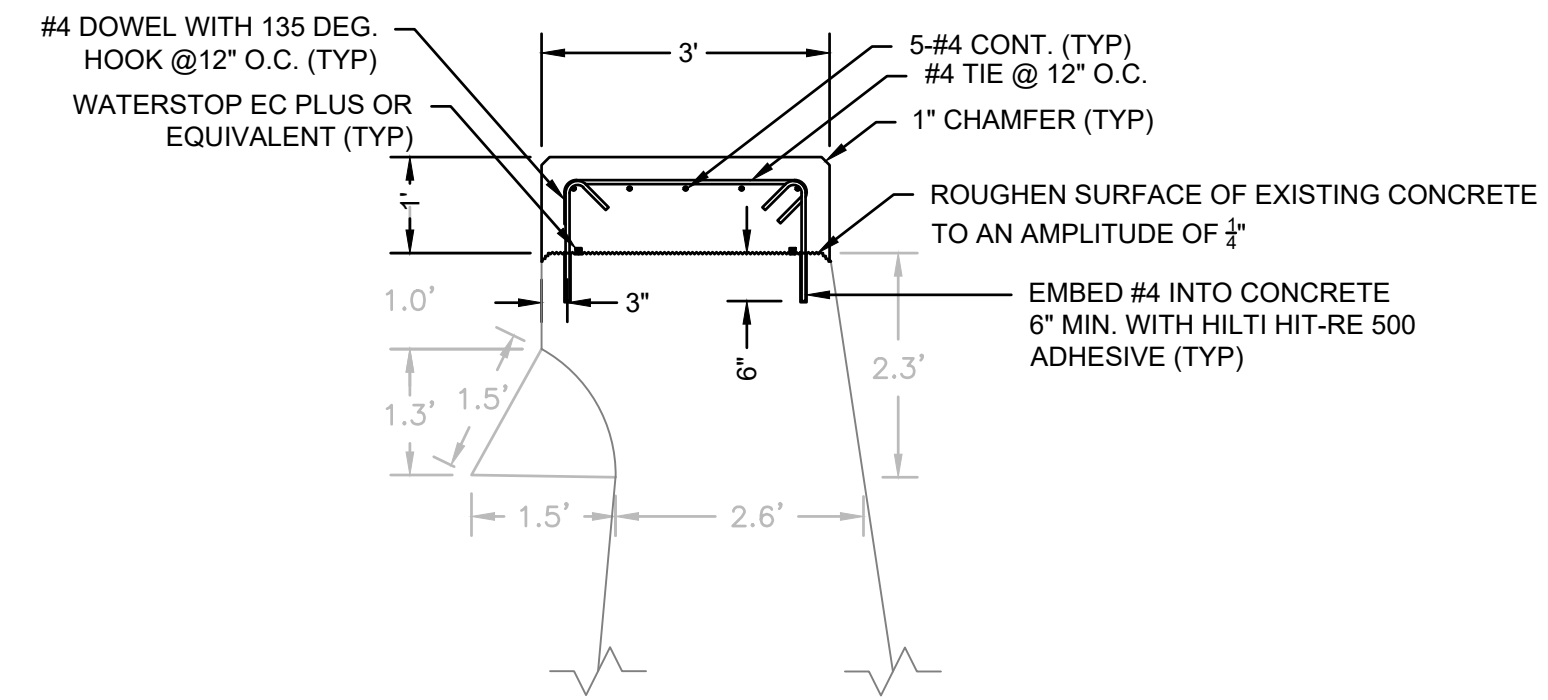
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FOR PERMITTING PURPOSES ONLY	
PROJECT NO:	20S001
SHEET NUMBER	S05



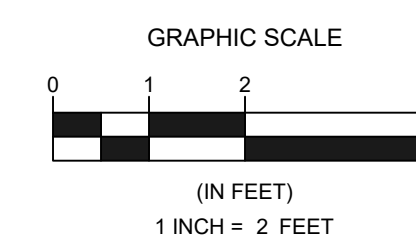
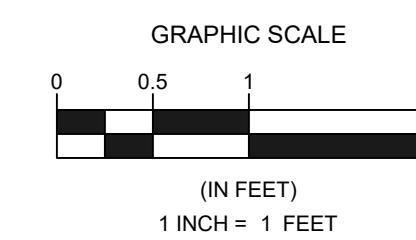
EXPANSION JOINT DETAIL
SCALE: N.T.S.



CONSTRUCTION JOINT DETAIL
SCALE: N.T.S.



EXISTING SEAWALL CAP REPLACEMENT DETAIL
SCALE: 1"=2'



TOWN OF SCITUATE, MA
SEAWALL RECONSTRUCTION
OCEANSIDE DRIVE
KENNETH ROAD TO SCITUATE AVENUE

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
2				
3				
4				
5				

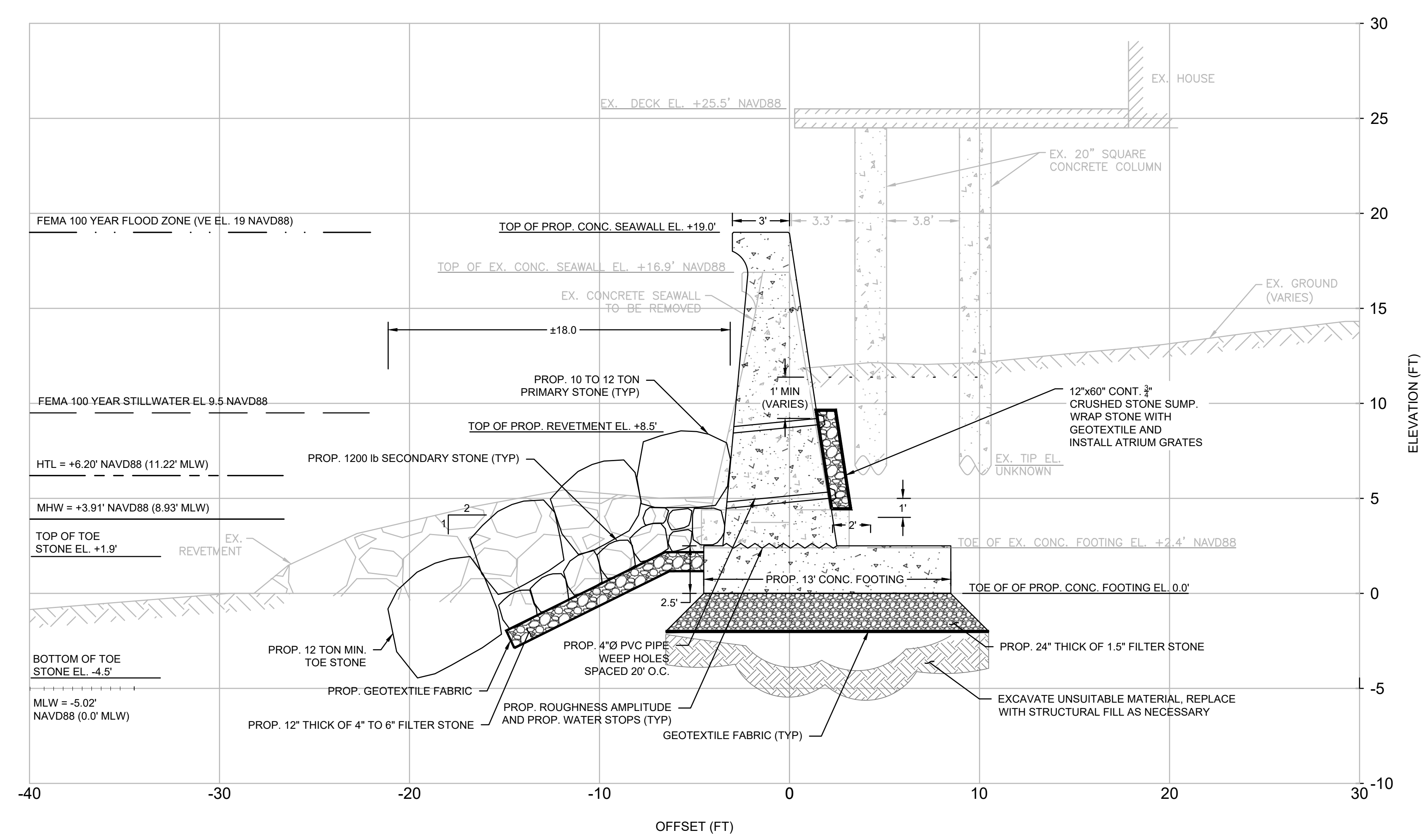
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DRAWN	JH/MHB	8/8/2020
DESIGNED	AM / AK	10/28/2022
CHECKED	JMP	11/4/2022

SHEET TITLE:
CONSTRUCTION
DETAILS 2 OF 2

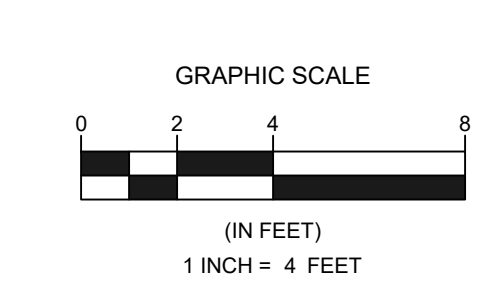
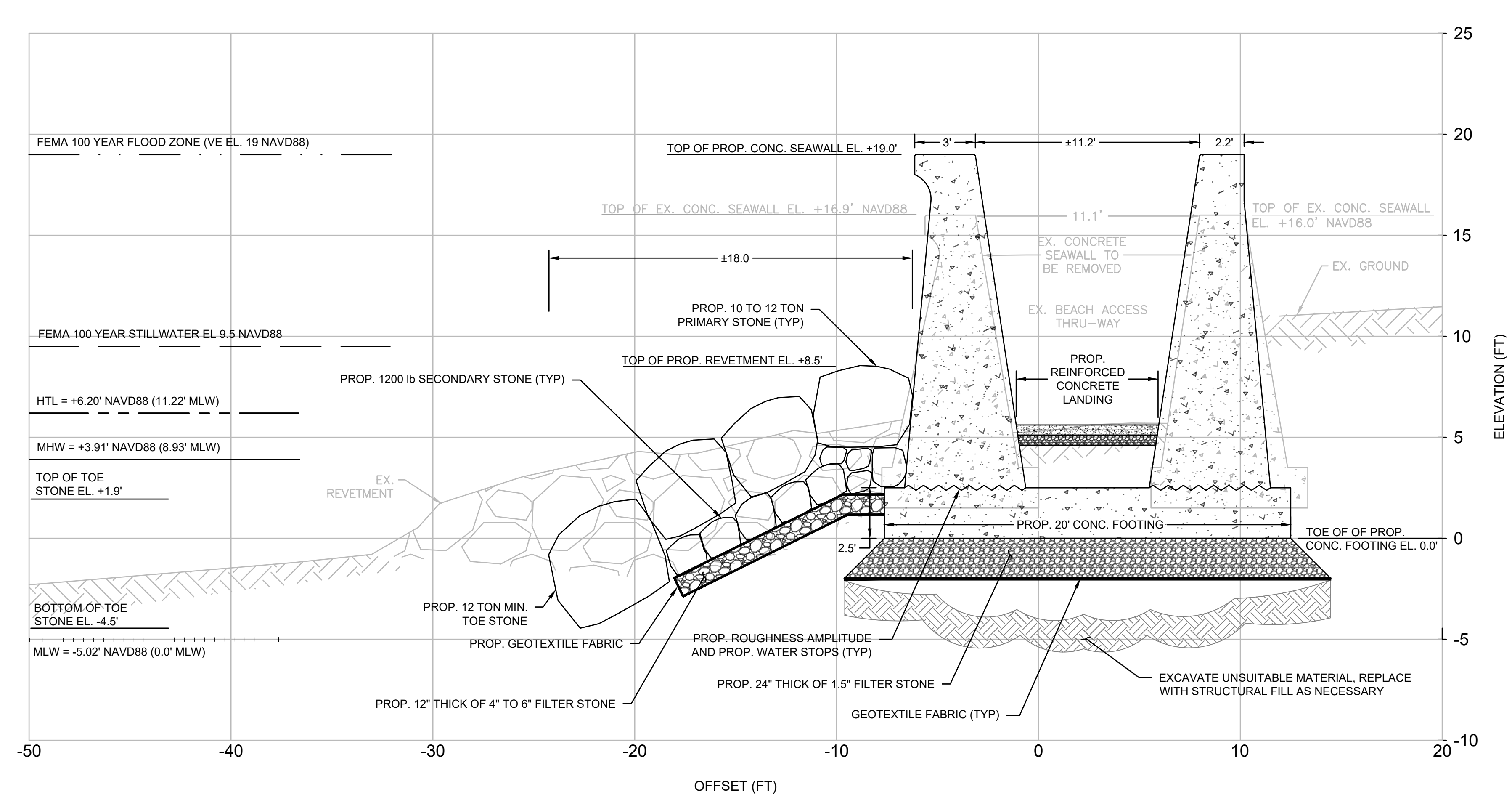
ISSUANCE:
FOR PERMITTING
PURPOSES ONLY

PROJECT NO: 20S001
SHEET NUMBER
S06

SECTION A:
PROPOSED CONCRETE SEAWALL AND REVETMENT
SCALE: 1" = 4'



SECTION B:
PROPOSED BEACH ACCESS 1
SCALE: 1" = 4'



REVISIONS		DATE OF PREPARATION	
NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			

DATE OF PREPARATION	
BY	DATE
MC/MC/JH	(SEE NOTES)
JH/MHB	8/6/2020
AM / AK	10/28/2022
JMP	11/4/2022

SHEET TITLE:
PROPOSED CROSS SECTIONS 1 OF 3

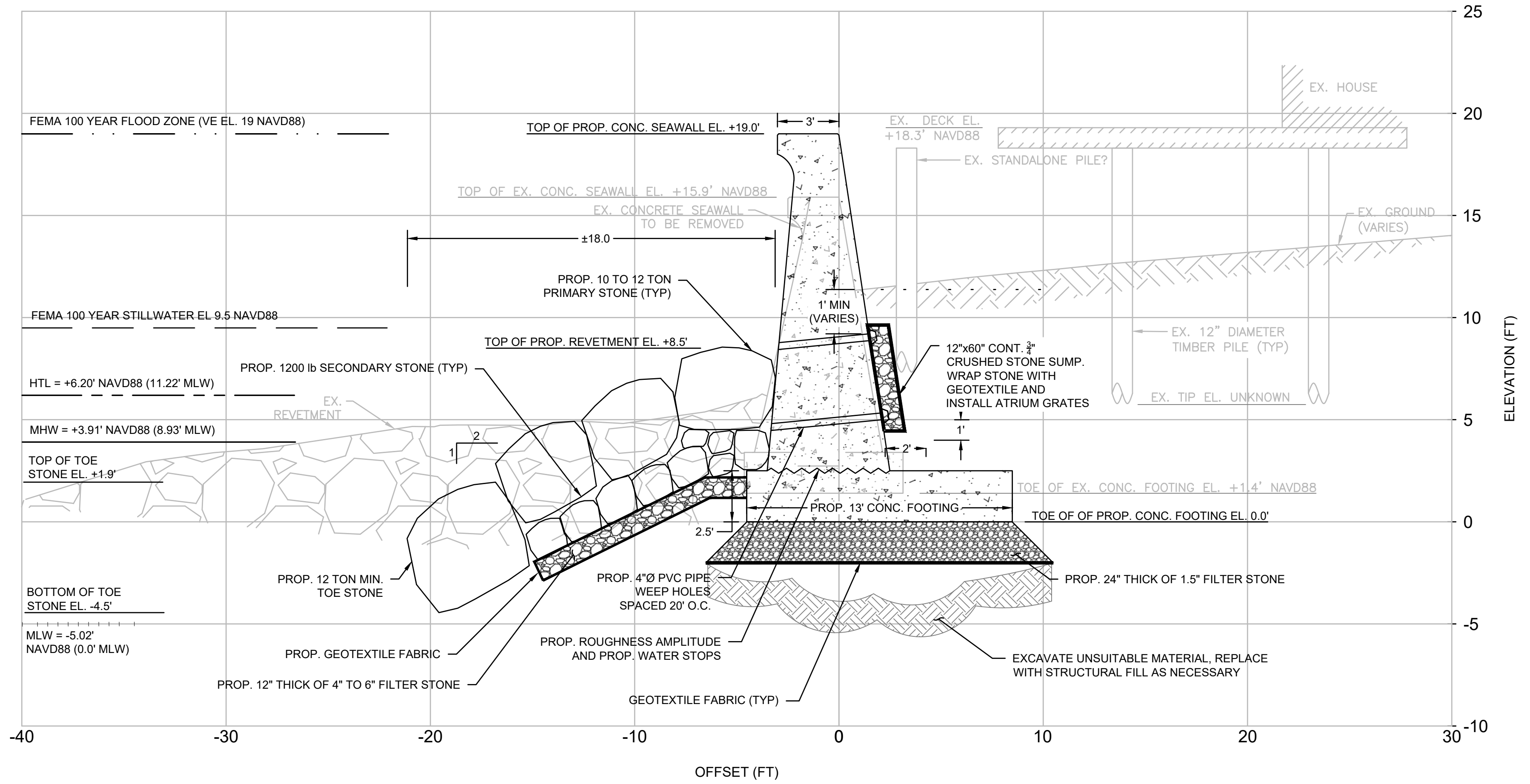
ISSUANCE:
FOR PERMITTING PURPOSES ONLY

PROJECT NO: 20S001
SHEET NUMBER
S07

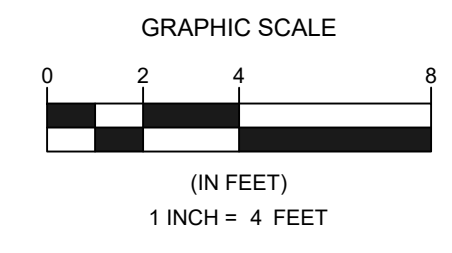
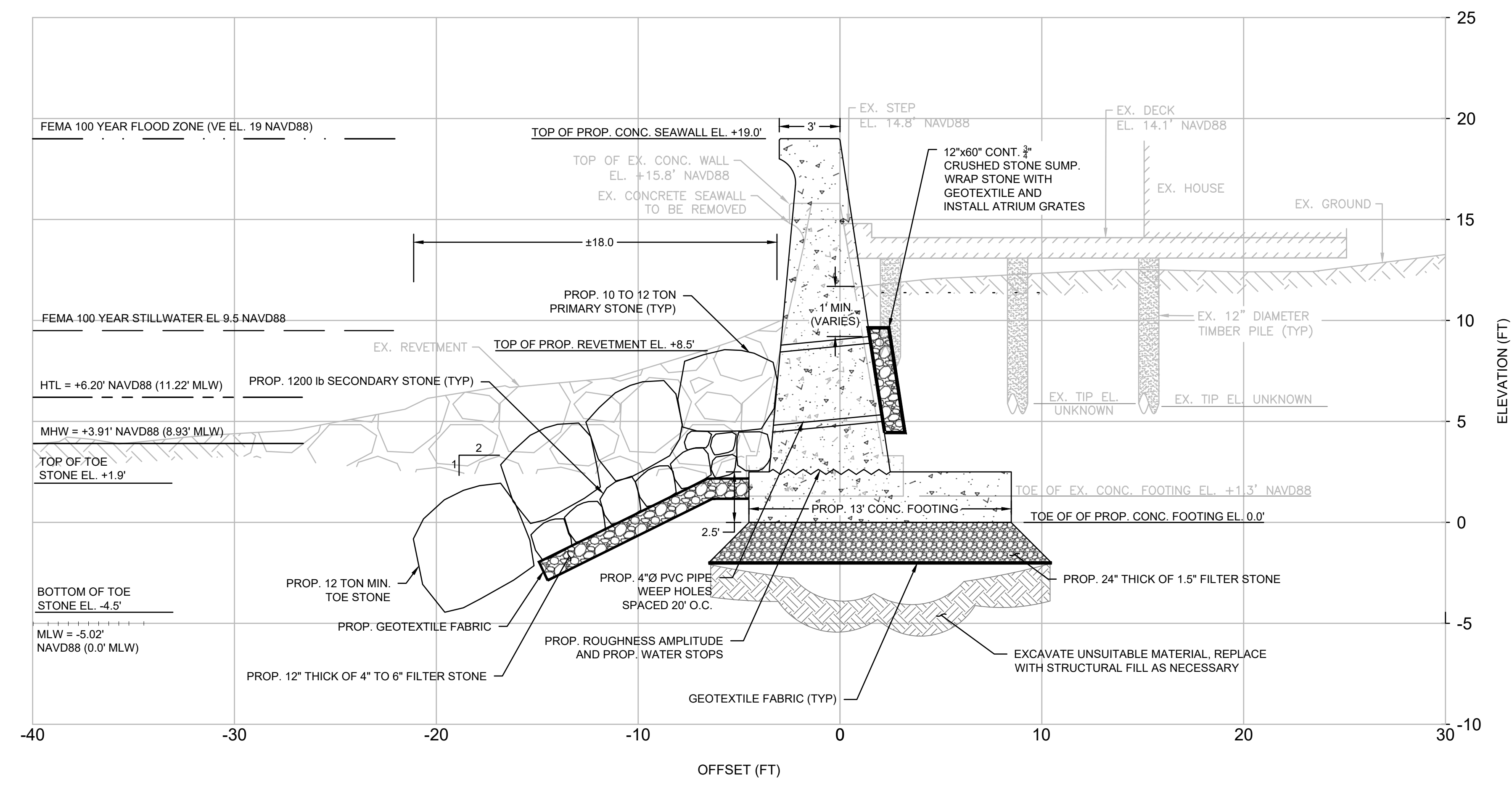


TOWN OF SCITUATE, MA
SEAWALL RECONSTRUCTION
OCEANSIDE DRIVE
KENNETH ROAD TO SCITUATE AVENUE

SECTION C:
PROPOSED CONCRETE
SEAWALL AND REVETMENT
SCALE: 1" = 4'



SECTION D:
PROPOSED CONCRETE
SEAWALL AND REVETMENT
SCALE: 1" = 4'



NO.	DATE	BY	DESCRIPTION

DATE OF PREPARATION	
BY	DATE

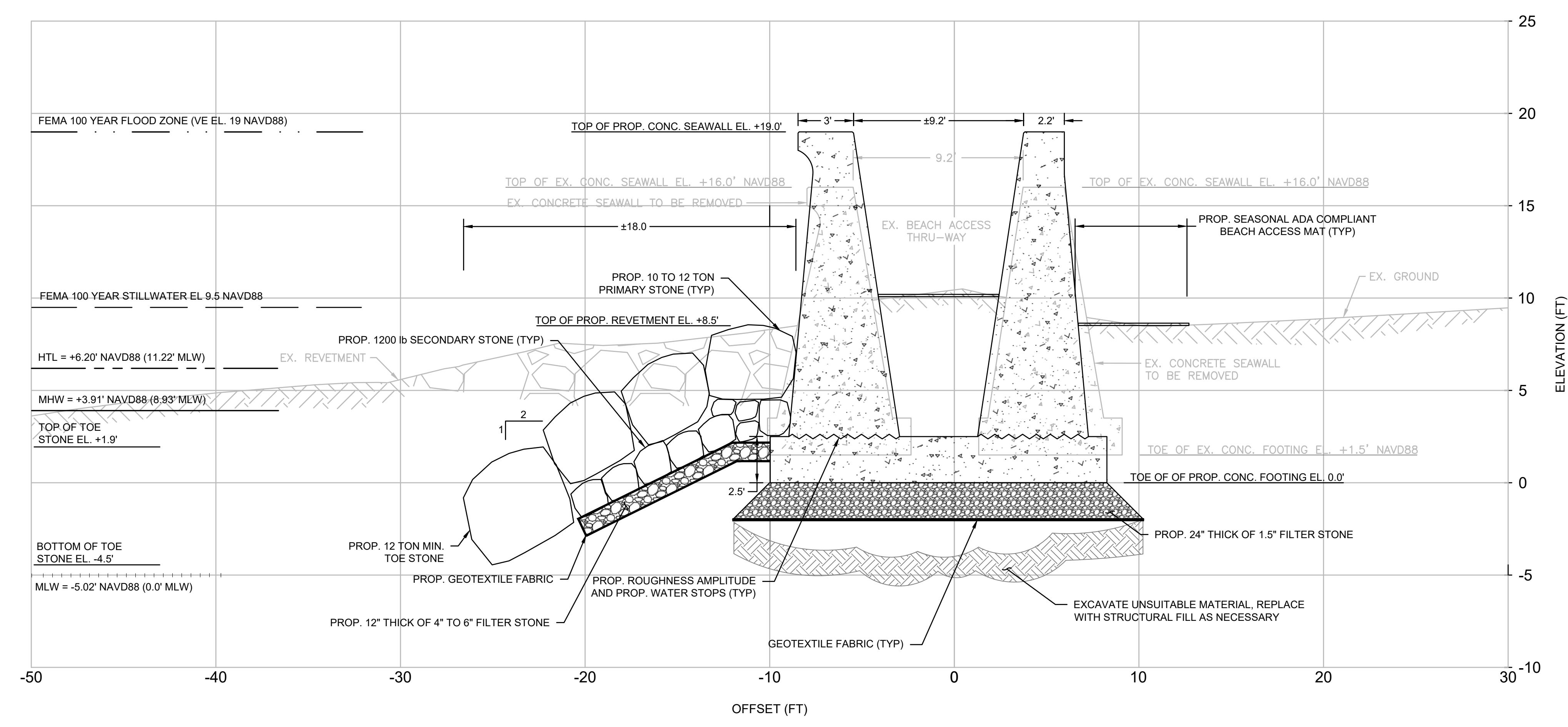
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DRAWN	JHM/HB	8/8/2020
DESIGNED	AM / AK	10/28/2022
CHECKED	JMP	11/4/2022

SHEET TITLE:
**PROPOSED
CROSS SECTIONS
2 OF 3**

ISSUANCE:
**FOR PERMITTING
PURPOSES ONLY**

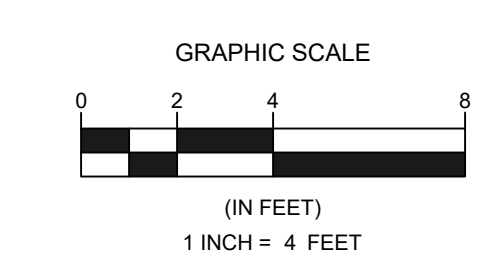
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SHEET NUMBER
S08

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SECTION E:
PROPOSED BEACH ACCESS 2
 SCALE: 1" = 4'

NOTE: ADA BEACH ACCESS NOT SHOWN FOR CLARITY



NO.	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
2				
3				
4				
5				

DATE OF PREPARATION		
SURVEYED	BY	DATE
MC/MC/JH		(SEE NOTES)
DRAWN	JH/MHB	8/8/2020
DESIGNED	AM / AK	10/28/2022
CHECKED	JMP	11/4/2022

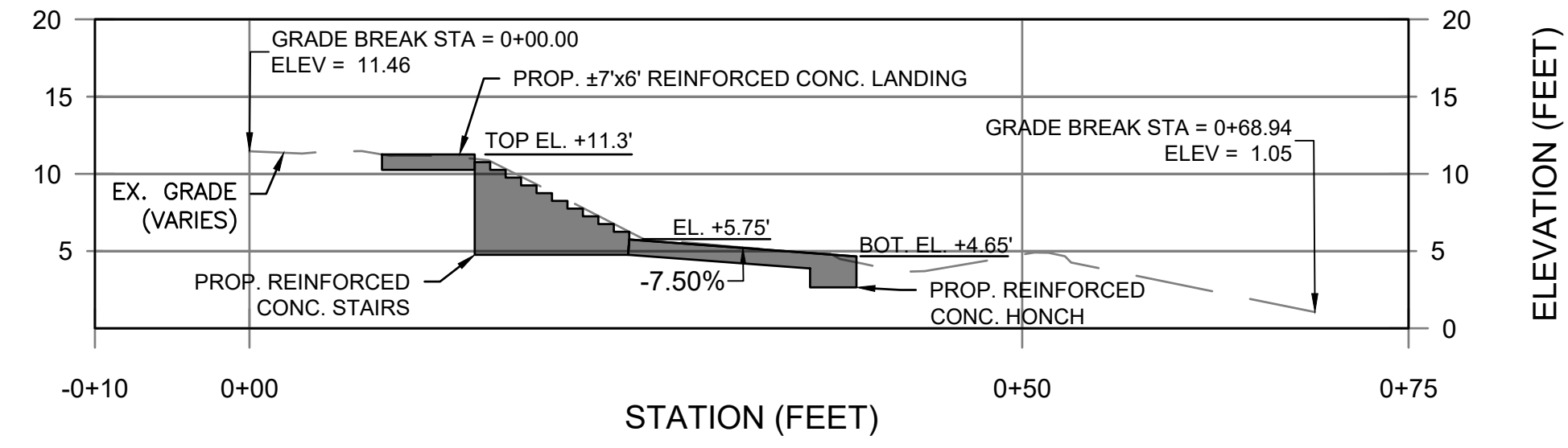
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ISSUANCE:
FOR PERMITTING PURPOSES ONLY

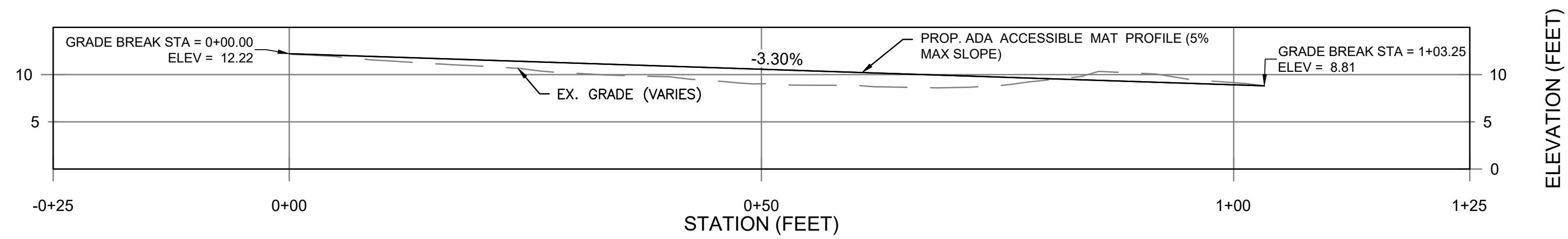
PROJECT NO: 20S001
 SHEET NUMBER
S09



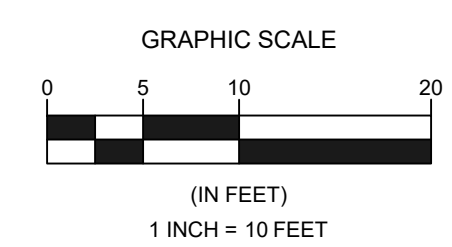
TOWN OF SCITUATE, MA
SEAWALL RECONSTRUCTION
OCEANSIDE DRIVE
KENNETH ROAD TO SCITUATE AVENUE



PROPOSED BEACH ACCESS 1 PROFILE
SCALE: 1" = 10'



PROPOSED BEACH ACCESS MAT PROFILE
SCALE: 1" = 10'



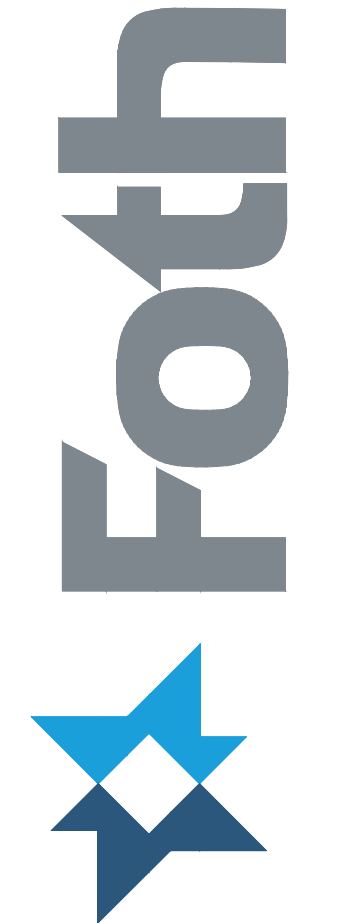
REVISIONS	
NO.	DESCRIPTION

DATE OF PREPARATION		
BY	DATE	

SURVEYED	MC/MC/JH	(SEE NOTES)
DRAWN	JH/MHB	8/8/2020
DESIGNED	AM / AK	10/28/2022
CHECKED	JMP	11/4/2022

ISSUANCE:
FOR PERMITTING PURPOSES ONLY

PROJECT NO: 20S001
SHEET NUMBER
S10



TOWN OF SCITUATE, MA
SEAWALL RECONSTRUCTION
OCEANSIDE DRIVE
KENNETH ROAD TO SCITUATE AVENUE

BORING LOG SC-B2. Foth logo, Boring Page 1 of 1, Date 12-Jun-20, Project Name Town of Scituate, Kenneth Seawall. Includes soil log table with columns for Depth, Elev., Type, Blows, Pen., Rec., and Soil & Rock Descriptions. Notes include geoprobe sites and sampling intervals.

BORING LOG SC-B2

BORING LOG SC-B3. Foth logo, Boring Page 1 of 1, Date 12-Jun-20, Project Name Town of Scituate, Kenneth Seawall. Includes soil log table with columns for Depth, Elev., Type, Blows, Pen., Rec., and Soil & Rock Descriptions. Notes include geoprobe sites and sampling intervals.

BORING LOG SC-B3

BORING LOG SC-B4. Foth logo, Boring Page 1 of 1, Date 12-Jun-20, Project Name Town of Scituate, Kenneth Seawall. Includes soil log table with columns for Depth, Elev., Type, Blows, Pen., Rec., and Soil & Rock Descriptions. Notes include geoprobe sites and sampling intervals.

BORING LOG SC-B4

BORING LOG SC-B5. Foth logo, Boring Page 1 of 1, Date 12-Jun-20, Project Name Town of Scituate, Kenneth Seawall. Includes soil log table with columns for Depth, Elev., Type, Blows, Pen., Rec., and Soil & Rock Descriptions. Notes include geoprobe sites and sampling intervals.

BORING LOG SC-B5

BORING LOG SC-B7. Foth logo, Boring Page 1 of 1, Date 10-Jun-20, Project Name Town of Scituate, Kenneth Seawall. Includes soil log table with columns for Depth, Elev., Type, Blows, Pen., Rec., and Soil & Rock Descriptions. Notes include geoprobe sites and sampling intervals.

BORING LOG SC-B7

BORING LOG SC-B8. Foth logo, Boring Page 1 of 1, Date 10-Jun-20, Project Name Town of Scituate, Kenneth Seawall. Includes soil log table with columns for Depth, Elev., Type, Blows, Pen., Rec., and Soil & Rock Descriptions. Notes include geoprobe sites and sampling intervals.

BORING LOG SC-B8

BORING LOG SC-B9. Foth logo, Boring Page 1 of 1, Date 8-Jun-20, Project Name Town of Scituate, Kenneth Seawall. Includes soil log table with columns for Depth, Elev., Type, Blows, Pen., Rec., and Soil & Rock Descriptions. Notes include geoprobe sites and sampling intervals.

BORING LOG SC-B9

REVISIONS table with columns for No., Date, and Description.

DATE OF PREPARATION table with columns for BY, DATE, SURVEYED, DRAWN, DESIGNED, CHECKED.

SHEET TITLE: BORING LOGS
ISSUANCE: FOR PERMITTING PURPOSES ONLY
PROJECT NO: 20S001
SHEET NUMBER: S11

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Friday, November 4, 2021 11:53:08 AM



Briggs Engineering & Testing
A Division of PK Associates, Inc.

July 8, 2020

Foth Infrastructure & Environment, LLC
15 Creek Road
Marion, MA 02738

Briggs no. 31250

Attn: Mr. Mike Campagnone, P.E.

EVALUATION OF CONCRETE CORES
Scituate Seawall - Foth

SPECIMEN Two concrete core samples extracted by Briggs Engineering and Testing on 6/10/20 for compressive strength testing.

LAB REF. NUMBER M-31731

METHOD OF ANALYSIS Obtaining and Testing Drilled Cores and Sawed Beams of Concrete ASTM C-42.

RESULTS	Specimen	Dia.(in)	Capped Length(in)	L/D Ratio	Corr. Factor	Comp.(psi)
	1	4.00	9.625	2.1	1.00	4960
	2	4.00	8.250	2.1	1.00	7420

Respectfully submitted,
BRIGGS ENGINEERING & TESTING
A Division of PK Associates, Inc.

Sean Skorohod
Director of Field Services
Construction Technology Division

www.briggsengineering.com

100 Weymouth Street - Unit C-2
Rockland, MA 02370
Phone (781) 871-6040 • Fax (781) 871-4340

100 Pound Road
Cumberland, RI 02864
Phone (401) 658-2990 • Fax (401) 658-2977

CONCRETE CORING RESULTS

Kenneth Rd to Scituate Ave Seawall Replacement			
#	Address	Deck Supports	House Foundation
1	22 Oceanside Drive	12"Ø Concrete Sonotubes	Solid
2	20 Oceanside Drive	12"Ø Concrete Sonotubes (1st Row), 4x8 Timber (2nd Row)	Solid
3	18 Oceanside Drive	20" Square Concrete Column	20" Square Concrete Column
4	16 Oceanside Drive	12"Ø Concrete Sonotubes	12"Ø Concrete Sonotubes
5	14 Oceanside Drive	20" Square Concrete Column	18"Ø Concrete Column
6	12 Oceanside Drive	12"Ø Concrete Sonotubes (Abandoned)	12"Ø
7	8 Oceanside Drive	12"Ø Timber	12"Ø
8	6 Oceanside Drive	12"Ø Timber	16" Square Concrete Column
9	4 Oceanside Drive	12"Ø Timber (1st Row), 16" Ø Concrete Column (2nd Row)	16"Ø Concrete Column
10	2 Oceanside Drive	12"Ø Timber	16"Ø Concrete Column
11	117 Turner Road	12"Ø Timber (1st Row), 18" Square Concrete Column (2nd Row)	18" Square Concrete Column
12	119 Turner Road	16" Square Concrete Column	16" Square Concrete Column
13	121 Turner Road	12"Ø Concrete Sonotubes	18" Square Concrete Column
14	123 Turner Road	12"Ø Timber	12"Ø Timber
15	125 Turner Road	12"Ø Concrete Sonotubes	12"Ø Concrete Sonotubes
16	127 Turner Road	12"Ø Flared Concrete Sonotubes	12"Ø Concrete Sonotubes (?)
17	129 Turner Road	12"Ø (Timber?)	18" Square Concrete Column
18	131 Turner Road	16" Square Concrete Blocks	Concrete (?) Columns
19	133 Turner Road	3"Ø Steel	12"Ø Concrete Columns
20	135 Turner Road	16" Square Concrete Column	Solid Concrete
21	137 Turner Road	13"Ø Concrete Column	13"Ø Concrete Column
22	139 Turner Road	12"Ø Fiberglass	12"Ø Fiberglass
23	143 Turner Road	12"Ø Concrete Sonotubes (Inners Buried)	12"Ø Concrete Sonotubes
24	145 Turner Road	12"Ø Concrete Sonotubes	12"Ø Concrete Sonotubes
25	147 Turner Road	12"Ø Concrete Sonotubes	Solid
26	149 Turner Road	12"Ø Timber	12"Ø Timber
27	151 Turner Road	12"Ø Timber	12"Ø Timber



TOWN OF SCITUATE, MA
SEAWALL RECONSTRUCTION
OCEANSIDE DRIVE
KENNETH ROAD TO SCITUATE AVENUE

NO	BY	DATE	DESCRIPTION

DATE OF PREPARATION		
SURVEYED	BY	DATE

SHEET TITLE:
CONCRETE CORING LOG & EXISTING FOUNDATION DETAILS

ISSUANCE:
FOR PERMITTING PURPOSES ONLY

PROJECT NO: 20S001

SHEET NUMBER
S12