

(Map data © 2022 Google)

## LJA Engineering, Inc.

2615 Calder Avenue, Suite 500  
Beaumont, Texas 77702

Phone 409.833.3363  
Fax 409.833.0317  
FRN - F-1386

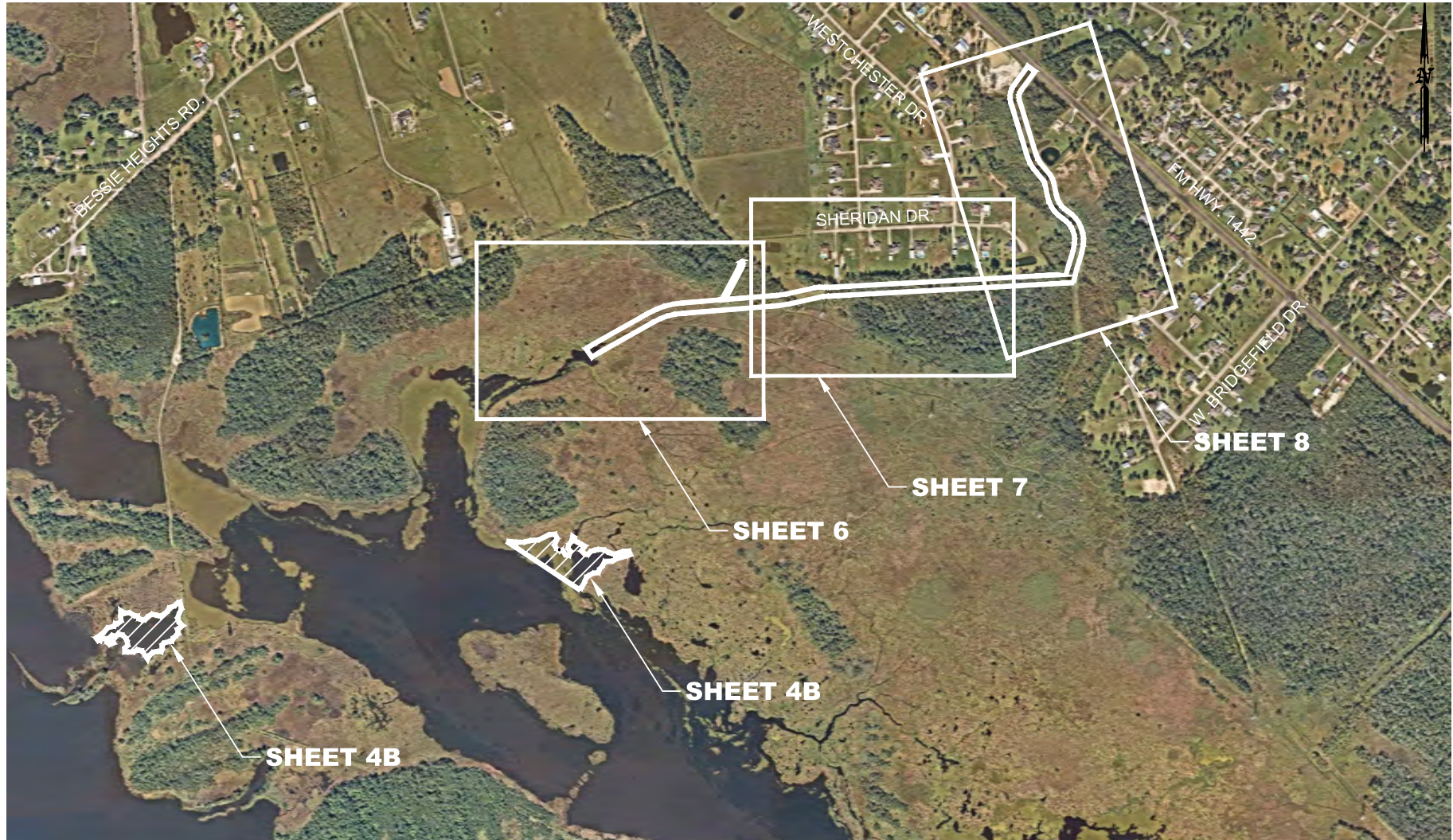
Plot Date: 9/26/2022

BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

VICINITY MAP

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	1" = 2,600'	
Sheet	2 of 21	





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BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

## PROJECT KEY MAP

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	1" = 1,000'	
Sheet	3 of 21	





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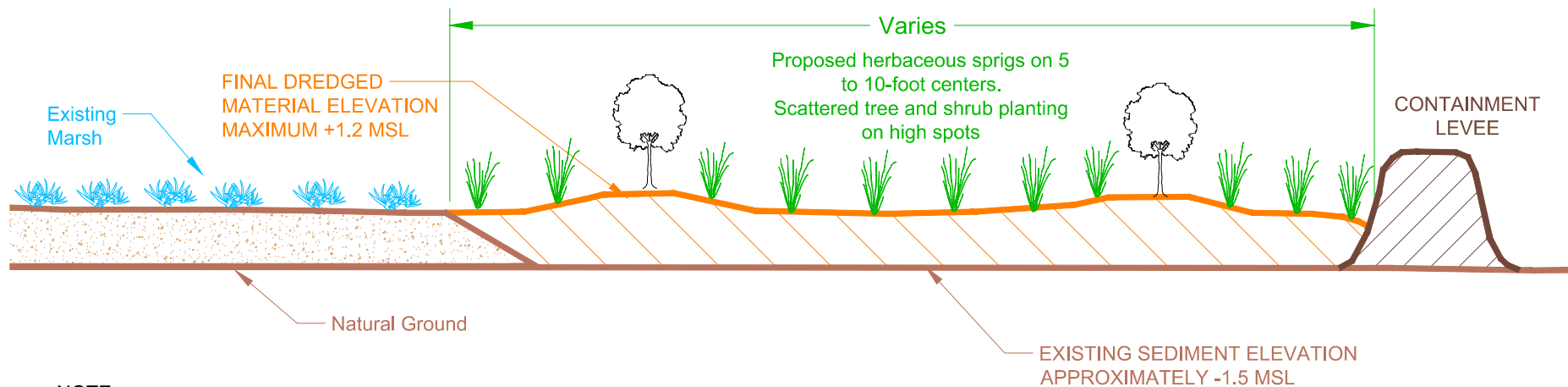


BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS  
MITIGATION SITE & BENEFICIAL  
USE PLACEMENT ENLARGED  
LOCATION DETAIL

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	1" = 500'	
Sheet	4 Of 21	

A

A



**NOTE:**

DREDGED MATERIAL WILL BE HYDRAULICALLY DISCHARGED IN THE MITIGATION AREA TO ACHIEVE AN UNDULATING SURFACE WITH A MAXIMUM FINAL ELEVATION OF +1.2' MSL. LOW AREAS IN THE MATERIAL DISPOSAL WILL DEVELOP SHALLOW OPEN WATER AND TIDAL CHANNELS WILL DEVELOP AS THE AREA IS EXPOSED TO PERIODIC HIGH WATER CONDITIONS.

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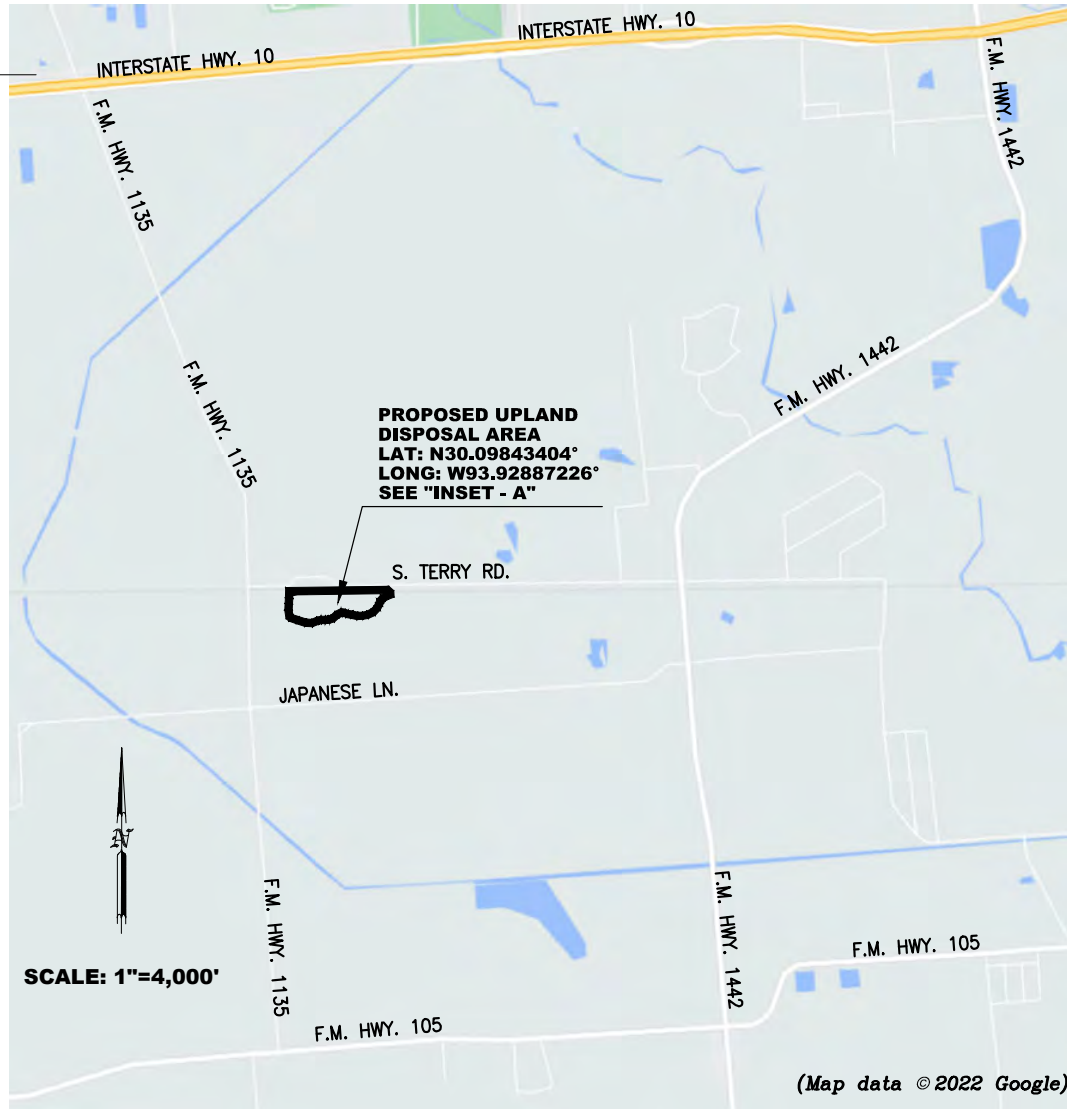


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BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS  
TYPICAL PLANTING  
MITIGATION AREA  
SECTION "A-A"

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	08/26/22
Approved	DMP	08/27/22
Last Revised	-	
Scale	N.T.S.	
Sheet	04A Of 21	





**INSET - A**  
SCALE: 1"=1,000'

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BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

UPLAND DISPOSAL AREA MAP

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	AS SHOWN	
Sheet	4B	Of 21

WATERS_NAME	SHEET NO.	COWADIN_CODE	HGM_CODE	AREA (ACRES)	LINEAR (FT)	WATERS TYPES	LATITUDE(DD NAD83)	LONGITUDE DD (NAD83)	LOCAL_WATERWAY
WAA1	6	E1UBL	ESTUARINEF	0.246		TNW	30.04280	-93.90860	NECHES RIVER
WAA2	6	E2EM1P	ESTUARINEF	1.468		TNWW	30.04348	-93.90659	NECHES RIVER
WAA3	6	PFO1A	ESTUARINEF	0.167		TNWW	30.04399	-93.90549	NECHES RIVER
WAA4	7	E2EM1P	ESTUARINEF	0.199		TNWW	30.04351	-93.90494	NECHES RIVER
WAA5	7	PFO1A	ESTUARINEF	0.110		TNWW	30.04353	-93.90456	NECHES RIVER
WAA6	7	E2EM1P	ESTUARINEF	0.004		TNWW	30.04347	-93.90403	NECHES RIVER
WAA7	7	E2EM1P	ESTUARINEF	0.035		TNWW	30.04358	-93.90371	NECHES RIVER
WAA8	7	PFO1A	ESTUARINEF	0.387		TNWW	30.04358	-93.90336	NECHES RIVER
WAA9	8	PFO1A	ESTUARINEF	1.175		TNWW	30.04528	-93.89875	NECHES RIVER
WAA10	8	E1UBL	ESTUARINEF	1.163		TNW	30.04540	-93.89868	NECHES RIVER

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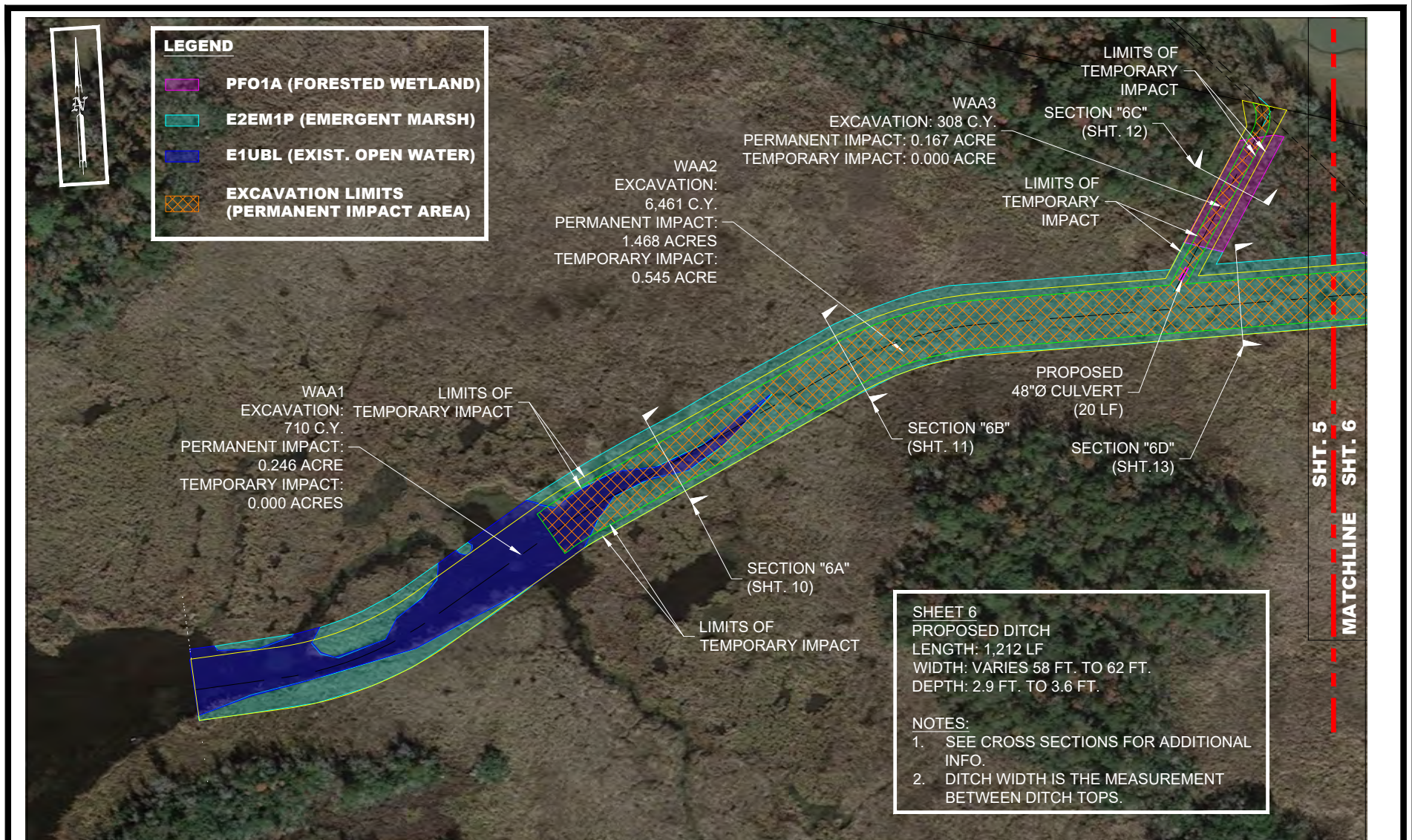
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IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

WATERS UPLOAD SHEET

Action	Name	Date
Design	DMP	09/18/21
Drawn	BDS	09/10/22
Approved	DMP	09/15/22
Last Revised	-	
Scale	-	
Sheet	5	of 21



O:\PROJECTS\LJA B000 - BXXX\B881 - OCDD\B881-1006 BESSIE HEIGHTS RELIEF DITCH\ACAD\EXHIBITS\06 - 08 PLAN SHEETS.DWG



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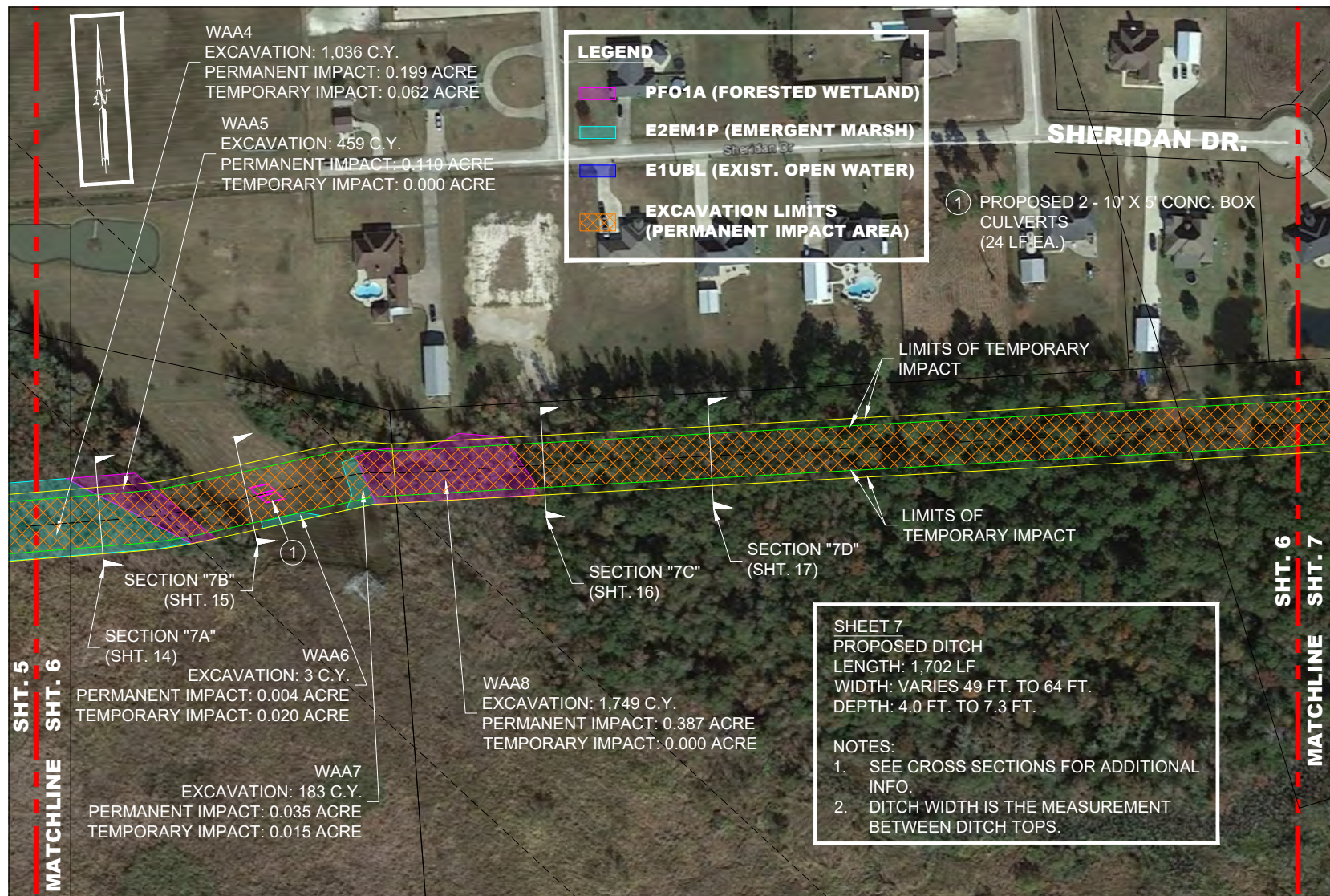
Plot Date: 9/26/2022

BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

PLAN SHEET

Action	Name	Date
Design	DMP	09/18/21
Drawn	JS	04/18/21
Approved	DMP	04/20/22
Last Revised	09/06/22 (BDS)	
Scale	1" = 200'	
Sheet	6 of 21	





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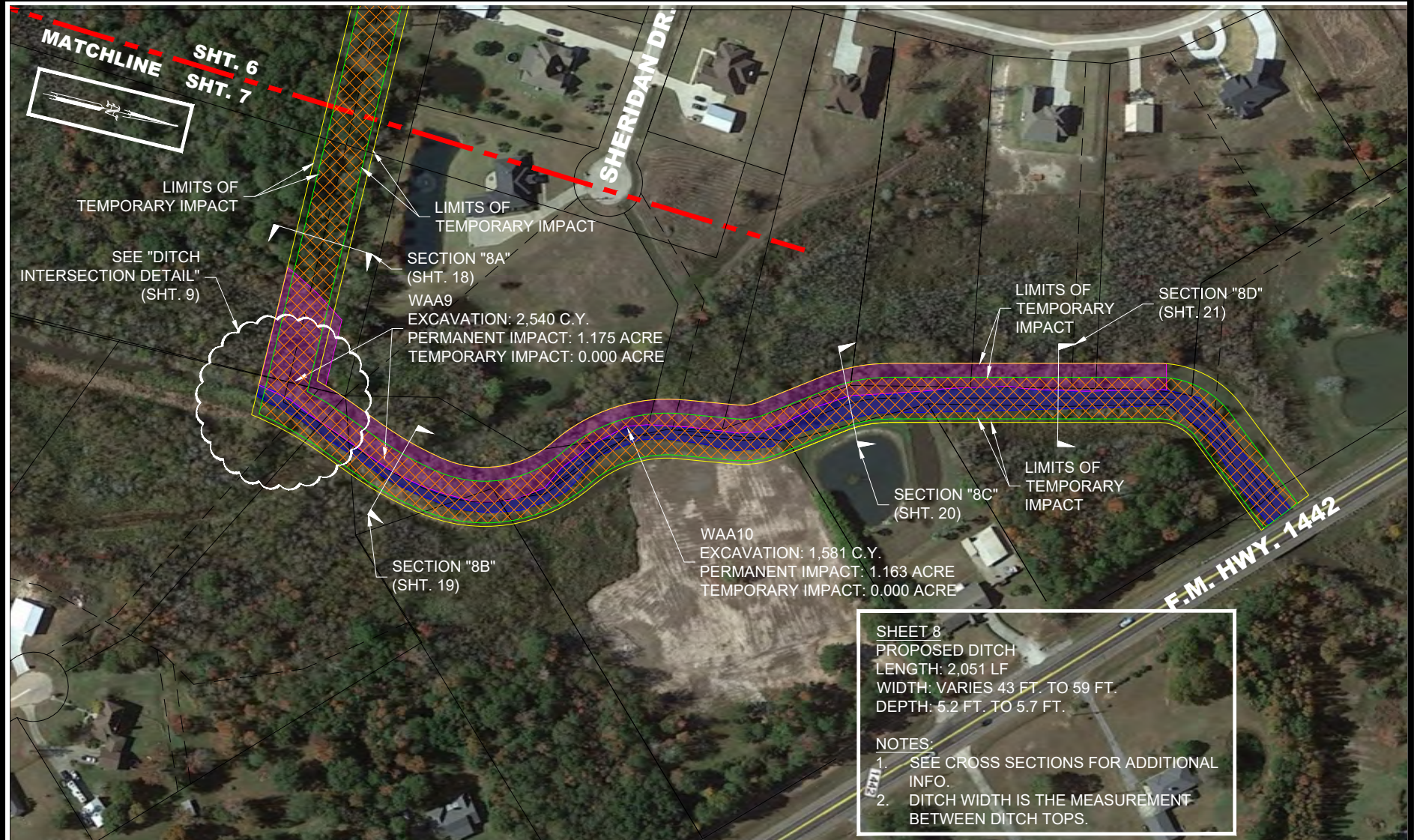
Plot Date: 9/26/2022

BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

PLAN SHEET

Action	Name	Date
Design	DMP	09/18/21
Drawn	JS	04/18/21
Approved	DMP	04/20/22
Last Revised	09/06/22 (BDS)	
Scale	1" = 200'	
Sheet	7 of 21	





**SHEET 8**  
PROPOSED DITCH  
LENGTH: 2,051 LF  
WIDTH: VARIES 43 FT. TO 59 FT.  
DEPTH: 5.2 FT. TO 5.7 FT.

**NOTES:**  
1. SEE CROSS SECTIONS FOR ADDITIONAL INFO.  
2. DITCH WIDTH IS THE MEASUREMENT BETWEEN DITCH TOPS.

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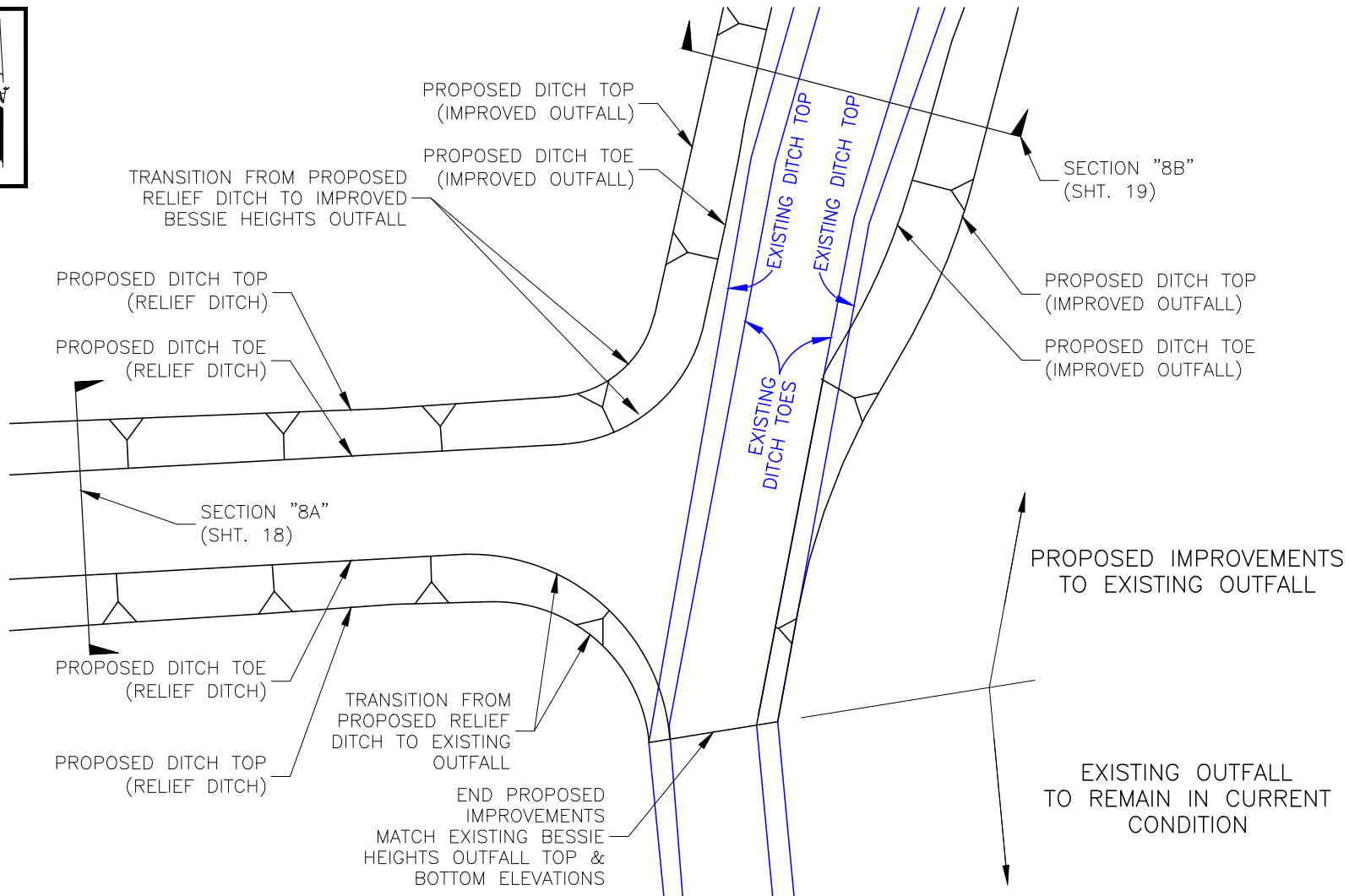
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BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

PLAN SHEET

Action	Name	Date
Design	DMP	09/18/21
Drawn	JS	04/18/21
Approved	DMP	04/20/22
Last Revised	09/06/22 (BDS)	
Scale	1" = 200'	
Sheet	8 of 21	



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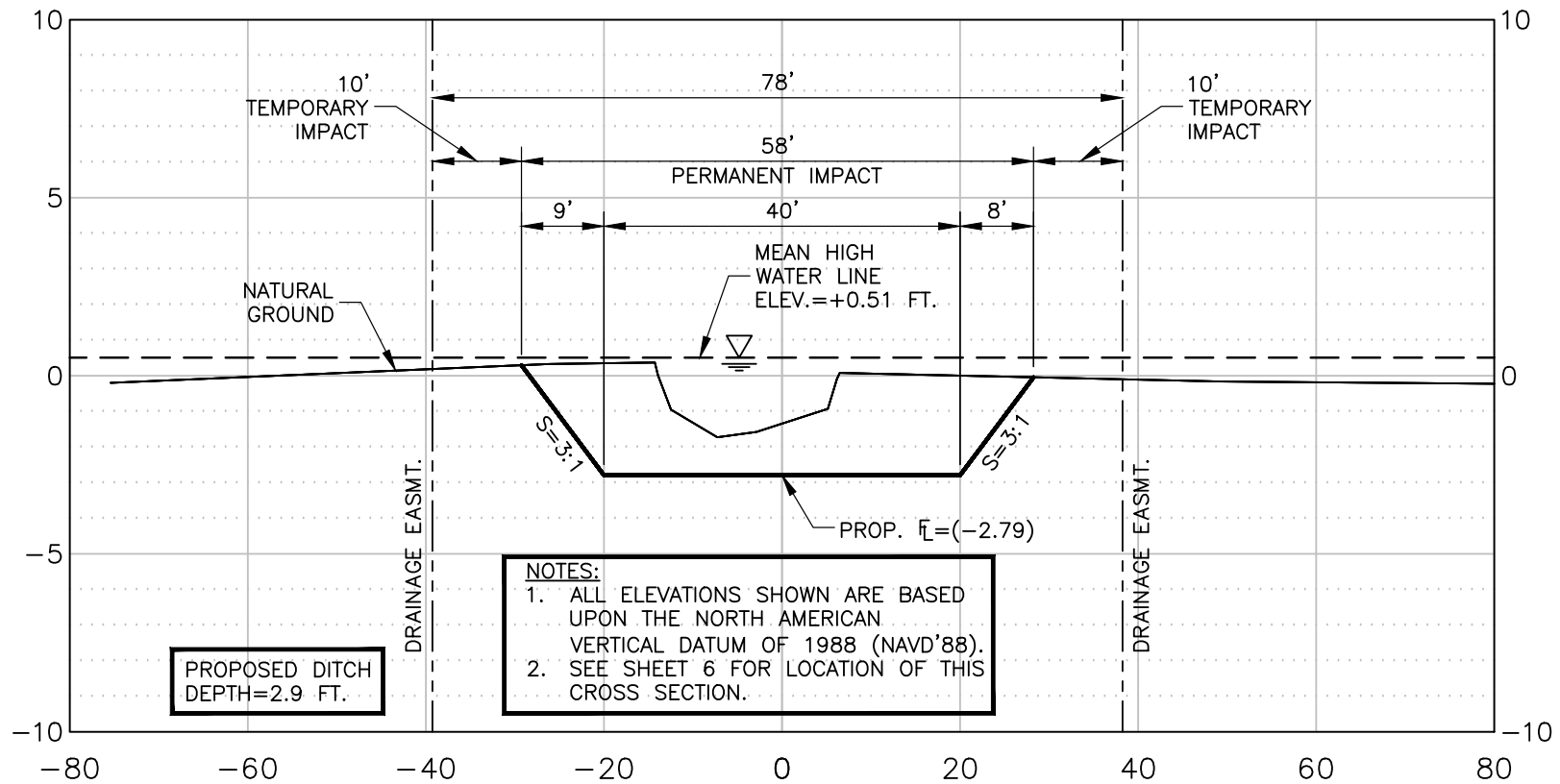
Plot Date: 9/26/2022

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IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

### DITCH INTERSECTION DETAIL

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	1" = 30'	
Sheet	9 of 21	





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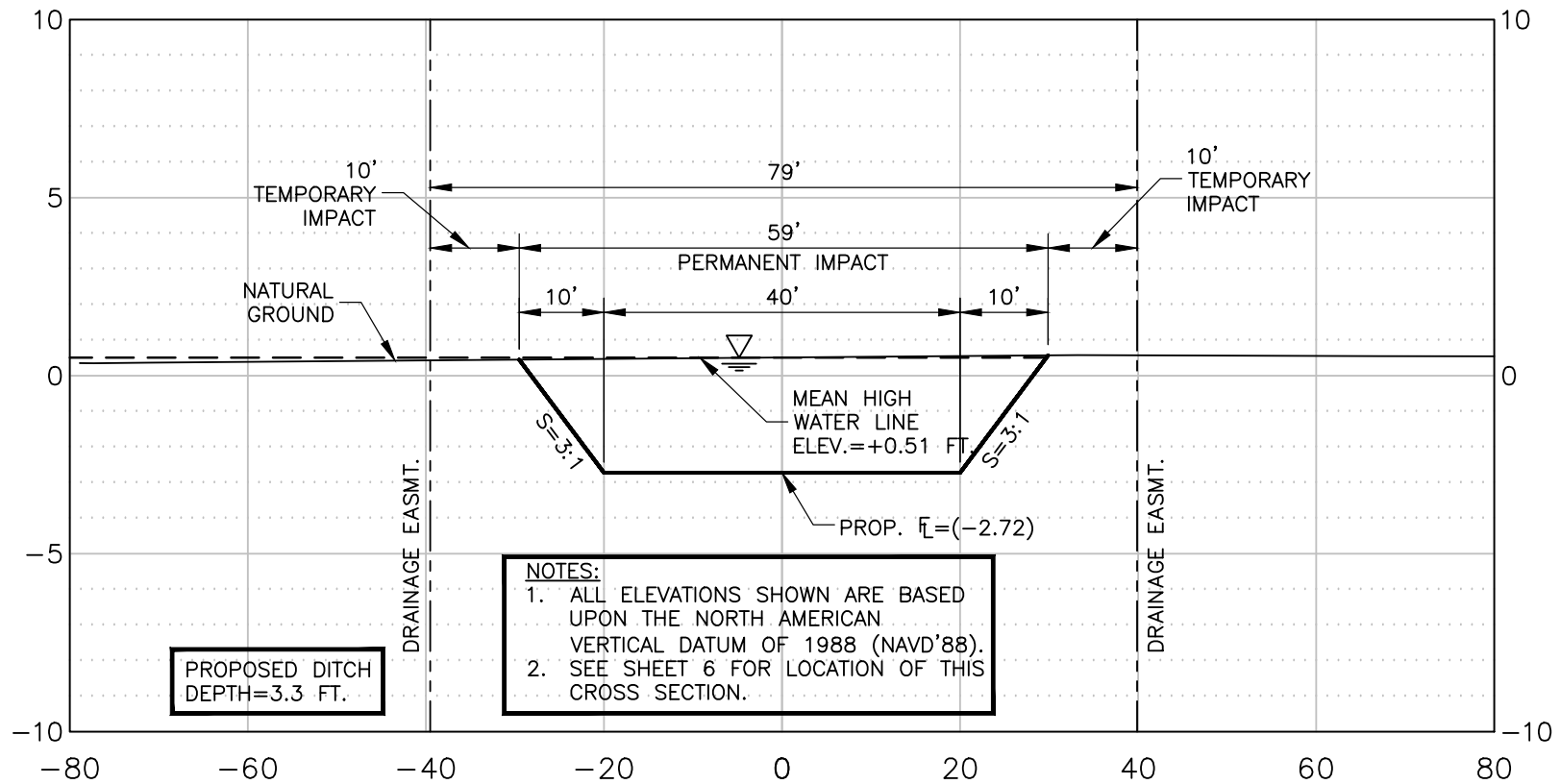
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BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

### SECTION "6A"

LAT: N30.04298097°  
LONG: W93.90817643°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT. 1"=5'	
Sheet	10 of 21	



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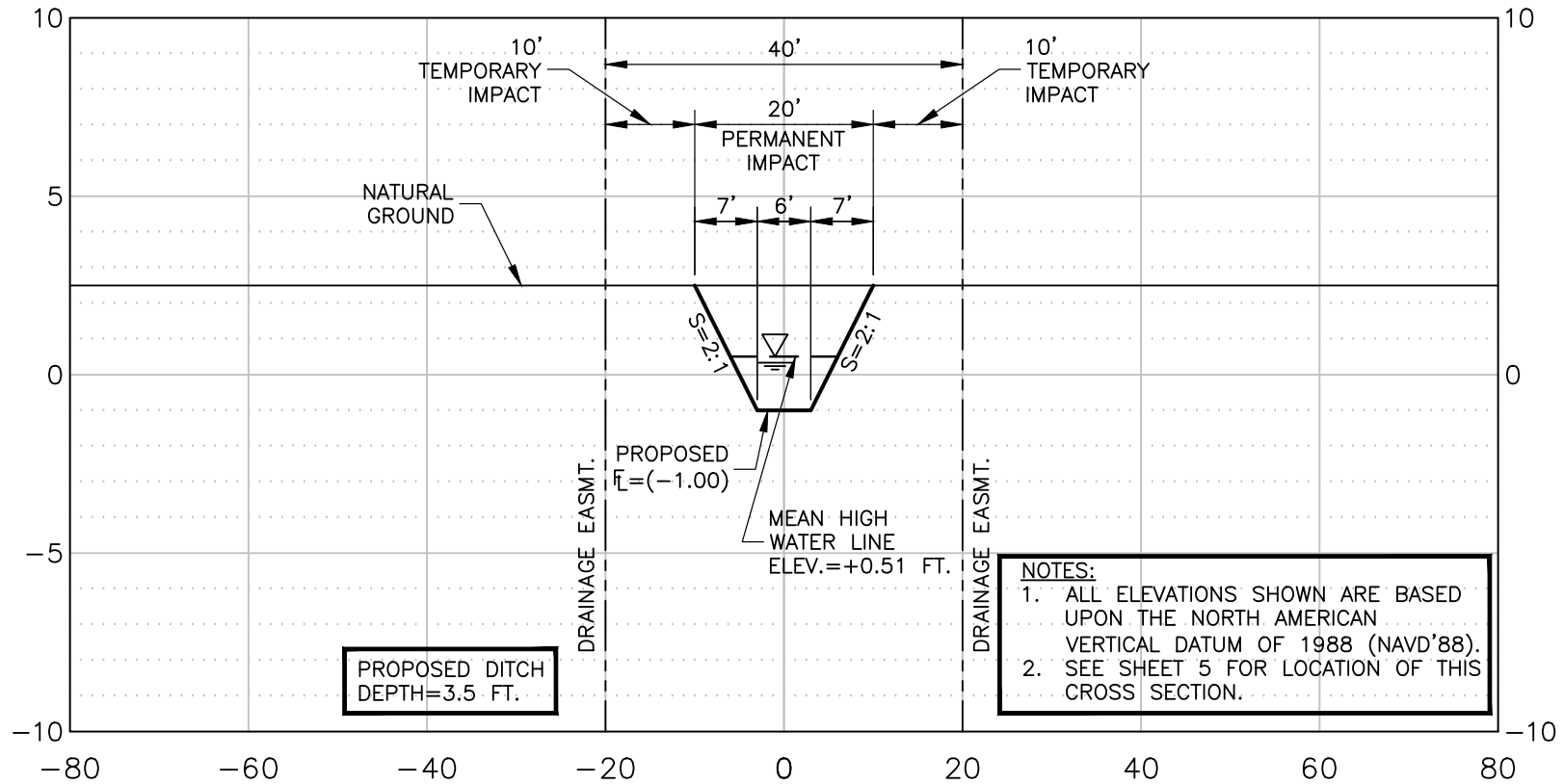
Plot Date: 9/26/2022

BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

SECTION "6B"  
LAT: N30.04334233°  
LONG: W93.90732416°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT: 1"=5'	
Sheet	11 of 21	





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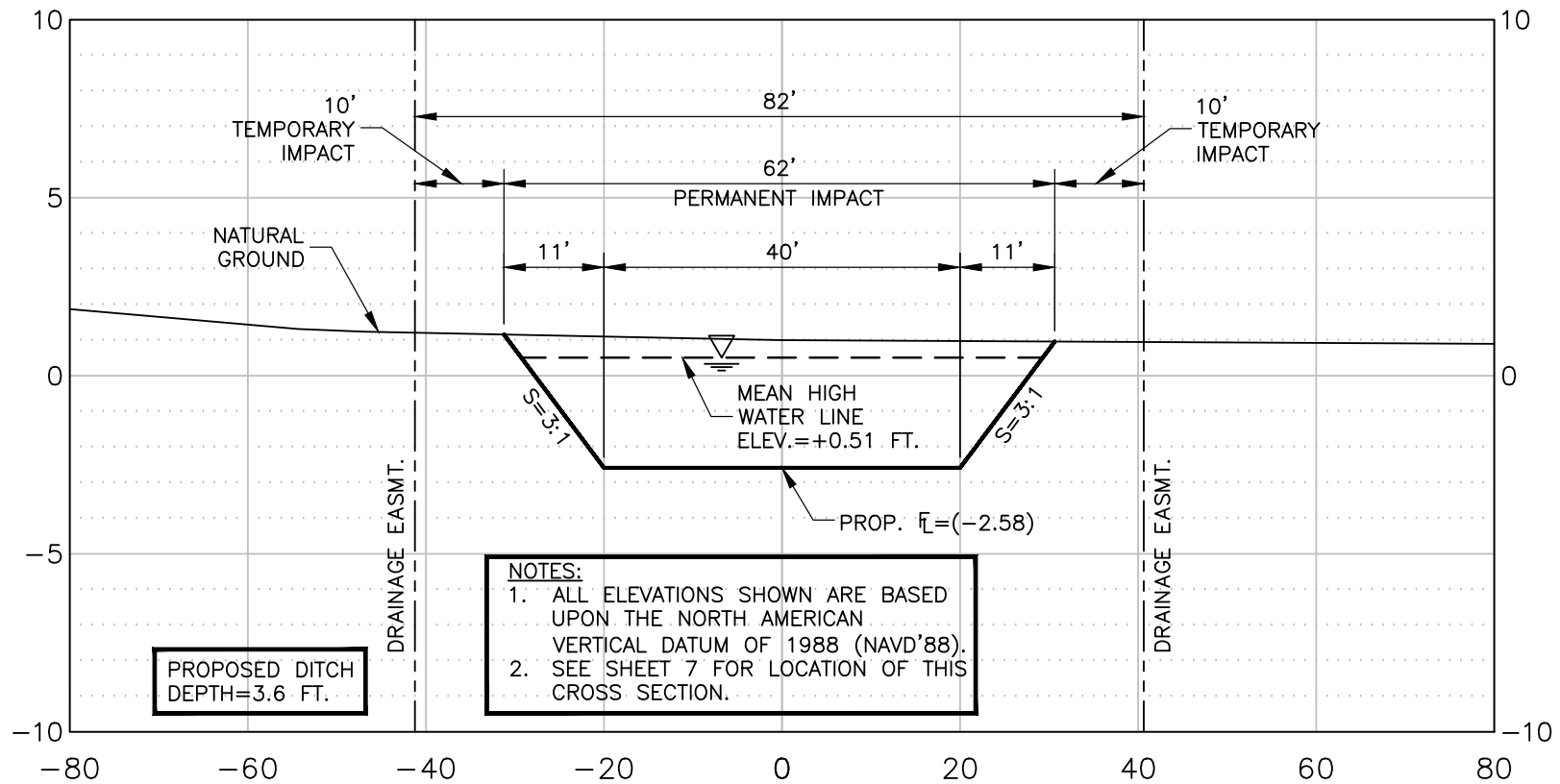
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BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

SECTION "6C"  
LAT: N30.04397475°  
LONG: W93.90553597°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT. 1"=5'	
Sheet	12 of 21	



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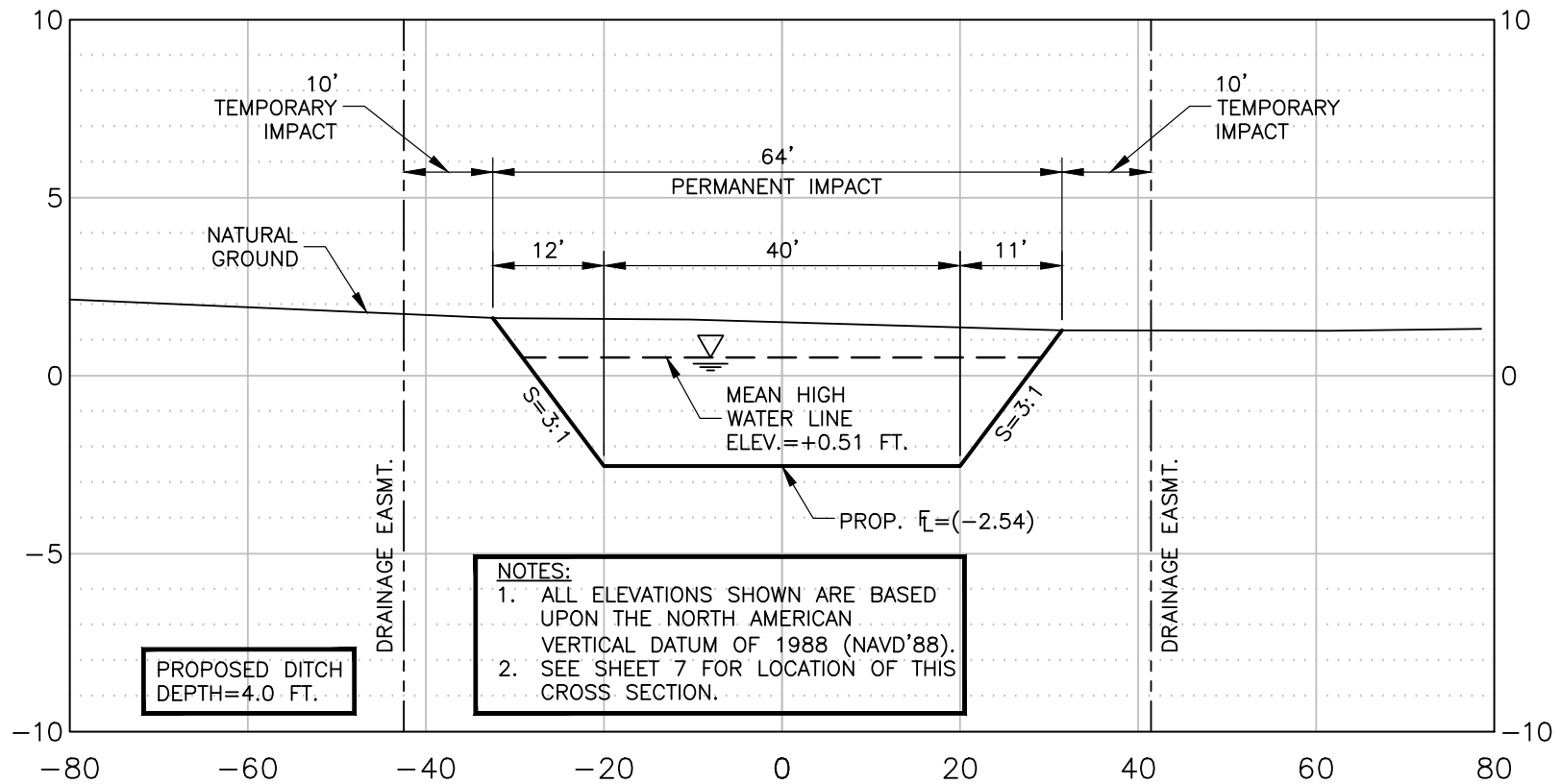
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IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

SECTION "6D"

LAT: N30.04349869°  
LONG: W93.90552713°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT: 1"=5'	
Sheet	13 of 21	





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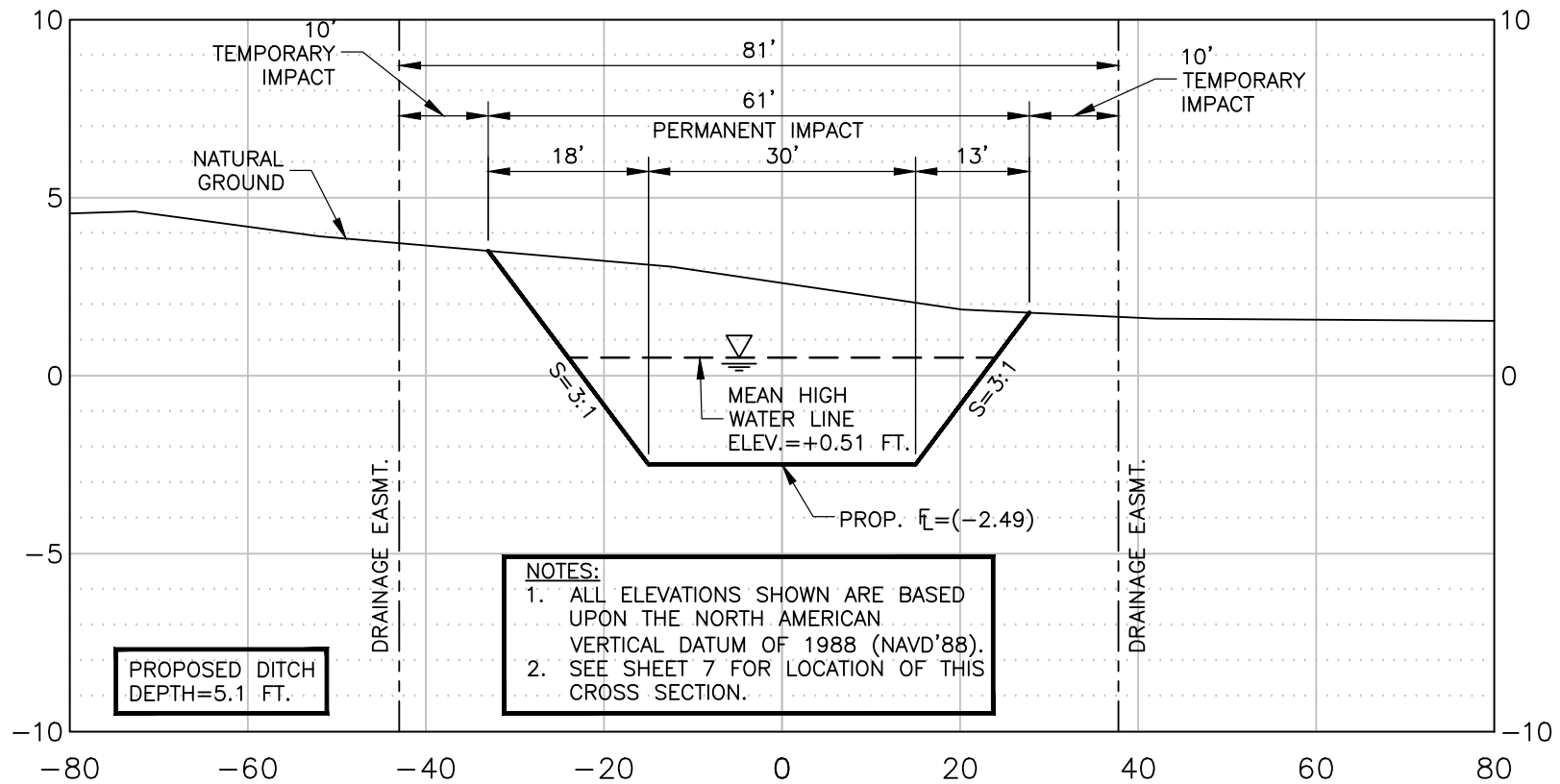
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**BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT**  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS  
**SECTION "7A"**  
LAT: N30.04351192°  
LONG: W93.90482077°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT: 1"=5'	
Sheet	14 of 21	



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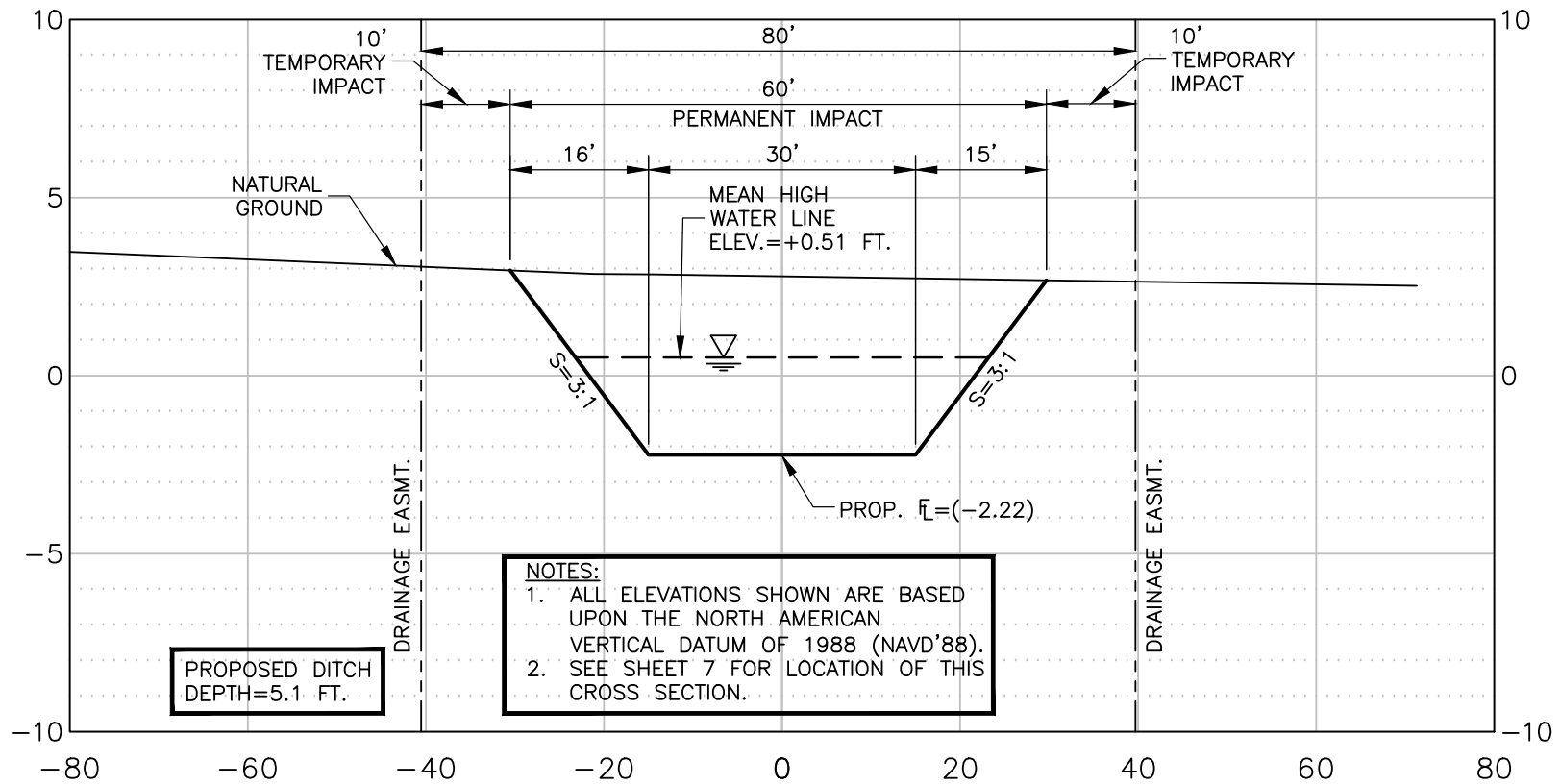
BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS

SECTION "7B"

LAT: N30.04354776°  
LONG: W93.90419062°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT: 1"=5'	
Sheet	15 of 21	





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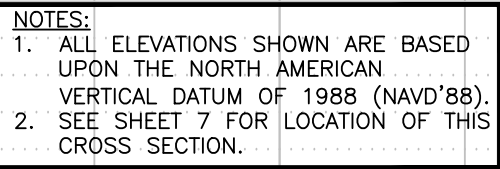
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BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS  
SECTION "7C"

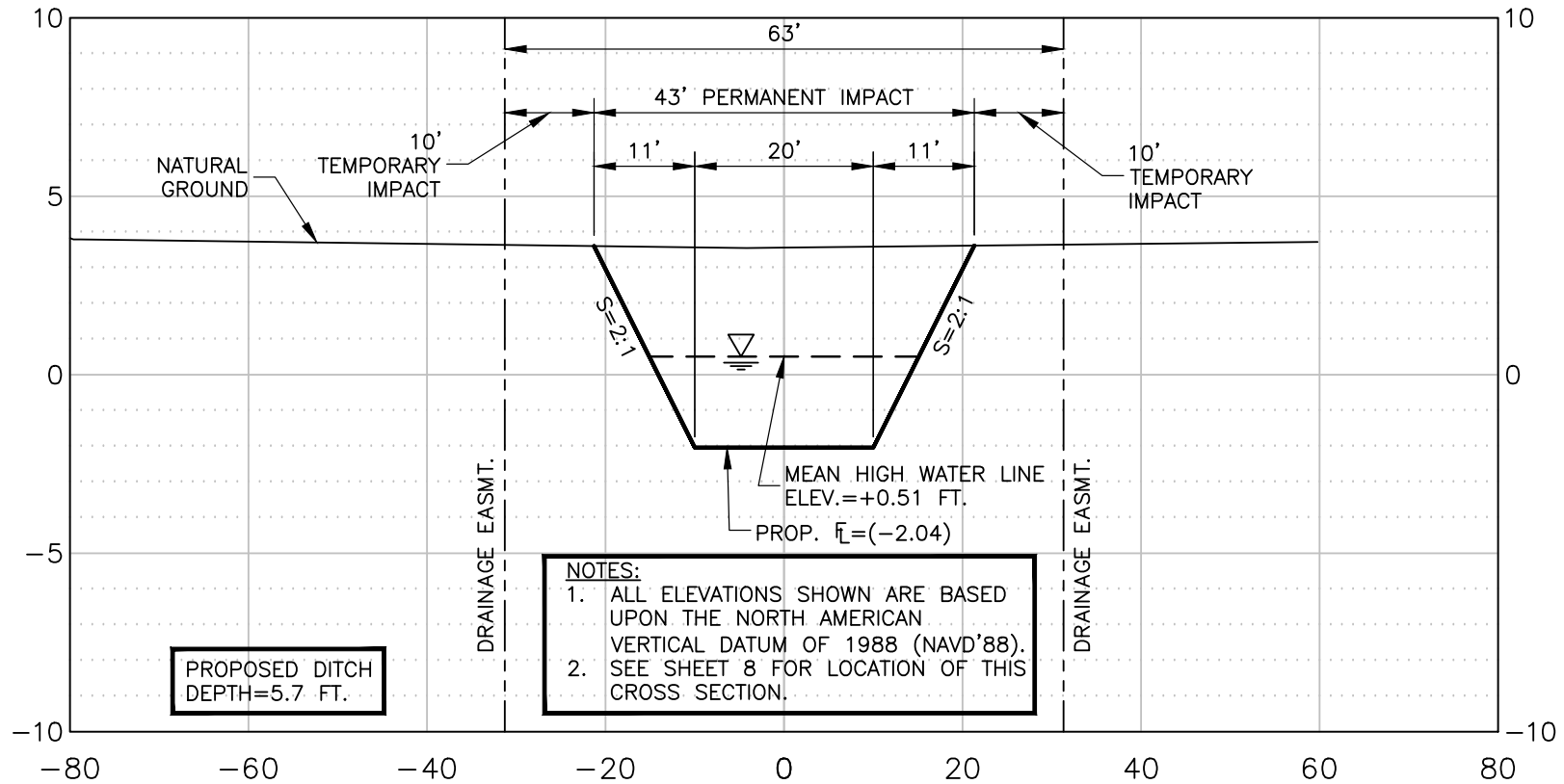
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LONG: W93.90292771°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT. 1"=5'	
Sheet	16 of 21	

**LJA**

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	—	
Scale	HOR.: 1"=20', VERT. 1"=5'	
Sheet	<u>17</u>	Of <u>21</u>





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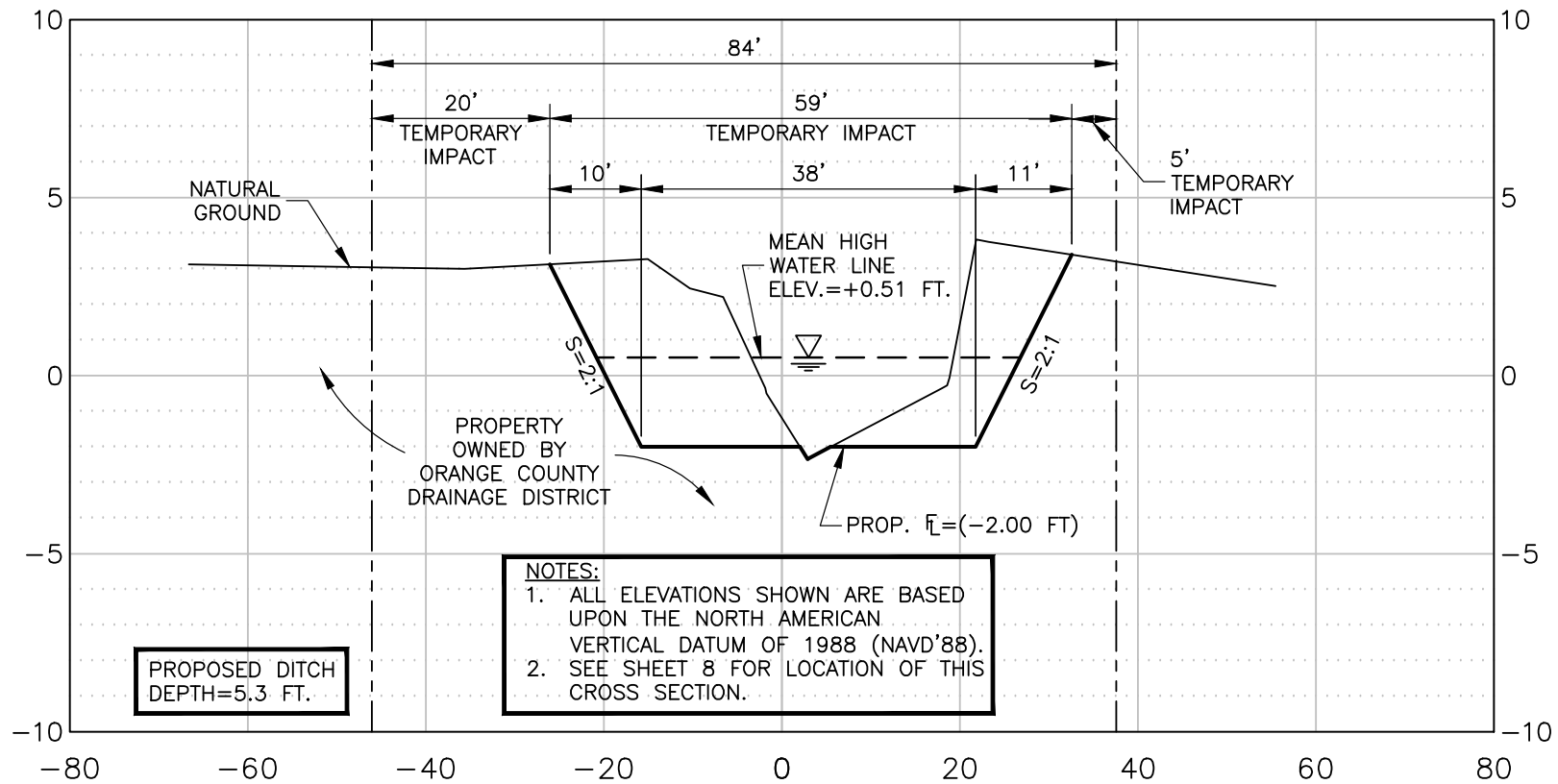
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BESSIE HEIGHTS DRAINAGE  
IMPROVEMENTS PROJECT  
FEMA, HMGP DR-4466-TS IMELDA  
BRIDGE CITY, ORANGE COUNTY, TEXAS  
SECTION "8A"  
LAT: N30.04357118°  
LONG: W93.89913534°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT: 1"=5'	
Sheet	18 of 21	



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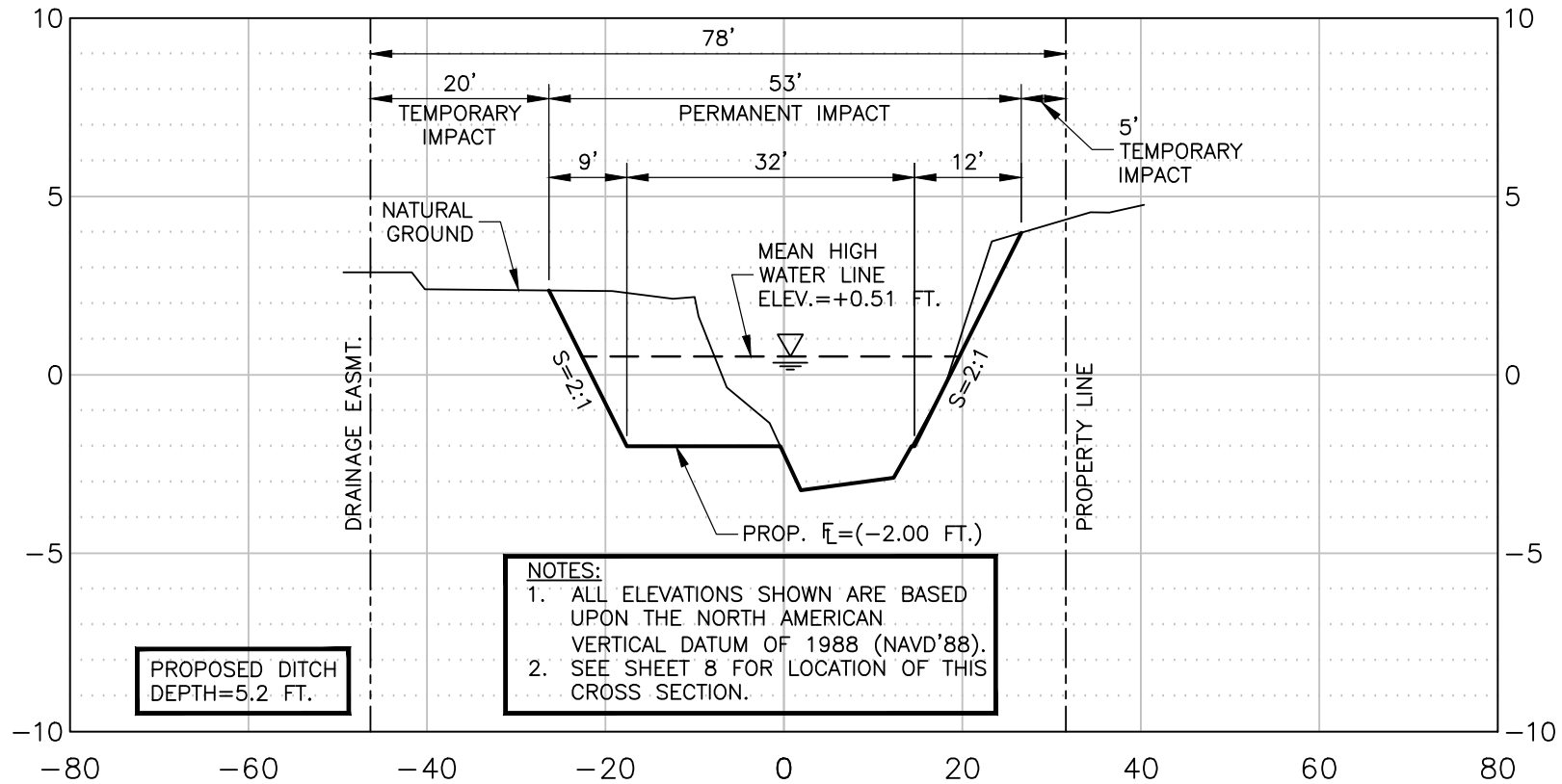
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IMPROVEMENTS PROJECT  
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BRIDGE CITY, ORANGE COUNTY, TEXAS

SECTION "8B"

LAT: N30.04409817°  
LONG: W93.89818620°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT: 1"=5'	
Sheet	19 of 21	





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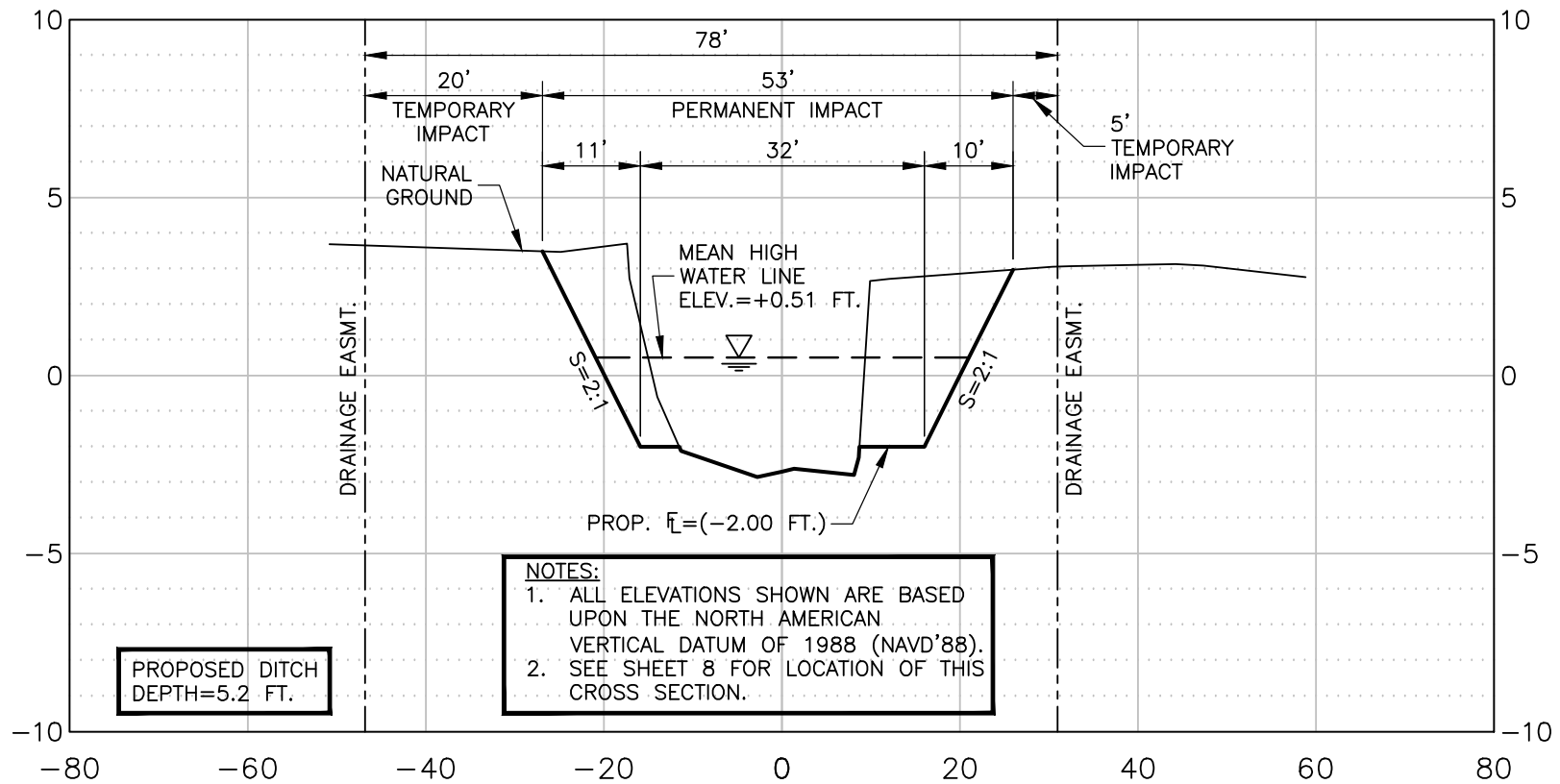
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BESSIE HEIGHTS DRAINAGE  
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BRIDGE CITY, ORANGE COUNTY, TEXAS  
SECTION "8C"

LAT: N30.04579231°  
LONG: W93.89896347°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT: 1"=5'	
Sheet	20 of 21	



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BRIDGE CITY, ORANGE COUNTY, TEXAS

SECTION "8D"

LAT: N30.04659256°  
LONG: W93.89918968°

Action	Name	Date
Design	DMP	10/31/21
Drawn	BDS	09/06/22
Approved	DMP	09/07/22
Last Revised	-	
Scale	HOR: 1"=20', VERT: 1"=5'	
Sheet	21 of 21	