DRAWN BY:		DATE:	
CHECKED BY:		DATE:	S&B PROJECT NO:
APPROVED BY:		DATE:	IBM09T0018
STATE	COUNTY		SHEET NO.
TEXAS	HIDALGO		1

UNITED STATES SECTION INTERNATIONAL BOUNDARY AND WATER COMMISSION

LOWER RIO GRANDE FLOOD CONTROL PROJECT

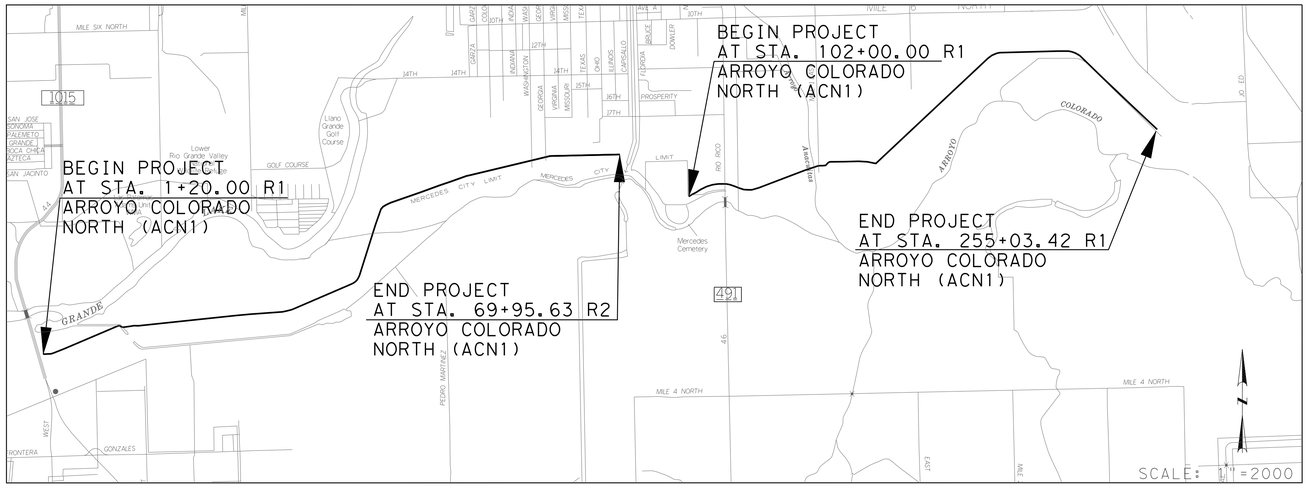
REHABILITATION OF ARROYO COLORADO NORTH LEVEE

FROM FM 1015 TO WILLACY CANAL

REHABILITATION OF ARROYO COLORADO NORTH LEVEE

INDEX OF SHEETS

SHEET No.	DESCRIPTION
	GENERAL
01.01	TITLE SHEET
02.1-02.01A	PROJECT LAYOUT
02.02-02.07	SURVEY CONTROL SHEET LEVEE ACN1
03.01	GENERAL NOTES & SPECIFICATION DATA
04.01	ESTIMATE OF QUANTITIES
05.01	SUMMARY OF LEVEE
05.02	SUMMARY OF ACCESS ROADS
05.03-05.04	SUMMARY OF SMALL STRUCTURES
	TYPICAL SECTIONS
06.01	EXISTING TYPICAL SECTIONS
06.02-06.03	PROPOSED TYPICAL SECTIONS
	LEVEE DETAILS
07.01-07.04	ALIGNMENT DATA SHEET
08.01-08.29	PLAN & PROFILE - LEVEE (ACN 1)
08.30-08.33	PLAN & PROFILE - ACCESS ROADS
09.01-09.08	BORE LOGS
10.01-10.73	CROSS SECTIONS - LEVEE
11.0	OMITTED
	STRUCTURES
12.01-12.02	STRUCTURAL LAYOUTS
12.03-12.18	CULVERT LAYOUT / CROSS-SECTIONS
12.19	STRUCTURE DETAIL
12.20-12.21	SAFETY END TREATMENT TY II
12.22-12.23	FLOODGATE DETAILS
	EROSION CONTROL
13.01	SW3P
	ENVIRONMENTAL COMMITMENTS / MITIGATION
14.01	EPIC
	STANDARDS
15.01	HEAVY DUTY VEHICULAR GATE
15.02	TRAFFIC CONTROL DETAILS TYPE III BARRICADES AND LANE CLOSURES
15.03-15.05	TEMPORARY EROSION SEDIMENT AND WATER POLLUTION CONTROL MEASURES
15.06-15.17	BC-07



EQUATION: STA. 113+34.97 R1 BK=STA. 00+00.00 R2 AH

VICINITY MAP

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by DARIO V. GUERRA III P.E. 64669, on September 20 09

ADDENDUM No. 2

PLANS PREPARED BY

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

DANIEL O. RIOS, P.E., PROJECT MANAGER

SUBMITTED FOR LETTING:

CHARLOTTE LYNNE TEAGUE, P.E.
DEPUTY PROJECT MANAGER / TASK ORDER MANAGER

DATE : 09-03-09

FINAL PLAN DATA:

FINAL CONTRACT PRICE: _____
CONTRACTOR'S NAME: _____
CONTRACTOR ADDRESS: _____
LETTING DATE: _____
DATE WORK BEGAN: _____
DATE WORK COMPLETED: _____
DATE OF ACCEPTANCE: _____

CHANGE ORDERS:

U.S. SECTION INTERNATIONAL BOUNDARY & WATER COMMISSION

RECOMMENDED FOR LETTING : _____ DATE : _____
RAYMUNDO AGUIRRE, Ph.D, P.E.
PROJECT MANAGER

APPROVED FOR LETTING : _____ DATE : _____
JOSE ARTURO NUNEZ, P.E.
DIVISION ENGINEER, ENGINEERING SERVICES DIVISION

APPROVED FOR LETTING : _____ DATE : _____
C. W. RUTH, P.E.
COMMISSIONER

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ESTIMATE & QUANTITIES SUMMARY

ITEM BID			DESCRIPTION	UNIT	TOTAL	
DIVISION NO.	ITEM No.	DESC CODE			ESTIMATE	FINAL
DIVISION 01 - GENERAL REQUIREMENTS						
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	27,614	
01	70	01	MOBILIZATION/DEMOBILIZATION	LS	1	
DIVISIONS 31-33 - GRADING						
31	11	01	PREP RIGHT OF WAY	STA	86.00	
31	11	11	CLEARING AND GRUBBING	AC	11.53	
31	14	01	REMOVE/STOCKPILE (EXIST GRAVEL)	CY	1,137	
31	14	02	REMOVE/STOCKPILE (EXIST TOPSOIL) (6 IN)	CY	6,623	
31	92	01	SEEDING (PERM)	SY	45,510	
31	92	02	VEGETATIVE WATERING	MG	182	
31	92	03	SEEDING (TEMP)	SY	45,510	
DIVISION 35 - WATERWAY/MARINE						
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	28,336	
35	41	02	LEVEE (EMBANKMENT)	CY	40,394	
35	41	03	LEVEE (TOPSOIL)	CY	7,585	
35	42	02	RIPRAP (ROCK)	CY	562	
35	42	03	GEOTEXTILE FABRIC	SY	843	
DIVISION 50 - ROADWAY CONSTRUCTION						
50	11	02	ROADWAY EMBANKMENT (ACCESS ROAD)	CY	11,768	
50	20	01	ROADWAY FLEX BASE (TYE GR 4)	CY	3,188	
DIVISION 60 - STRUCTURES						
60	64	10	RC PIPE (CL III) (18 IN)	LF	41	
60	67	01	SAFETY END TREATMENT (3:1)	EA	2	
60	68	21	SLUICE GATE (REFURB) (18 IN)	EA	1	
60	68	23	SLUICE GATE (REFURB) (24 IN)	EA	2	
60	68	90	SLUICE GATE (LUBE)	EA	1	
60	71	10	GATEWELL GRATE (REPLACE &/OR INSTALL)	EA	3	
60	98	10	CLEAN EXIST STRUCTURE	EA	7	
DIVISION 90 - MISCELLANEOUS						
90	79	01	VEHICULAR GATE	EA	1	

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Engineering Management Technology
S&B Infrastructure, Ltd. Firm Registration Number: 1582

ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE
(ACN1)
ESTIMATES OF QUANTITIES
SHEET 1 OF SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: HG	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				4.01

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SUMMARY OF LEVEE

SHEET. NO.	LOCATION STA FROM	TO	01 57 01 TEMP EROSION CONTROL (SILT FENCE)	31 11 01 PREP ROW	31 11 11 CLERAING AND GRUBING	31 92 01 SEEDING PERM	31 92 02 VEGETATIVE WATERING	31 14 01 REMOVE/STKPL (EXISTING GRAVEL)	31 14 02 REMOVE/STKPL (EXIST TOPSOIL 6")	35 41 01 RAISE LEVEE (BENCH EXCAVATION)	35 41 02 RAISE LEVEE (EMBANKMENT)	35 41 03 RAISE LEVEE (TOP SOIL)	35 42 02 RIPRAP (ROCK)	35 42 03 GEOTEXTILE FABRIC	50 20 01 ROADWAY FLEXBASE TY E GR 4	90 79 01 VEHICULAR GATE
			LF	STA	AC	SY	MG	CY	CY	CY	CY	CY	CY	SY	CY	EA
ARROYO COLORADO 1 NORTH LEVEE																
1 OF 29	0+00.00	11+00.00	1800	9.00		5364	21	174	859	2783	4825	894	562	843	267	1
2 OF 29	11+00.00	23+00.00	1600	8.00		5988	24	87	984	3542	5251	998			278	
3 OF 29	23+00.00	35+00.00	2400	12.00		4044	16	188	656	2824	4201	674			372	
4 OF 29	35+00.00	47+00.00	2400	12.00		5340	21	230	778	3329	4840	890			372	
5 OF 29	47+00.00	59+00.00	2400	12.00		7032	28	218	1037	4140	6055	1172			372	
6 OF 29	59+00.00	71+00.00	2400	12.00		7878	32	162	1219	4505	6682	1313			372	
7 OF 29	71+00.00	83+00.00	2400	12.00		5160	21	69	589	3720	4447	860			372	
8 OF 29	83+00.00	95+00.00	200	1.00		348	1	3	55	241	314	58			31	
9 OF 29	95+00.00	107+00.00				0	0									
10 OF 29	107+00.00	5+00.00				0	0									
11 OF 29	5+00.00	17+00.00	1800	2.00	1.40	1806	7	4	148	954	1135	301			98	
12 OF 29	17+00.00	29+00.00	1700	1.00	1.40	732	3	2	56	408	473	122			49	
13 OF 29	29+00.00	41+00.00	200		0.25	0	0									
14 OF 29	41+00.00	53+00.00	1200		1.50	0	0									
15 OF 29	53+00.00	65+00.00	200		0.25	0	0									
16 OF 29	65+00.00	69+95.63				0	0									
17 OF 29	100+89.90	112+00.00	300	3.00		750	3		106	632	770	125			85	
18 OF 29	112+00.00	124+00.00				0	0									
19 OF 29	124+00.00	136+00.00				0	0									
20 OF 29	136+00.00	148+00.00				0	0									
21 OF 29	148+00.00	160+00.00	500	1.00	0.50	282	1		22	385	407	47			52	
22 OF 29	160+00.00	172+00.00	1200		1.54	0	0									
23 OF 29	172+00.00	184+00.00	1200		1.54	0	0									
24 OF 29	184+00.00	196+00.00	1200		1.54	0	0									
25 OF 29	196+00.00	208+00.00	500		0.64	0	0									
26 OF 29	208+00.00	220+00.00	314	2.00	0.08	786	3		114	873	994	131			143	
27 OF 29	220+00.00	232+00.00				0	0									
28 OF 29	232+00.00	244+00.00				0	0									
29 OF 29	244+00.00	255+03.42	1900		0.89	0	0									
ACN1 LEVEE TOTALS			27814	87.00	11.53	45510	182	1137	6623	28336	40394	7585	562	843	2863	1

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Engineering Management Technology
S&B Infrastructure, Ltd. Firm Registration Number: 1582

ADDENDUM No. 2

SUMMARY OF LEVEE

SHEET 1 OF 1 SHEET

STATE	COUNTY	DRAWN BY:	CHECKED BY:	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				05.01

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SHEET. NO.	LOCATION	50 11 02 ROADWAY EMBANK (ACCESS ROAD)	50 20 01 ROADWAY FLEX BASE (TY E GR 4)	50 21 01 PRIME OIL (MC-30)	50 25 01 HOT MIX ASPH SURF
	STA	CY	CY	LF	TON
8.30	24+90.00	1063	30	0	0
8.30	26+57.00	1368	52	0	0
8.31	27+58.00	35	8	0	0
8.31	60+39.00	1466	31	0	0
8.32	60+41.47	2017	56	0	0
8.32	83+64.00	1641	54	0	0
8.33	70+62.22	1862	38	0	0
8.33	82+34.71	2316	56	0	0
TOTAL		11768	325	0	0

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

ADDENDUM No. 2

SUMMARY OF ACCESS ROADS

SHEET 1 OF 1 SHEET

STATE	COUNTY	DRAWN BY:	CHECKED BY:	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				05.02

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SUMMARY OF SMALL STRUCTURES

SHEET NO.	LEVEE REACH	STATIONNO.	STRUCTURE NO.	STRUCTURE SIZE	STRUCTURE USAGE	60 68 21 SLUICE GATE (REFURB) (18INCH)	61 68 23 SLUICE GATE (REFURB) (24 INCH)	62 68 90 SLUICE GATE (LUBE)
						LF	LF	LF
5	ACN 1	49+07.00	NEW	18-INCH	DRAINAGE			
11	ACN 1	8+23.96	164	24-INCH	DRAINAGE			
12	ACN 1	25+57.91	165	24-INCH	DRAINAGE		1	
16	ACN 1	69+36.38	165B	18-INCH	DRAINAGE			1
17	ACN 1	105+35.98	167	18-INCH	DRAINAGE			
23	ACN 1	173+00.00	168A	18-INCH	DRAINAGE	1		
26	ACN 1	209+61.01	169	24-INCH	DRAINAGE		1	
29	ACN 1	245+51.24	170	24-INCH	DRAINAGE			
ACN1 LEVEE TOTALS						1	2	1

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S&B Infrastructure, Ltd. Firm Registration Number: 1582

ADDENDUM No. 2

SUMMARY
OF
SMALL
STRUCTURES
SHEET 1 OF 2 SHEET

STATE	COUNTY	DRAWN BY:	CHECKED BY:	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				05.03

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SUMMARY OF SMALL STRUCTURES

SHEET NO.	LEVEE REACH	STATION NO.	STRUCTURE NO.	STRUCTURE SIZE	STRUCTURE USAGE	60 64 10	60 67 01	60 71 10	60 98 10
						18" RCP (CL III)	SAFETY END TREATMENT (3:1) W/ RIPRAP	GATEWELL GRATE (REPLACE &/OR INSTALL)	CLEAN EXIST STRUCTURE
						LF	EA	EA	EA
5	ACN 1	49+07.00	NEW	18-INCH	DRAINAGE	41	2		
11	ACN 1	8+23.96	164	24-INCH	DRAINAGE				2
12	ACN 1	25+57.91	165	24-INCH	DRAINAGE			1	
16	ACN 1	69+36.38	165B	18-INCH	DRAINAGE			1	2
17	ACN 1	105+35.98	167	18-INCH	DRAINAGE				1
23	ACN 1	173+00.00	168A	18-INCH	DRAINAGE			1	
26	ACN 1	209+61.01	169	24-INCH	DRAINAGE				1
29	ACN 1	245+51.24	170	24-INCH	DRAINAGE				1
ACN1 LEVEE TOTALS						41	2	3	7

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Engineering Management Technology
S&B Infrastructure, Ltd. Firm Registration Number: 1582

ADDENDUM No. 2

SUMMARY
OF
SMALL
STRUCTURES
SHEET 2 OF 2 SHEET

STATE	COUNTY	DRAWN BY:	CHECKED BY:	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				05.04

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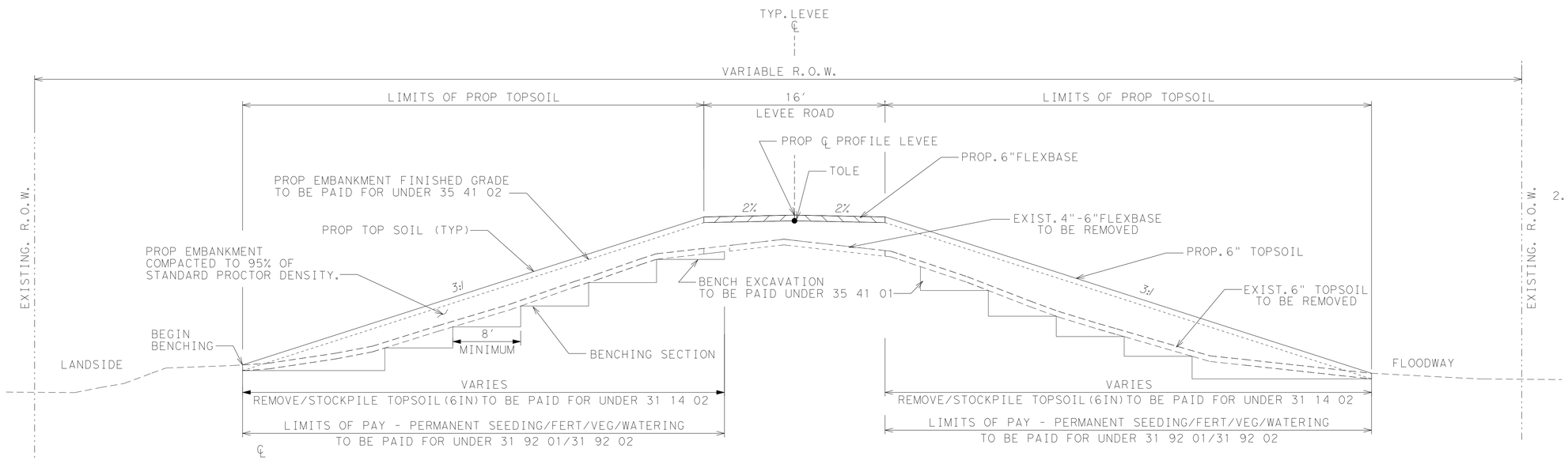
PROPOSED TYPICAL SECTION (RAISING LEVEE)

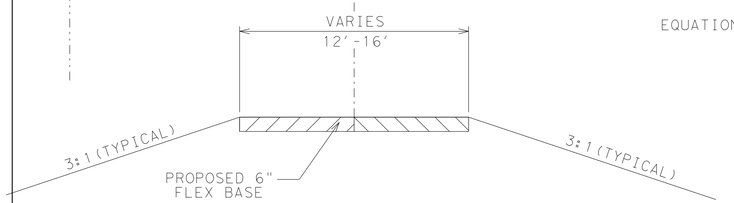
SCALE : 1" = 5'



EQUATION = STA 113+34.97 R1 BK = 0+00.00 R2 AH

ACN1

STA 3+28.00 R1 TO STA 16+00.00 R1
STA 21+00.00 R1 TO STA 84+00.00 R1



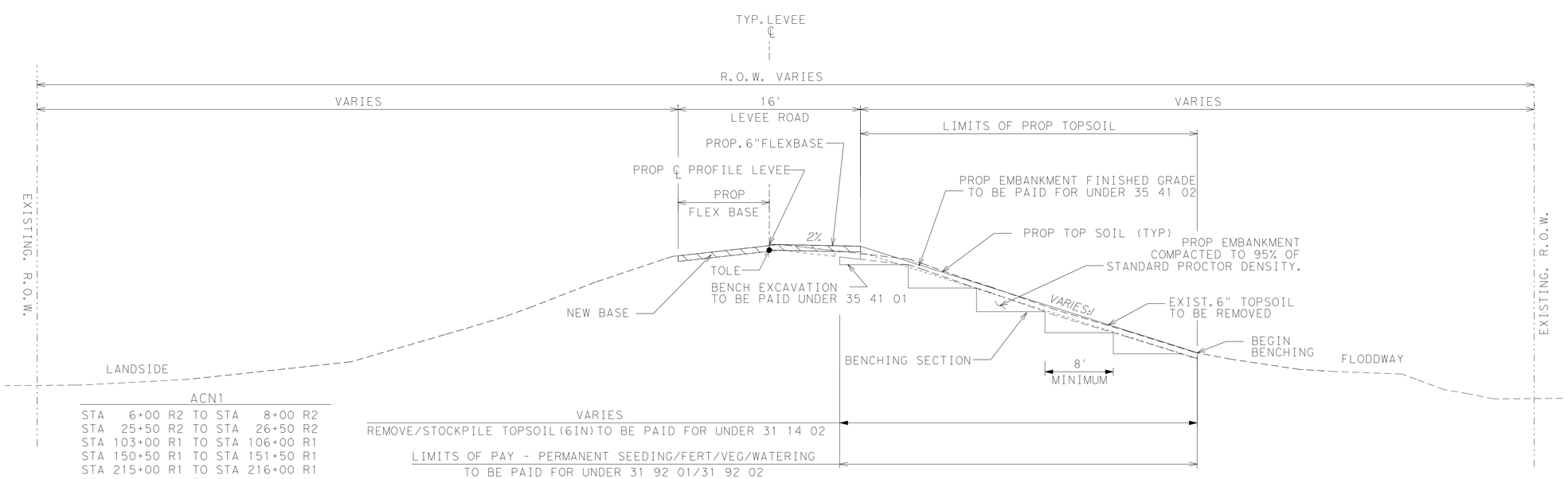
ACCESS ROAD TYPICAL SECTION

SCALE : 1" = 5'

SEE ACCESS ROADS PLAN AND PROFILE SHEETS FOR LOCATIONS, WIDTH AND LENGTHS

PROPOSED TYPICAL SECTION(REHABILITATION OF SIDE SLOPE)

SCALE : 1" = 5'



ACN1

STA 6+00 R2 TO STA 8+00 R2
STA 25+50 R2 TO STA 26+50 R2
STA 103+00 R1 TO STA 106+00 R1
STA 150+50 R1 TO STA 151+50 R1
STA 215+00 R1 TO STA 216+00 R1
STA 219+00 R1 TO STA 220+00 R1

NOTES:

1. FILL MATERIAL SHALL BE PLACED IN HORIZONTAL LIFTS NOT EXCEEDING 6 IN. COMPACTED THICKNESS AND COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE FILL SHALL BE MAINTAINED WITHIN THE RANGE THE OPTIMUM MOISTURE CONTENT TO THREE PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT UNTIL THE FINAL LIFT OF FILL IS PERMANENTLY COVERED.

2. NEW CALICHE MATERIAL GRADATION SHALL BE ARGILLACEOUS LIMESTONE, CALCAREOUS OR CALCAREOUS CLAY PARTICLES, WITH OR WITHOUT STONE CONGLOMERATE GRAVEL, SAND, OR GRANULAR MATERIAL:

TYPE E GRADE 4

SIEVE NO.	PERCENT RETAINED
2	0
1/2	20-60
4	40-75
40	75-85

3. PROPOSED TOP-OF-LEVEE ELEVATIONS WERE PROVIDED BY THE USIBWC.

4. SALVAGED / STOCKPILED GRAVEL MAY BE USED IN THE BOTTOM LIFTS OF ACCESS ROADS.

5. FINISH GRADING FOR DRAINAGE WILL BE CONSIDERED SUBSIDIARY TO 35 41.

TOLE = MINIMUM TOP OF LEVEE ELEVATION

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by DARIO V. GUERRA III P.E. 64669, on September 30 2009

ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE
ACN1
PROPOSED TYPICAL SECTION

SHEET 1 OF 2 SHEET

STATE	COUNTY	DRAWN BY: HG	CHECKED BY: DG	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				6.02

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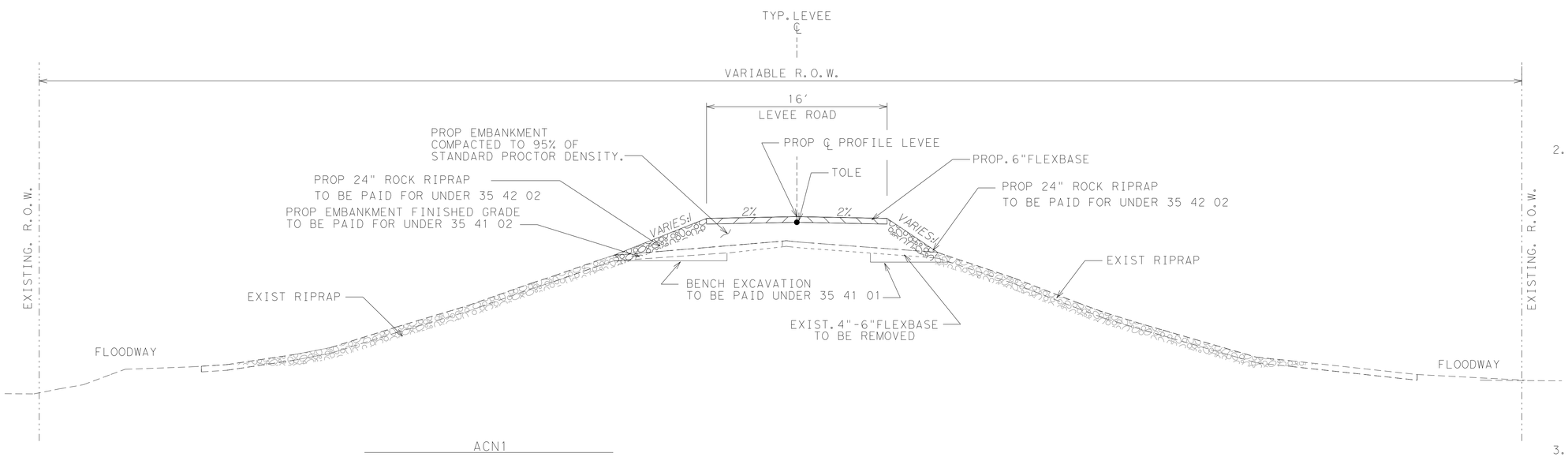
PROPOSED TYPICAL SECTION (RAISING LEVEE)

SCALE : 1" = 5'



ACN1

STA 1+20.00 R1 TO STA 3+28.00 R1

NOTES:

1. FILL MATERIAL SHALL BE PLACED IN HORIZONTAL LIFTS NOT EXCEEDING 6 IN. COMPACTED THICKNESS AND COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE FILL SHALL BE MAINTAINED WITHIN THE RANGE THE OPTIMUM MOISTURE CONTENT TO THREE PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT UNTIL THE FINAL LIFT OF FILL IS PERMANENTLY COVERED.

2. NEW CALICHE MATERIAL GRADATION SHALL BE ARGILLACEOUS LIMESTONE, CALCAREOUS OR CALCAREOUS CLAY PARTICLES, WITH OR WITHOUT STONE CONGLOMERATE GRAVEL, SAND, OR GRANULAR MATERIAL:

TYPE E GRADE 4

SIEVE NO.	PERCENT RETAINED
2	0
1/2	20-60
4	40-75
40	75-85

3. PROPOSED TOP-OF-LEVEE ELEVATIONS WERE PROVIDED BY THE USIBWC.

4. SALVAGED / STOCKPILED GRAVEL MAY BE USED IN THE BOTTOM LIFTS OF ACCESS ROADS.

5. FINISH GRADING FOR DRAINAGE WILL BE CONSIDERED SUBSIDIARY TO 35 41.

TOLE = MINIMUM TOP OF LEVEE ELEVATION

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by DARIO V. GUERRA III P.E. 64669, on 8/16, 2009

REVISED 8-16-09

ARROYO COLORADO NORTH LEVEE
ACN1
PROPOSED TYPICAL SECTION

SHEET OF SHEET 2 2

STATE	COUNTY	DRAWN BY: HG	CHECKED BY: DG	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				6.03

10:22:43 AM

8/21/2009

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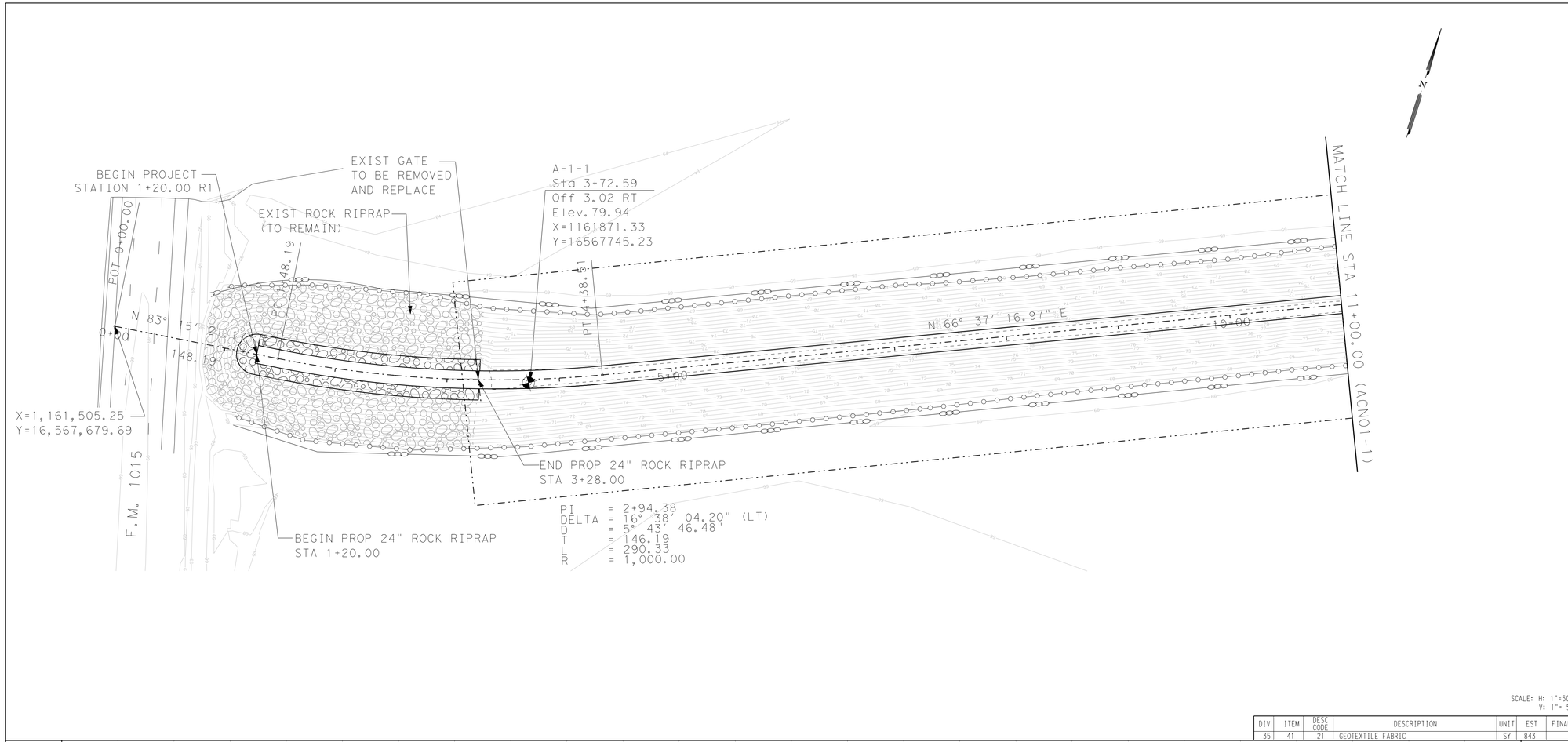


PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

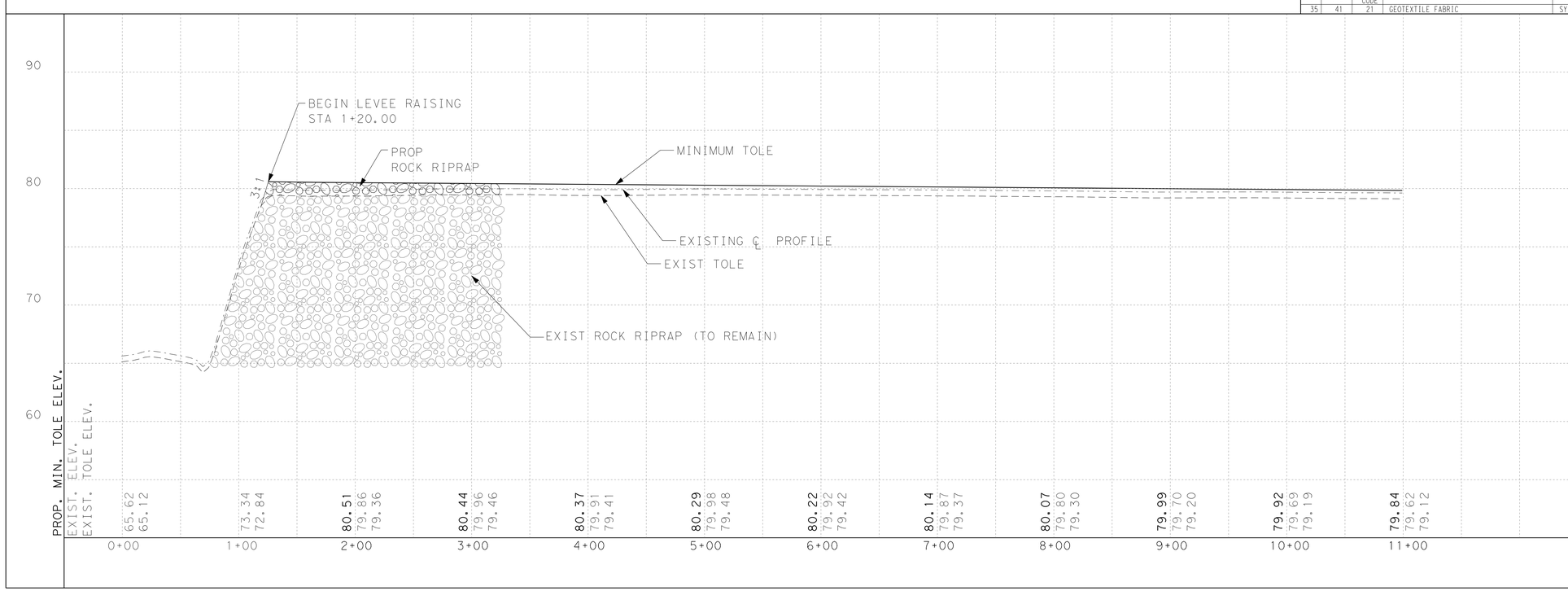
VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1800	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	9	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	5364	
31	92	02	VEGETATIVE WATERING	MG	21	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	174	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	859	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	2783	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	4825	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	894	
35	42	02	RIPRAP (ROCK)	CY	562	
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	267	
90	79	01	VEHICULAR GATE	EA	1	

SCALE: H: 1"=50'
V: 1"= 5'

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
35	41	21	GEOTEXTILE FABRIC	SY	843	



INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by DARIO V. GUERRA III P.E. 64669, on September 30 2009

ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 0+00 TO 11+00

SHEET 1 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DI	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.01

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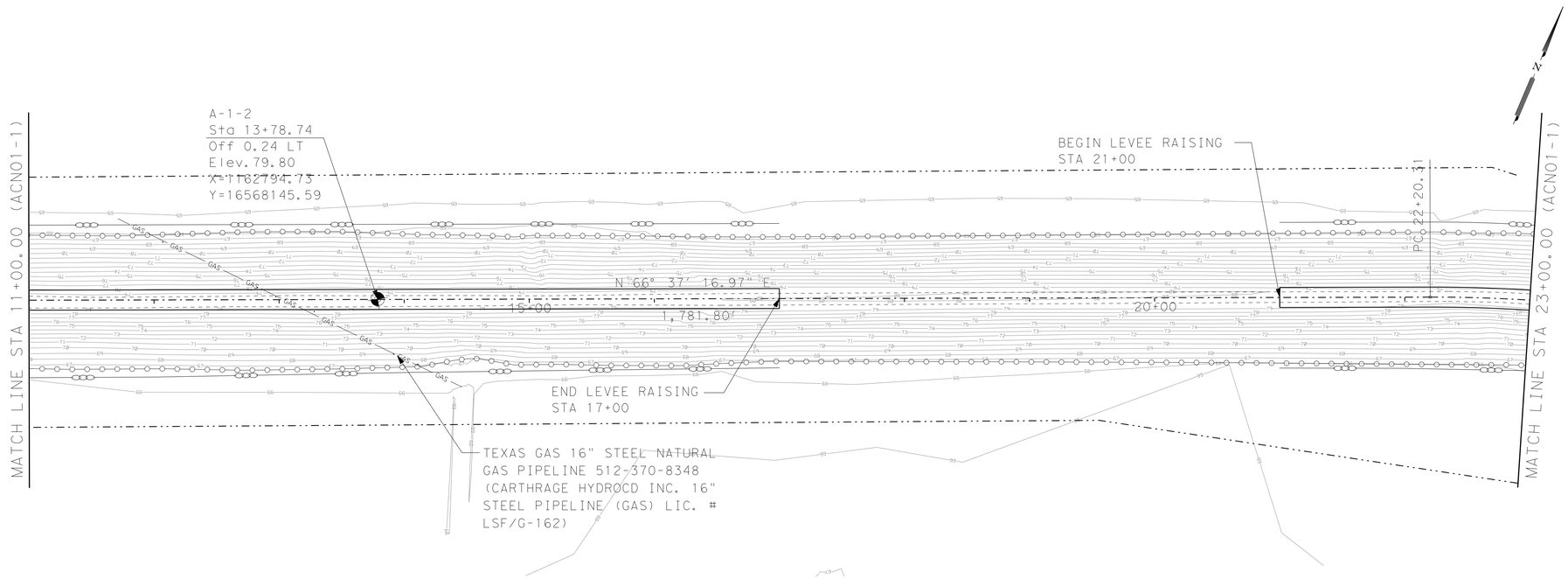

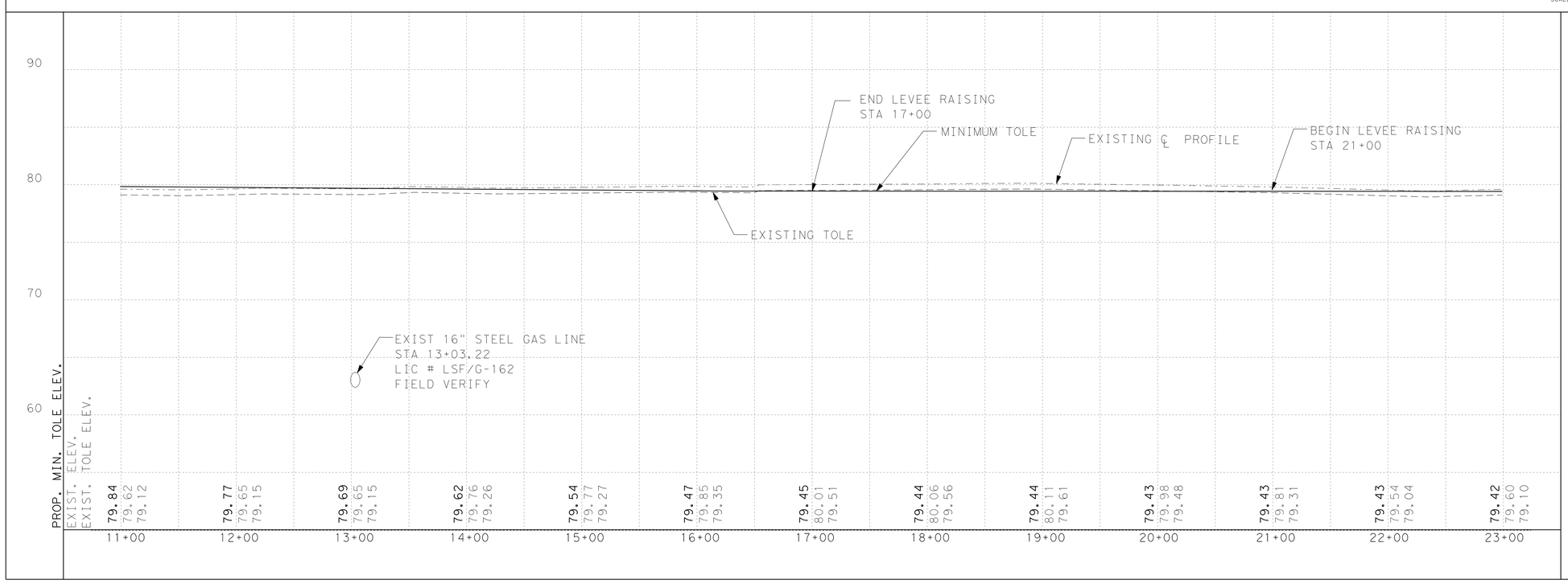

SCALE: H: 1"=50'
V: 1"= 5'

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1600	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	8	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	5988	
31	92	02	VEGETATIVE WATERING	MG	24	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	87	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	984	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	3542	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	5251	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	998	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	278	
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 11+00 TO 23+00

SHEET 2 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.02

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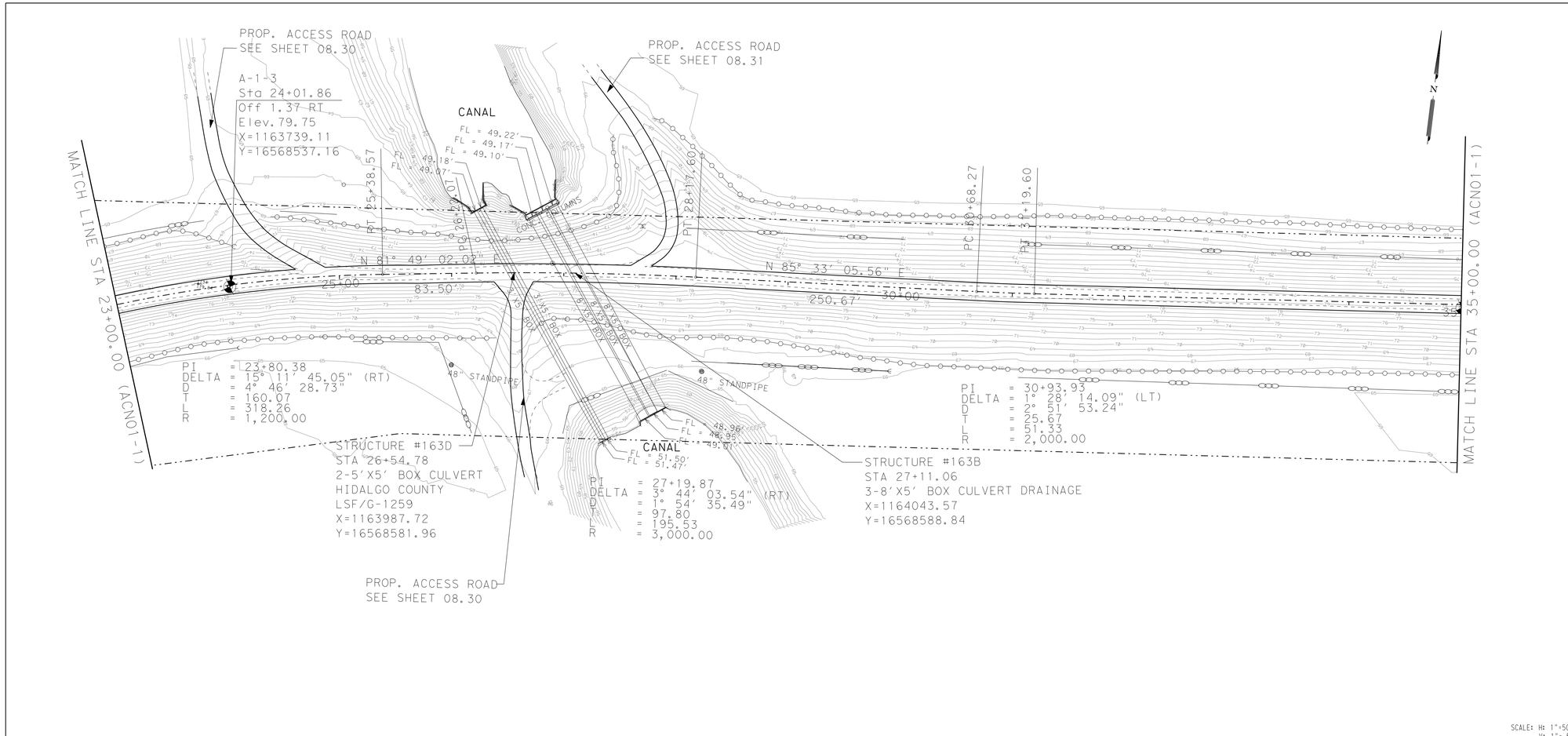


PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

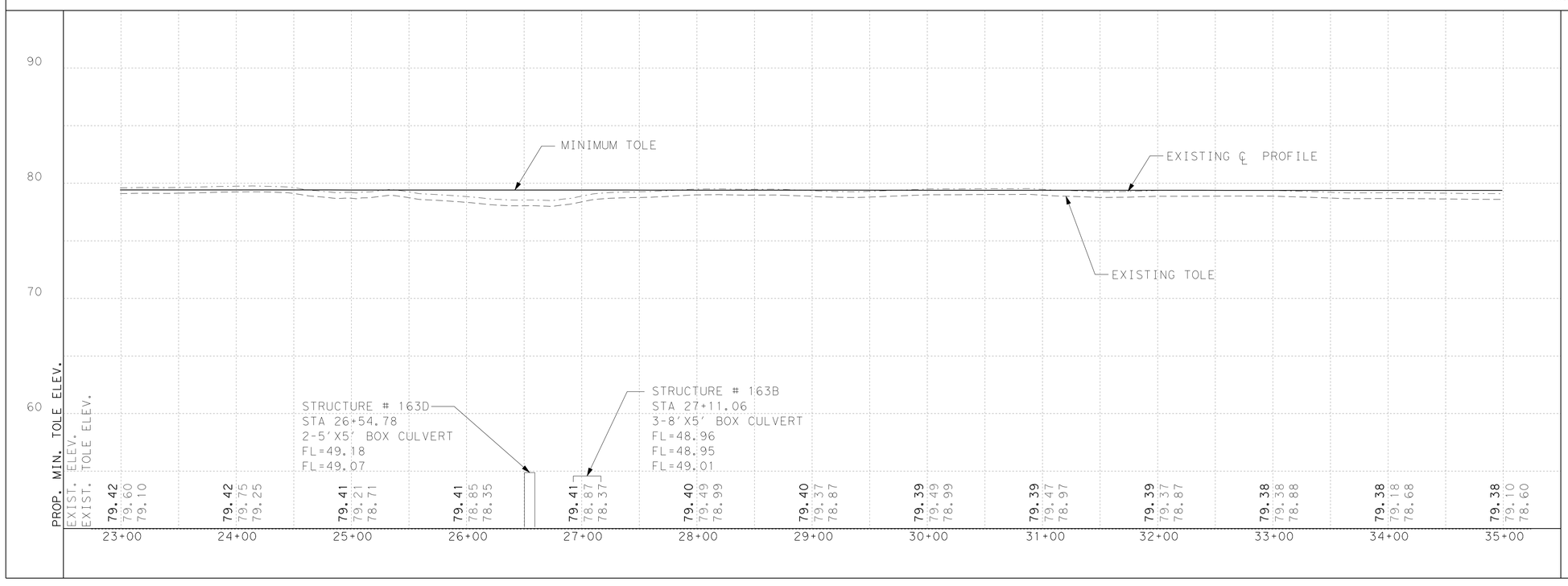
PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	2400	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	12	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	4044	
31	92	02	VEGETATIVE WATERING	MG	16	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	188	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	656	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	2824	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	4201	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	674	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	372	
90	79	01	VEHICULAR GATE	EA		

SCALE: H: 1"=50'
V: 1"= 5'



S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 23+00 TO 35+00

SHEET 3 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.03

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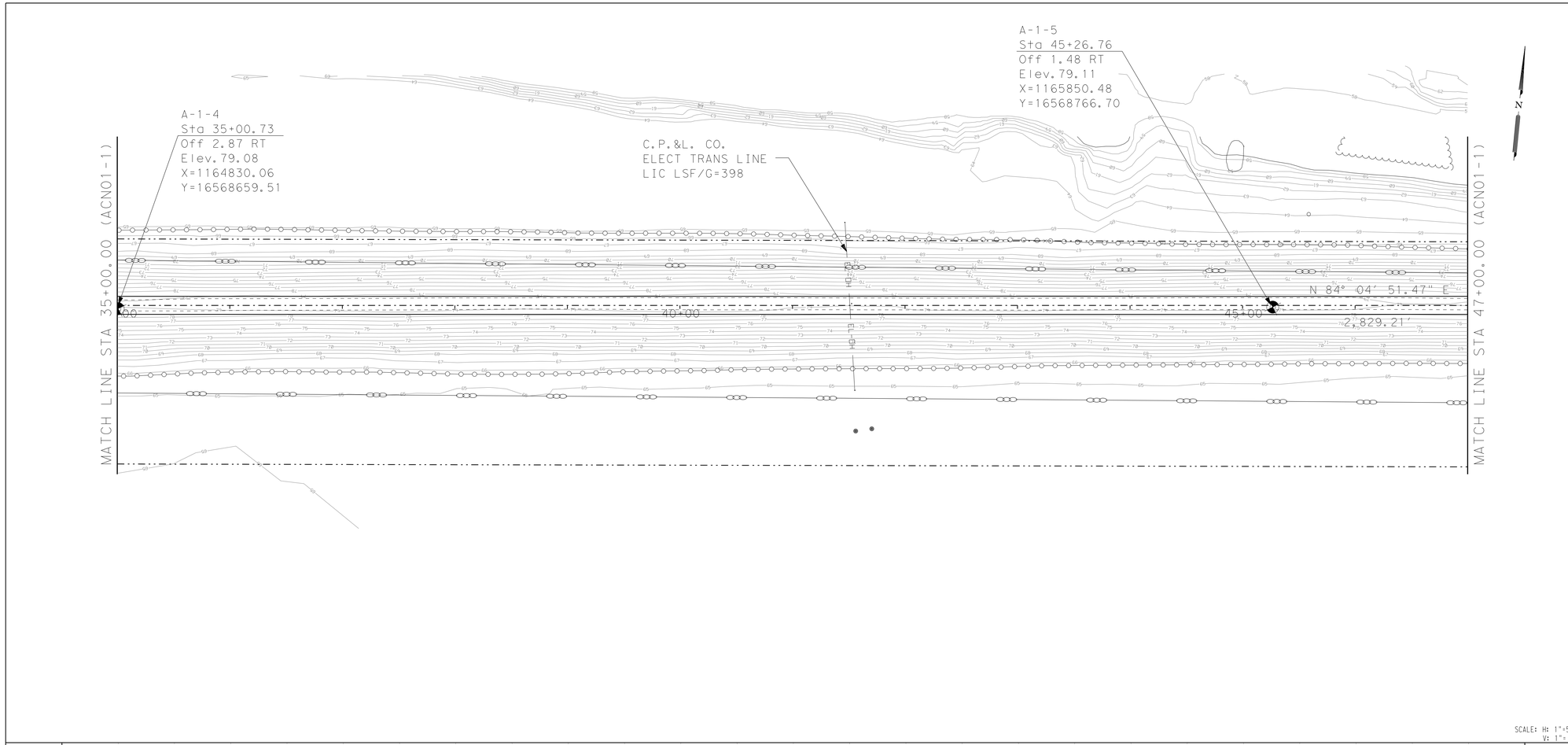
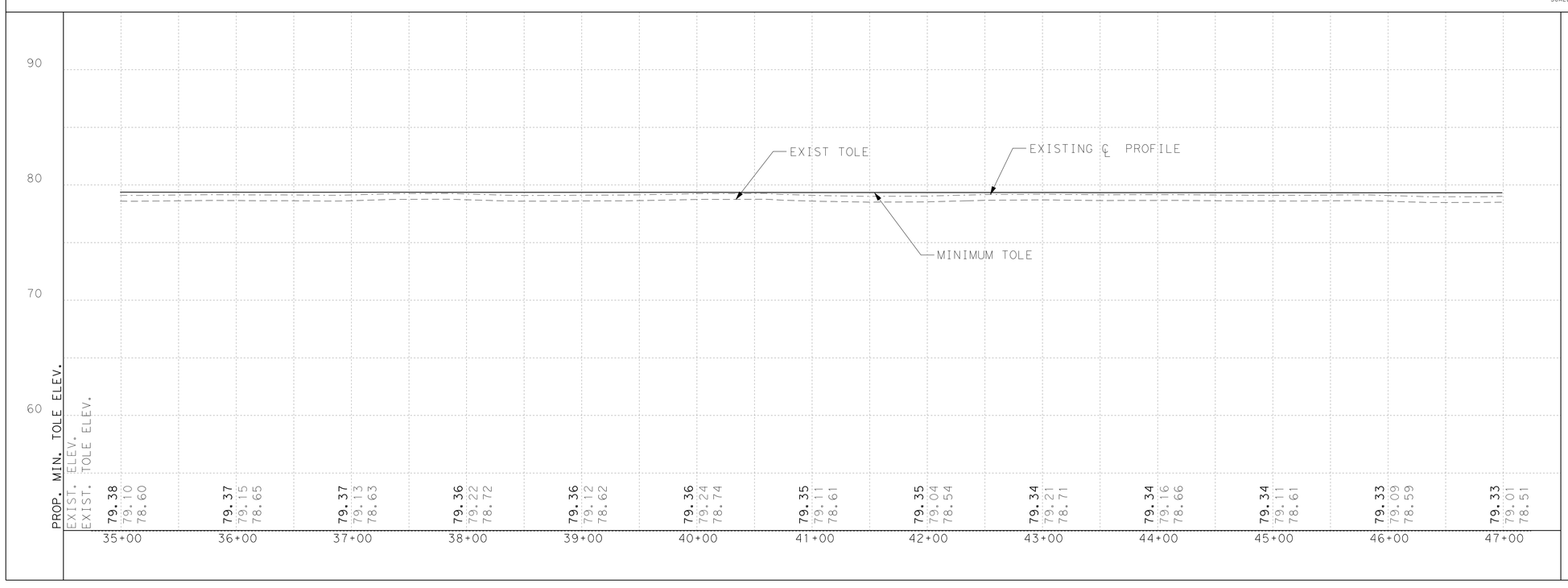


SCALE: H: 1"=50'
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	2400	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	12	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	5340	
31	92	02	VEGETATIVE WATERING	MG	21	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	230	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	778	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	3329	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	4840	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	890	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	372	
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by DARIO V. GUERRA III P.E. 64669, on September 3, 2009

ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 35+00 TO 47+00

SHEET 4 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.04

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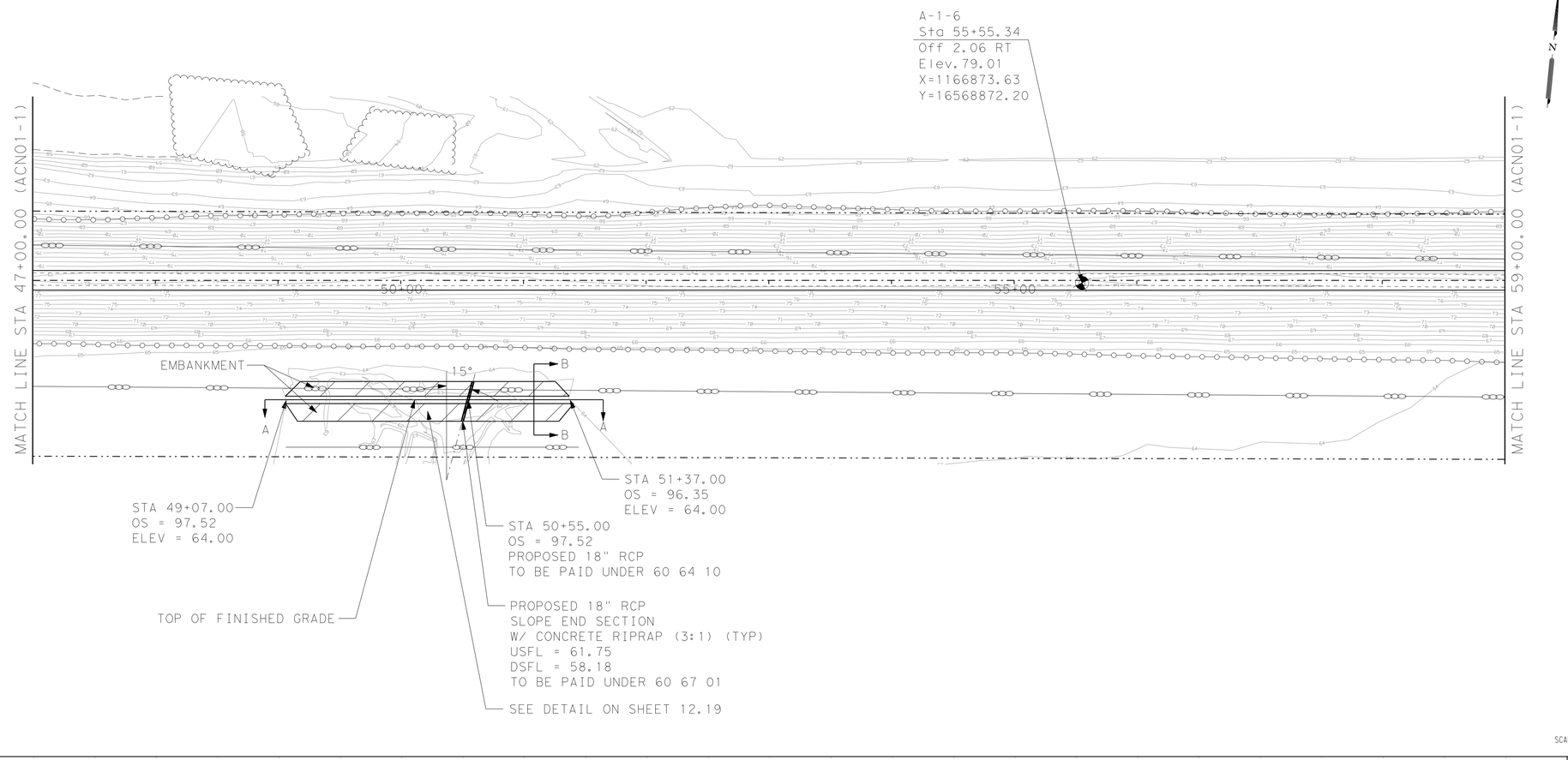

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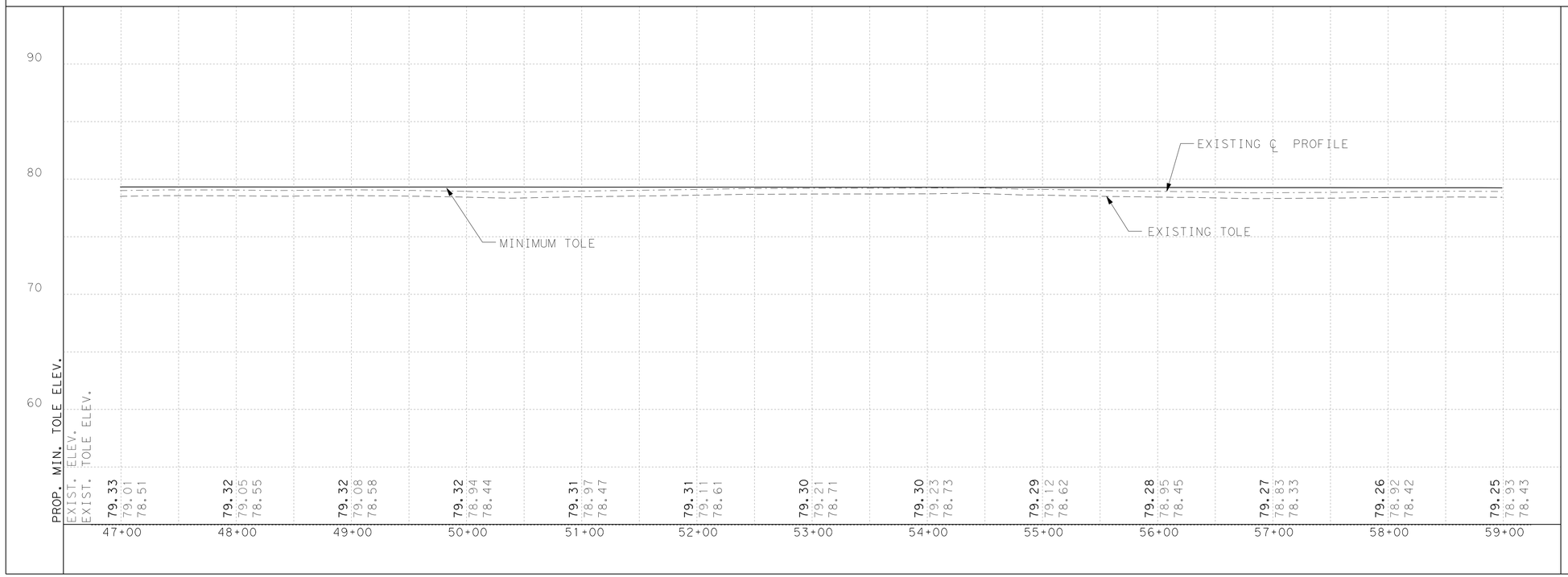

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	2400	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	12	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	7032	
31	92	02	VEGETATIVE WATERING	MG	28	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	218	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	1037	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	4140	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	6055	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	1172	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	372	
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&R INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 47+00 TO 59+00

SHEET 5 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.

REHABILITATION OF ARROYO COLORADO NORTH LEVEE
(FM 1015 TO WILLACY CANAL)

8.05

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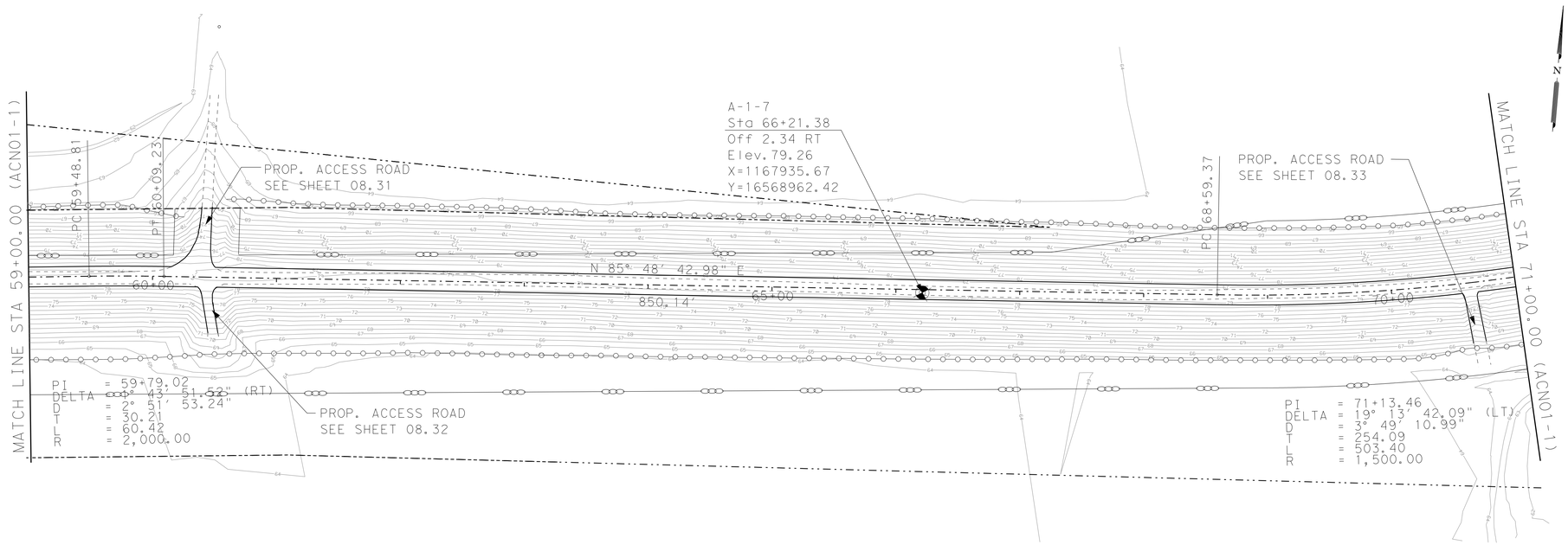

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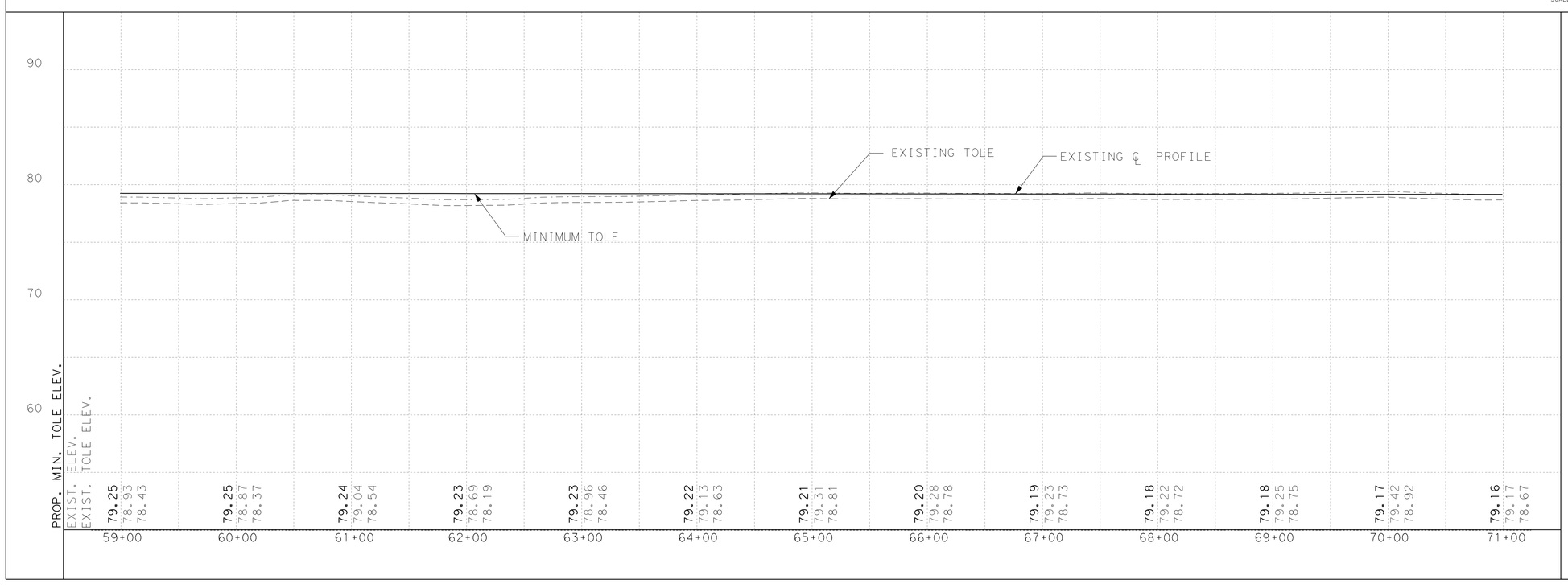
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	2400	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	12	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	7878	
31	92	02	VEGETATIVE WATERING	MG	32	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	162	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	1219	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	4505	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	6682	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	1313	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	372	
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

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STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 59+00 TO 71+00

SHEET 6 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.06

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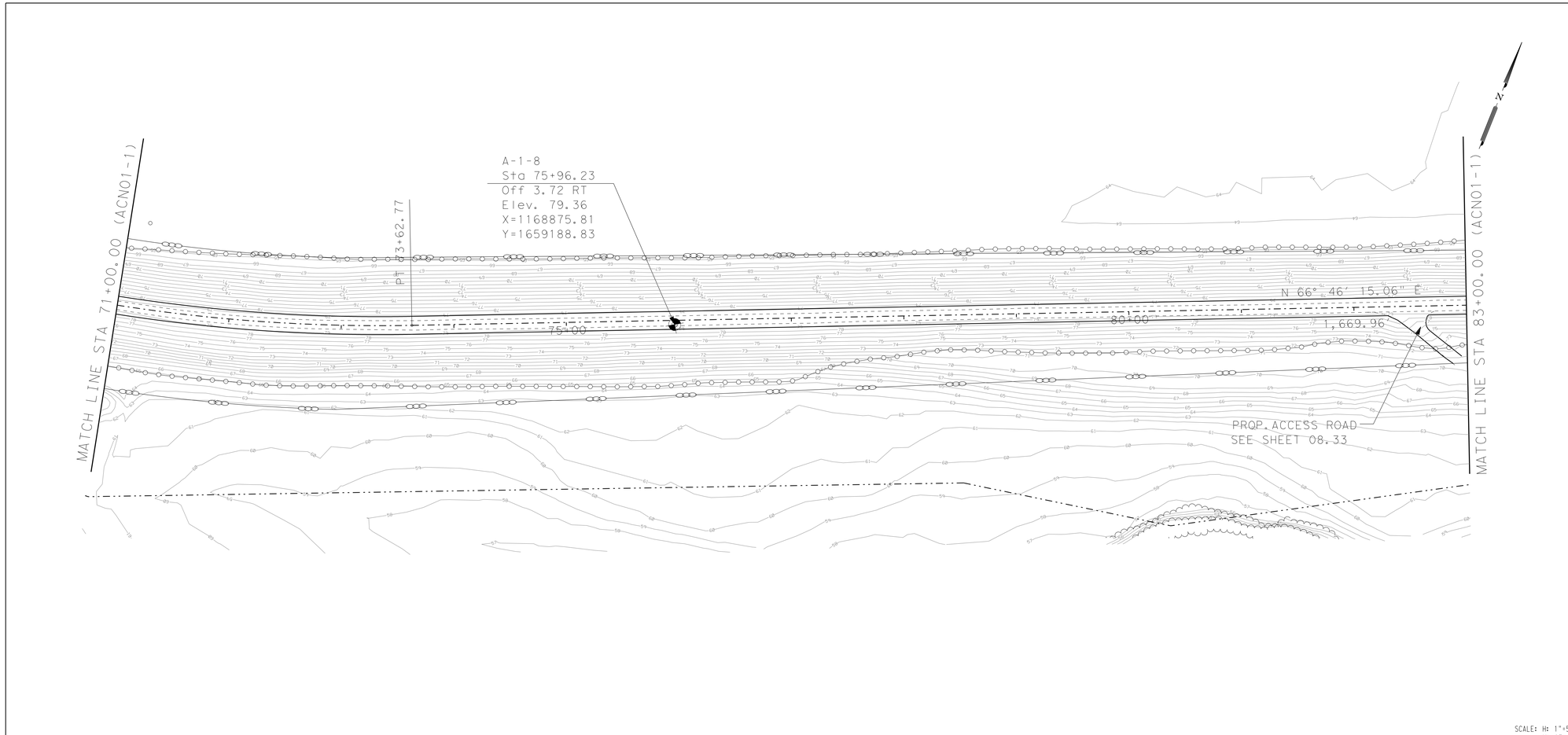

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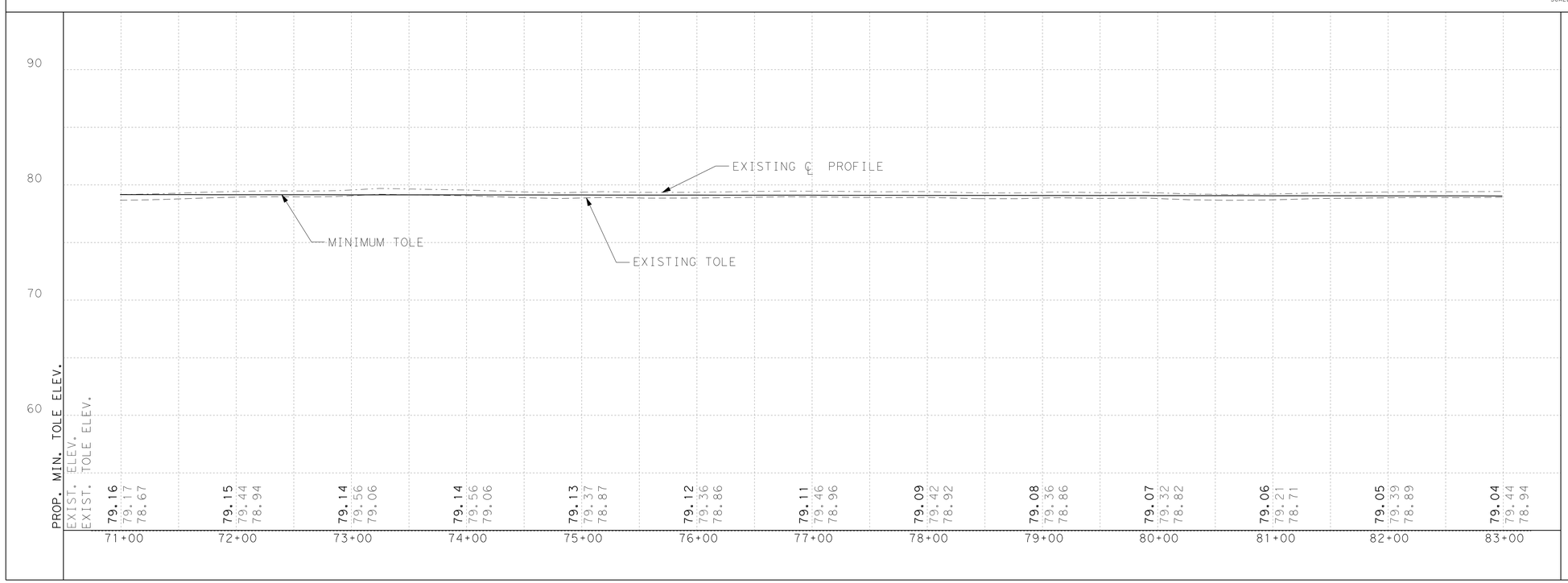
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	2400	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	12	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	5160	
31	92	02	VEGETATIVE WATERING	MG	21	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	69	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	589	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	3720	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	4447	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	860	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	372	
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 71+00 TO 83+00

SHEET 7 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.07

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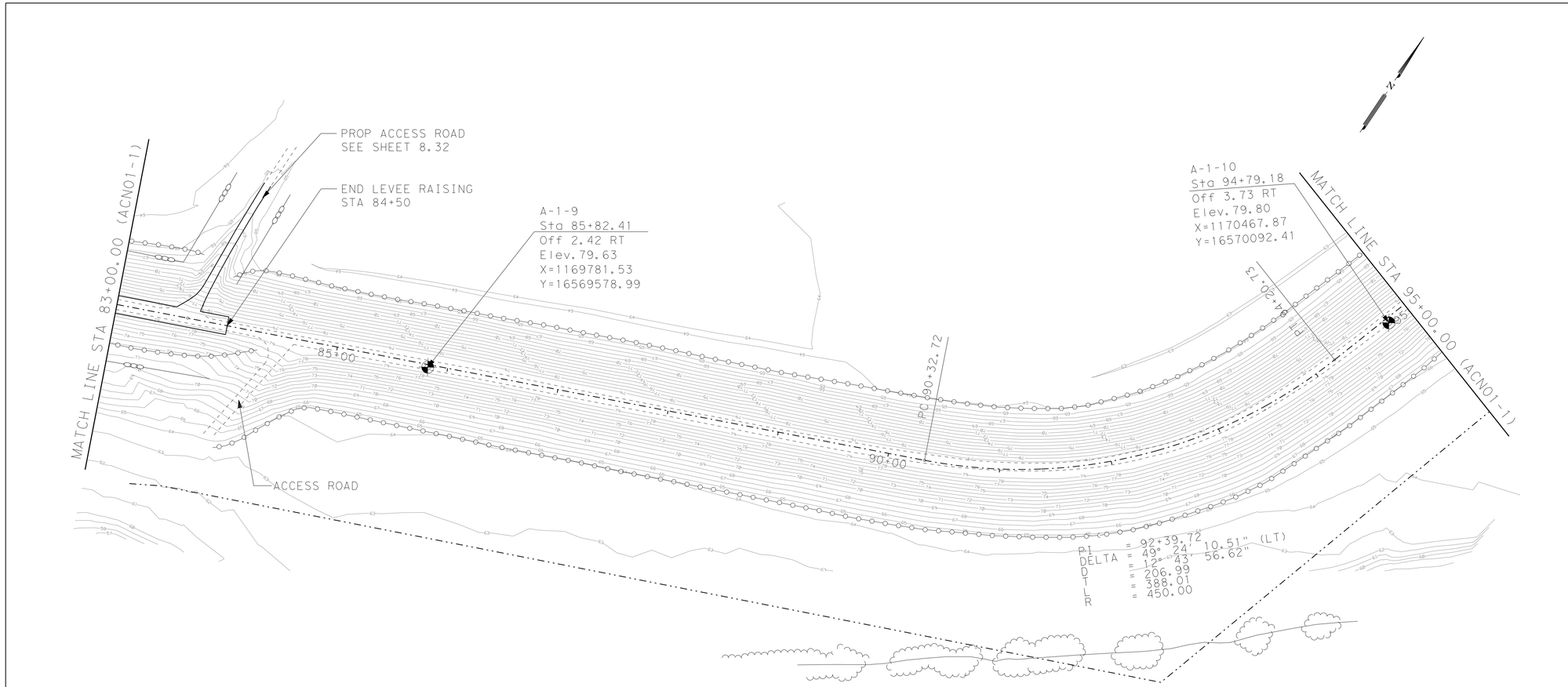


PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

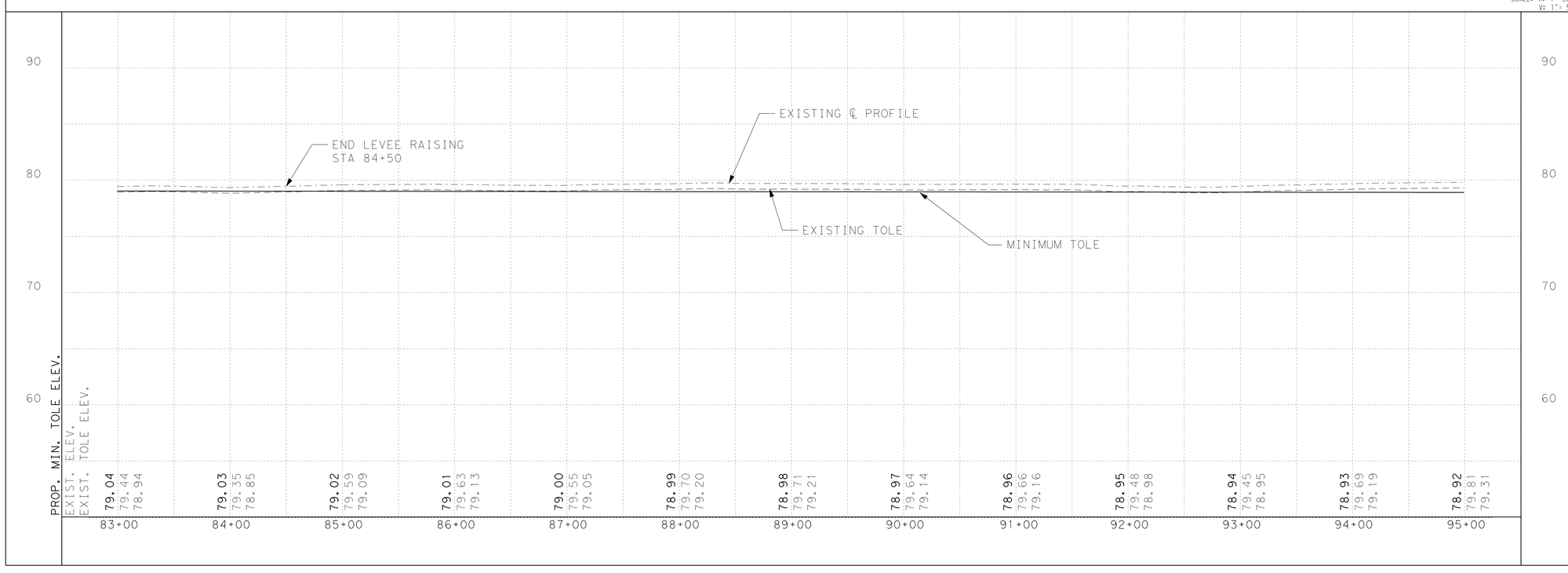
PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	200	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	1	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	348	
31	92	02	VEGETATIVE WATERING	MG	1	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	3	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	55	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	241	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	314	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	58	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	31	
90	79	01	VEHICULAR GATE	EA		

SCALE: H: 1"=50'
V: 1"= 5'



INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 83+00 TO 95+00

SHEET 8 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.08

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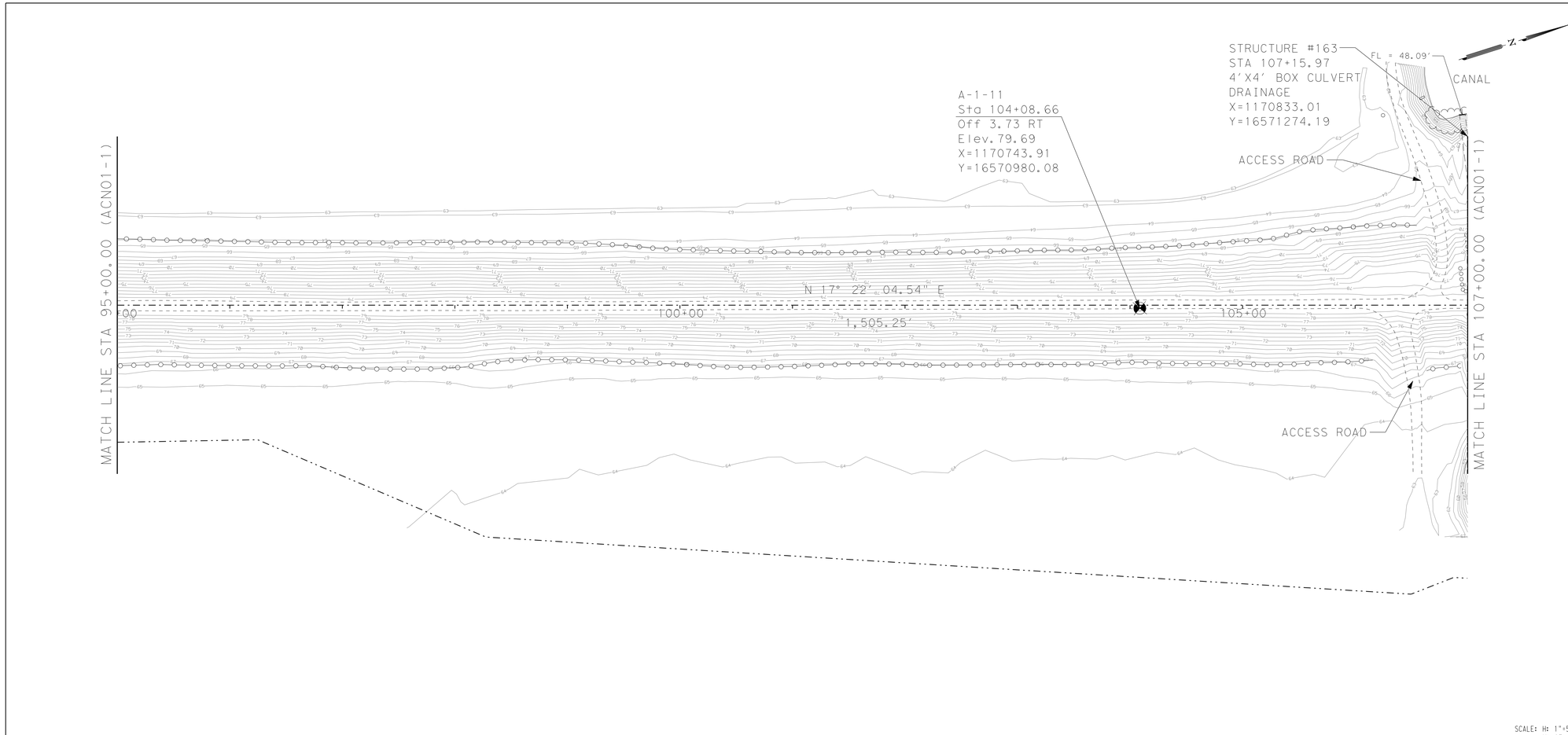

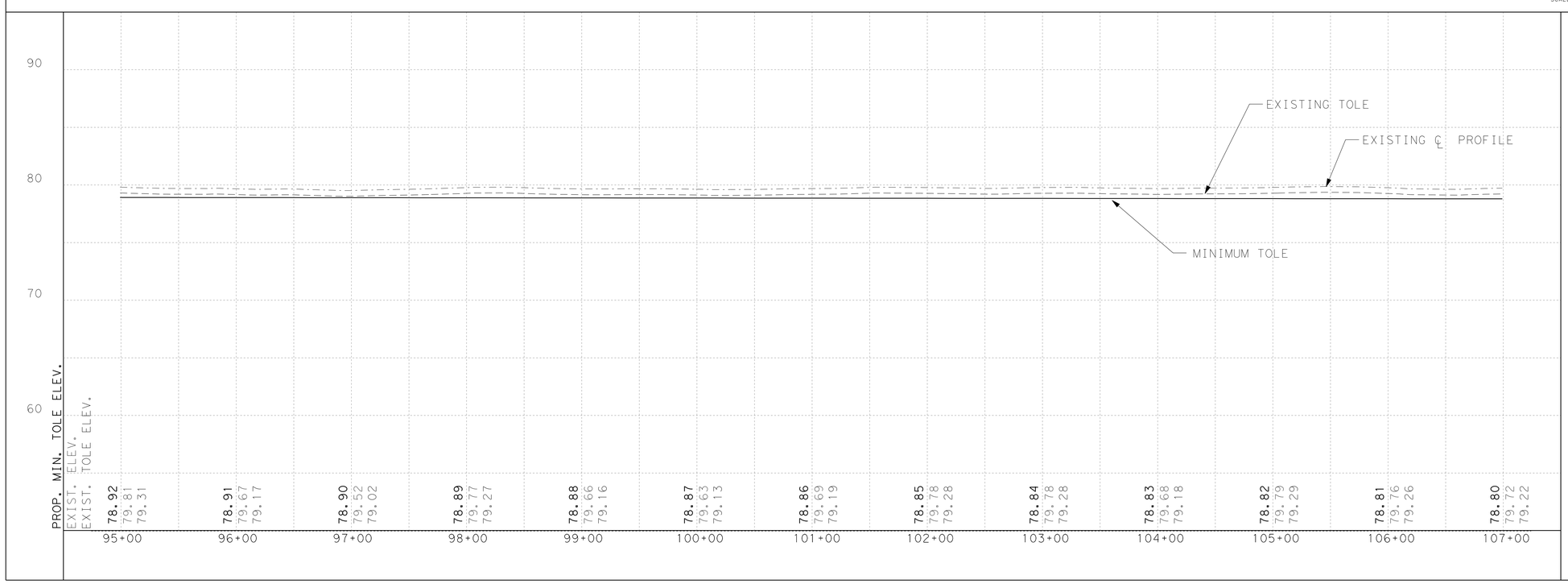

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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STATE OF TEXAS
DARIO V. GUERRA III
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 95+00 TO 107+00

SHEET 9 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.09

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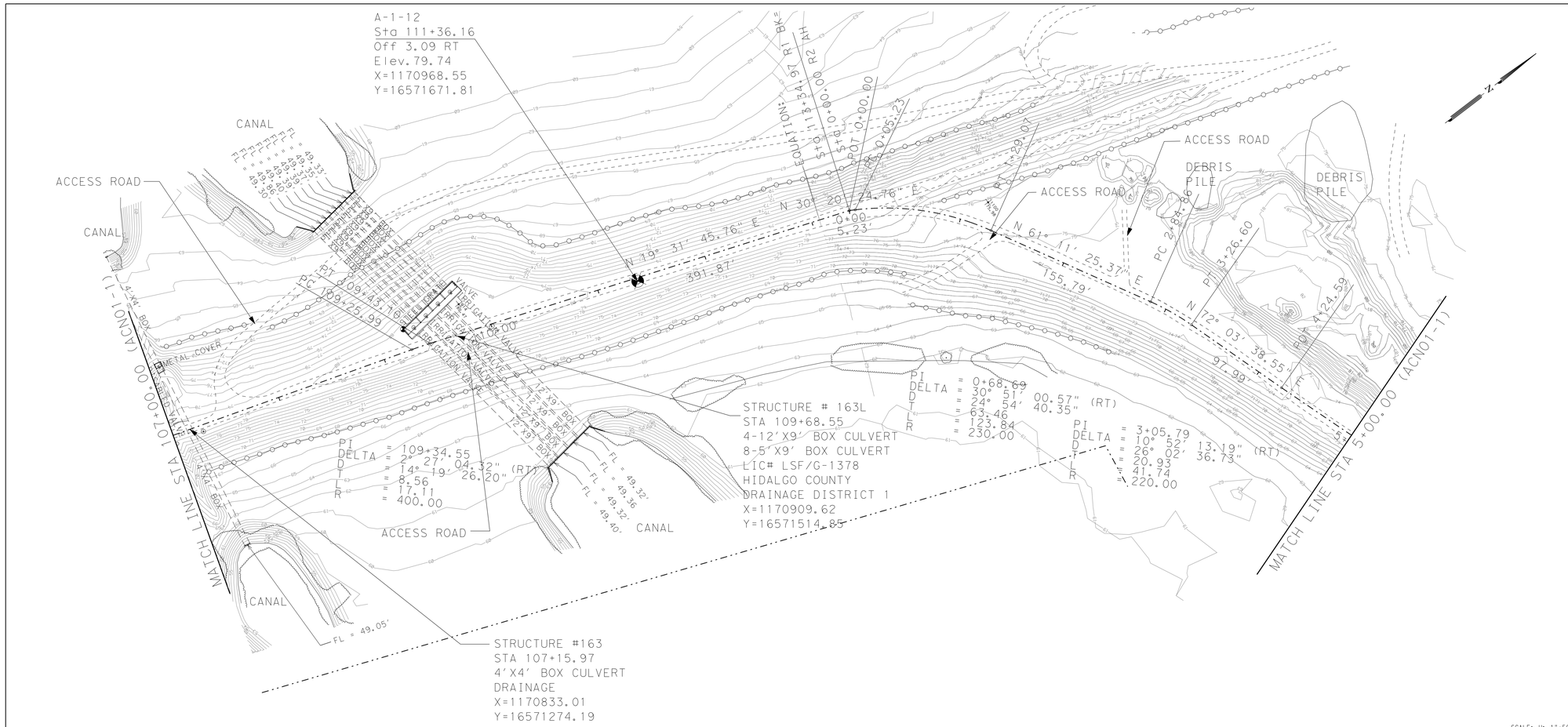
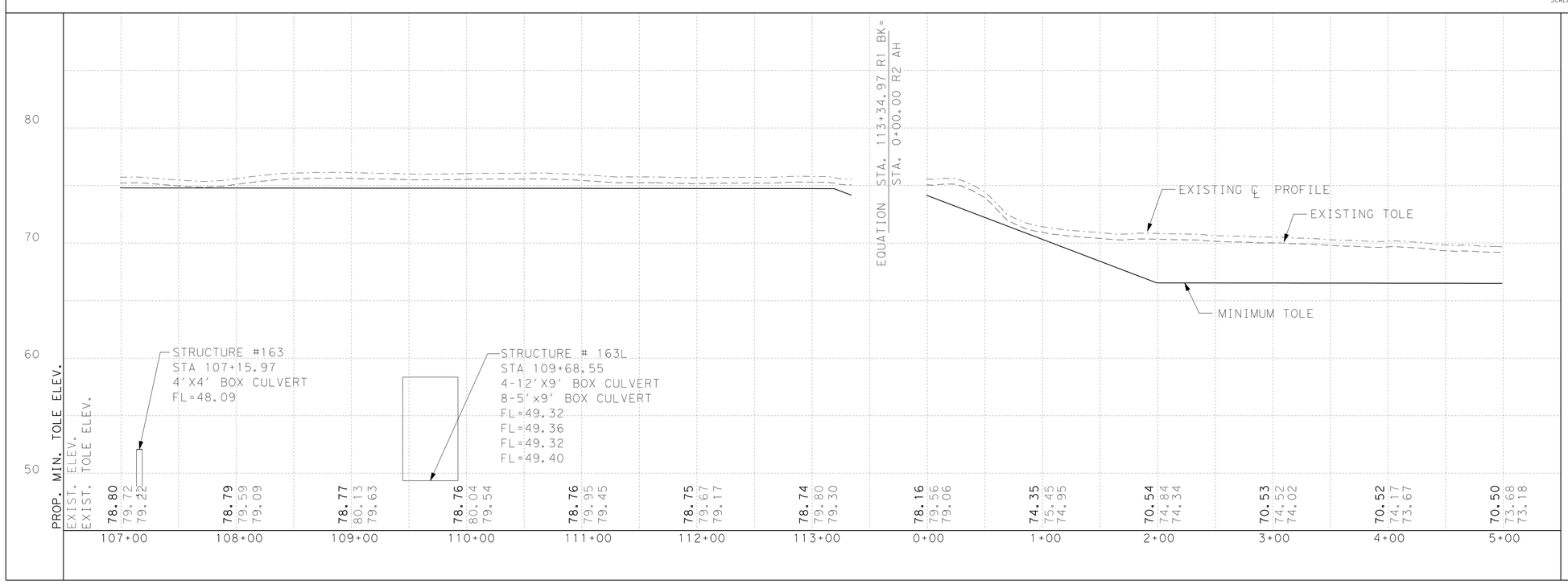


SCALE: H: 1"=50'
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

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VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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STATE OF TEXAS
DARIO V. GUERRA III
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REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 107+00 TO 5+00 (R2)

SHEET 10 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.10

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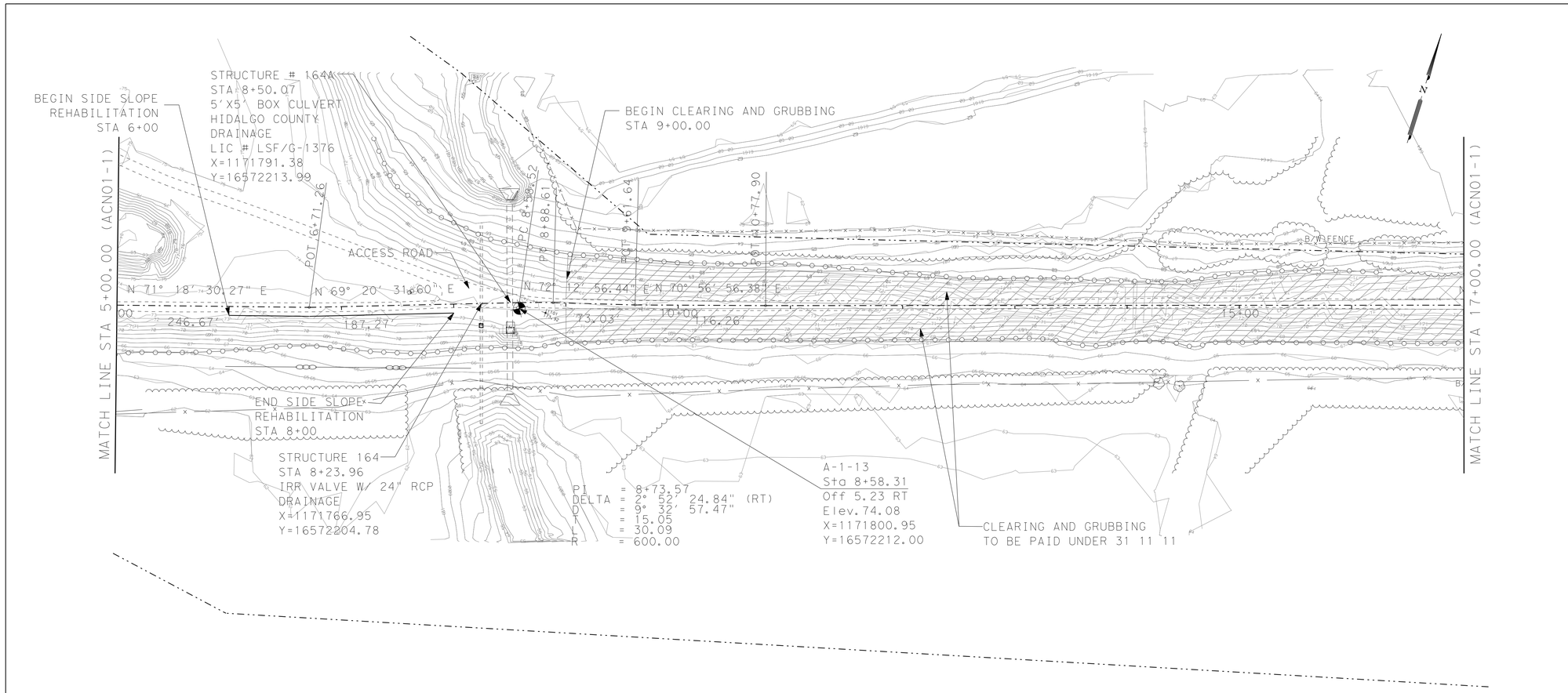

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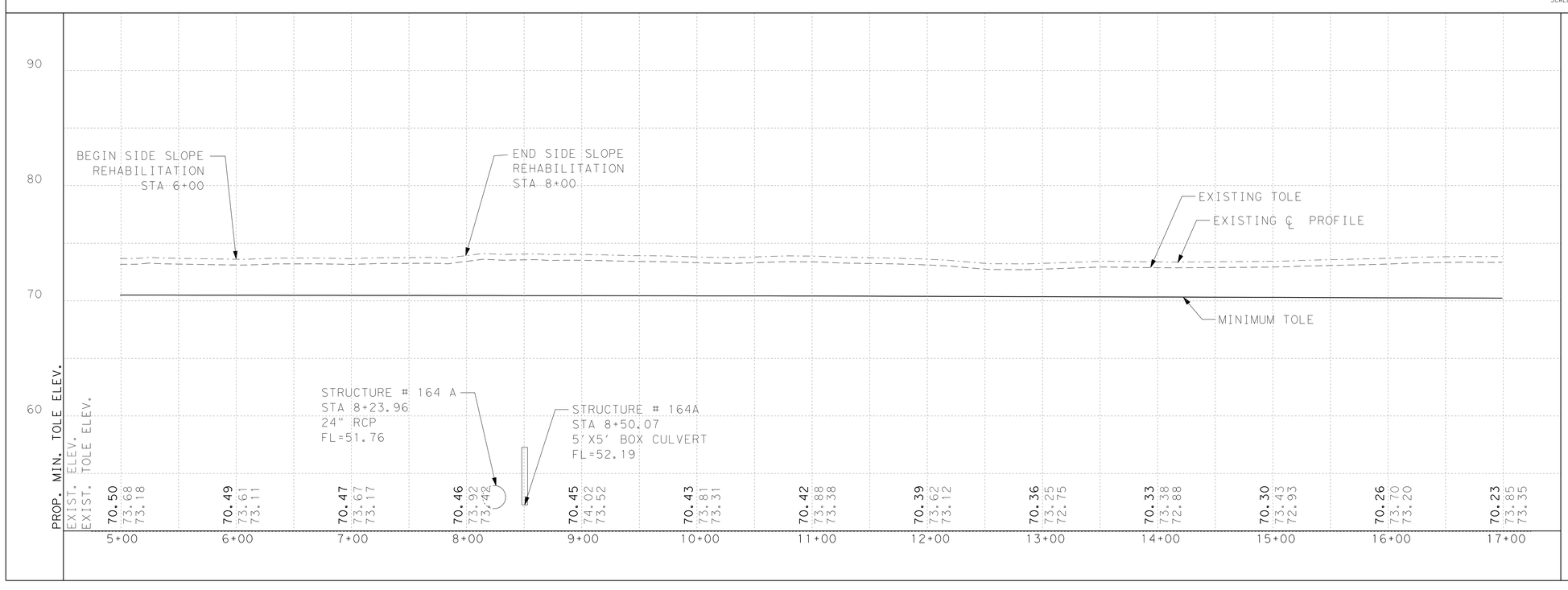

PLAN VIEW LEGEND

	PROP CENTERLINE
	EXIST RIGHT-OF-WAY
	EXIST GEOTECHNICAL BORE
	EXIST FLOODWALL
EL-OH	EXIST OVERHEAD UILITY
	EXIST SIGN
101	EXIST CONTOURS
	EXISTING LEVEE TOE
F/O	EXIST FIBER OPTIC LINE
GAS	EXIST GAS LINE
W	EXIST WATER LINE
T	EXIST TELEPHONE LINE
X	EXIST FENCE
	PROP SEDIMENT CONTROL FENCE
	WATER BOUNDARY
	PROP LEVEE MAINTENANCE ROAD

NOTES:

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VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1800	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	2	
31	11	11	CLEARING AND GRUBBING	AC	1.40	
31	92	01	SEEDING (PERM)	SY	1806	
31	92	02	VEGETATIVE WATERING	MG	7	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	4	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	138	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	148	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	954	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	301	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	98	
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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STATE OF TEXAS
DARIO V. GUERRA III
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REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 5+00 (R2) TO 17+00 (R2)

SHEET 11 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.11

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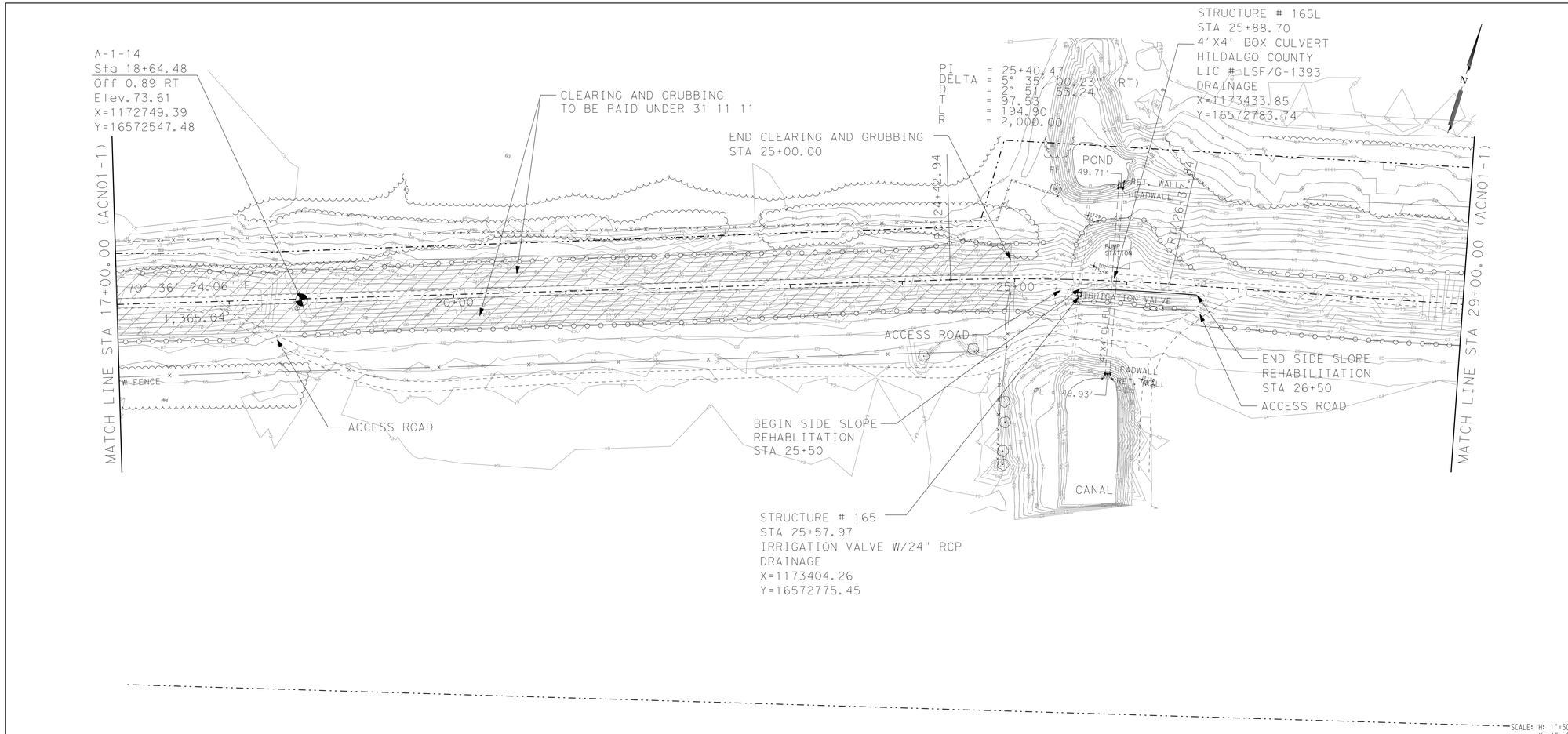

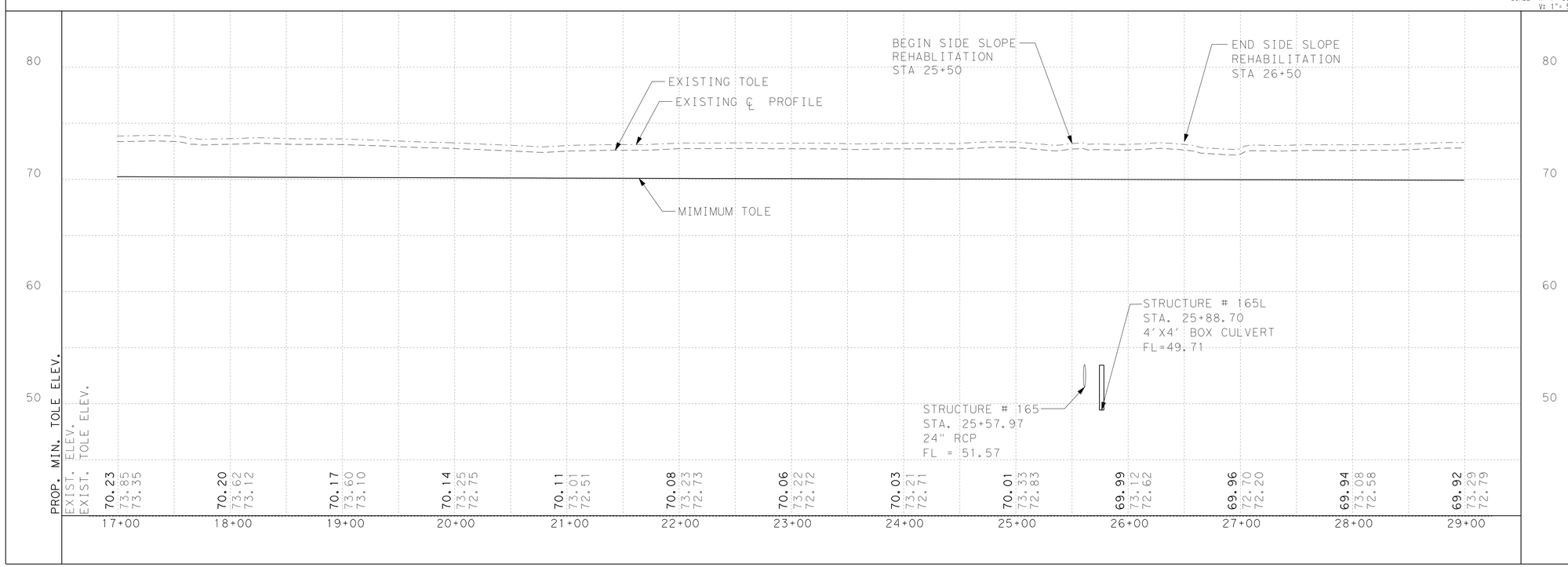

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

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VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1700	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	1	
31	11	11	CLEARING AND GRUBBING	AC	1.40	
31	92	01	SEEDING (PERM)	SY	732	
31	92	02	VEGETATIVE WATERING	MG	3	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY	2	
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	56	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	408	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	473	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	122	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	49	
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 17+00 (R2) TO 29+00 (R2)

SHEET 12 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.12

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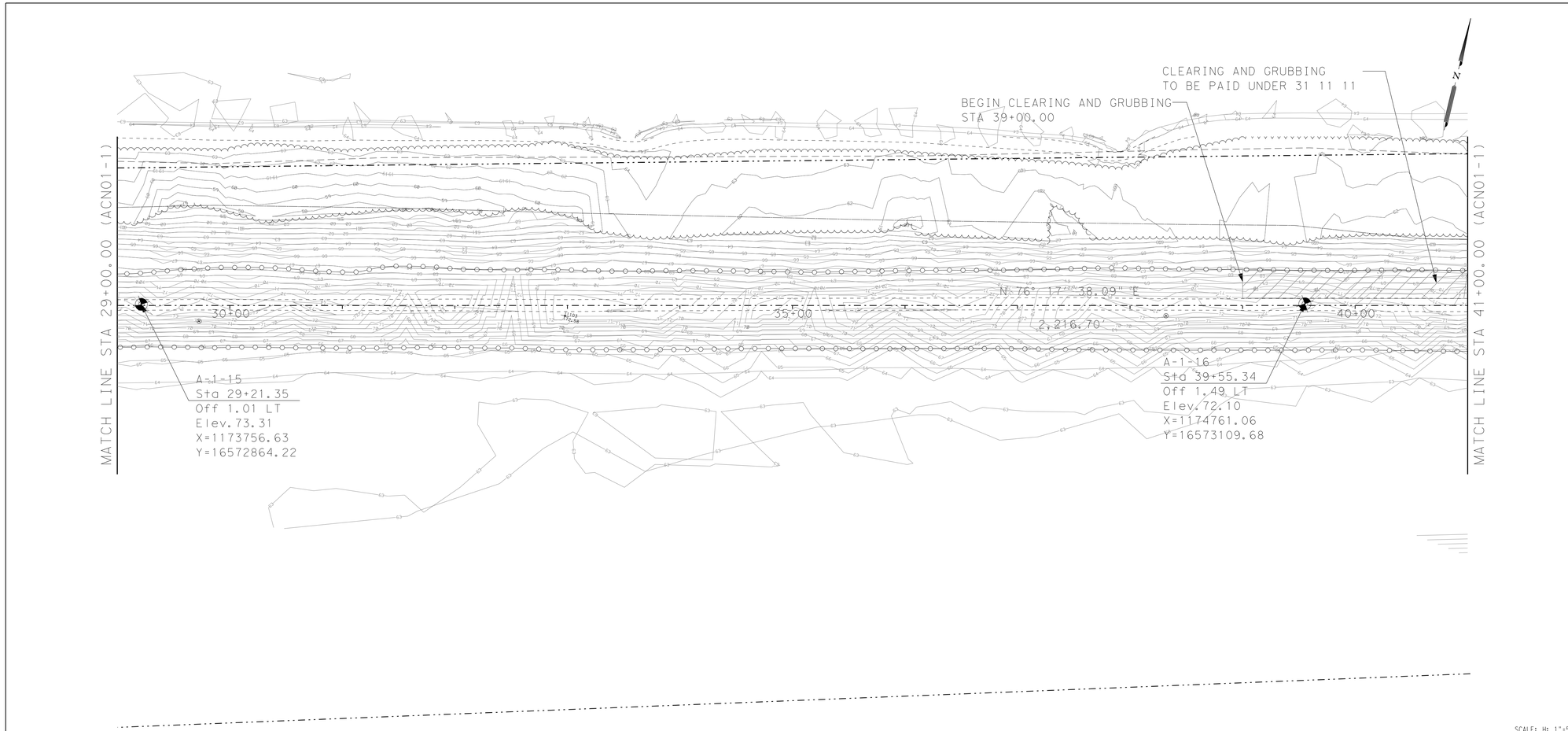

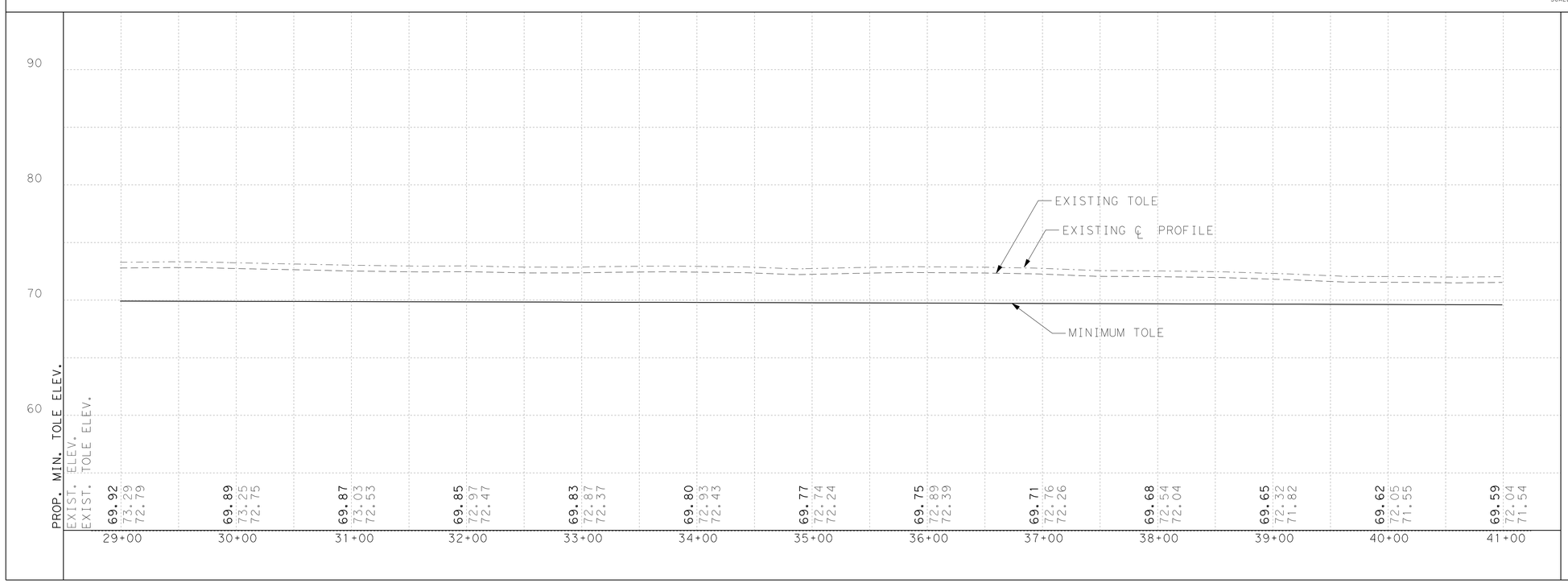

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
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- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

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VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	200	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC	0.25	
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 29+00 (R2) TO 41+00 (R2)

SHEET 13 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.13

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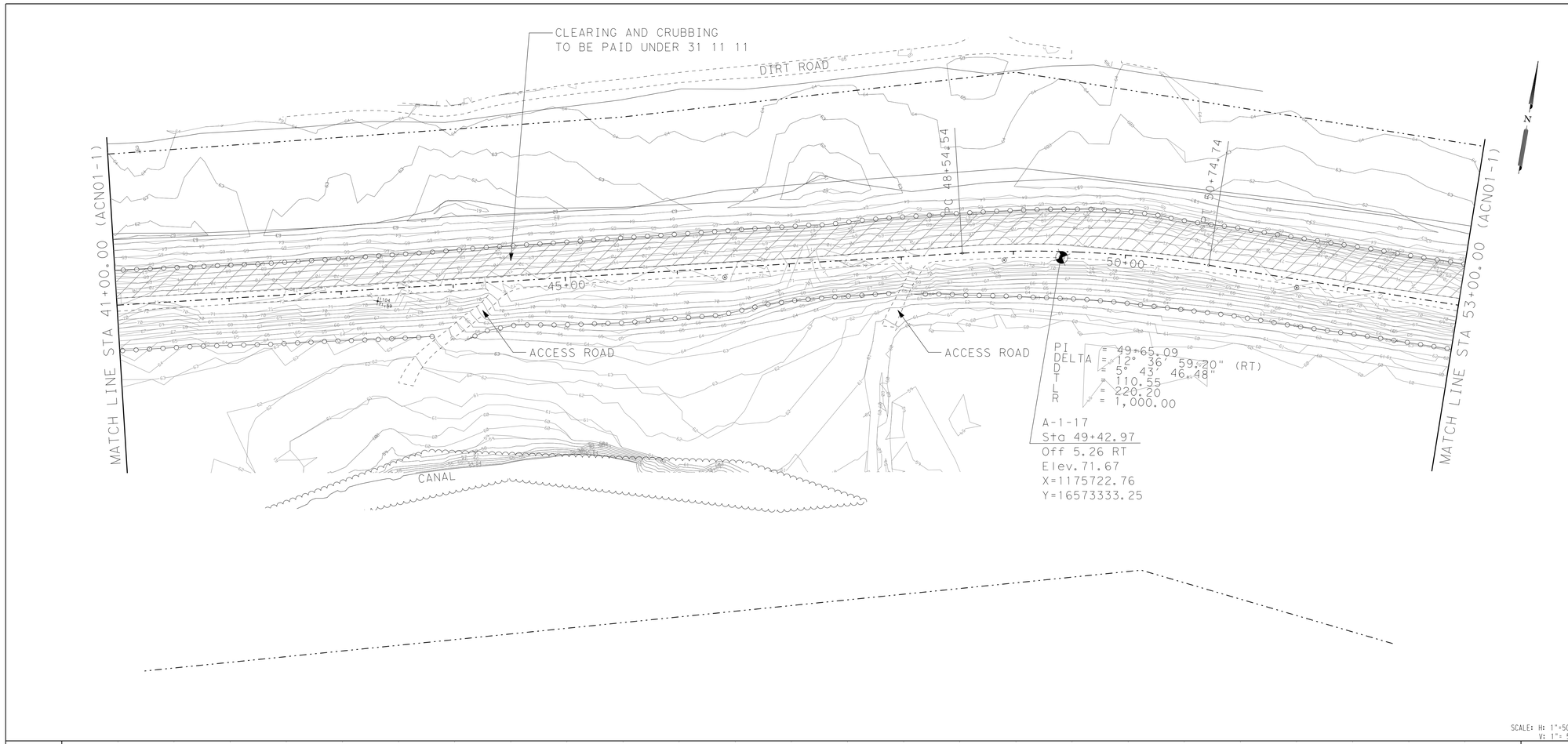

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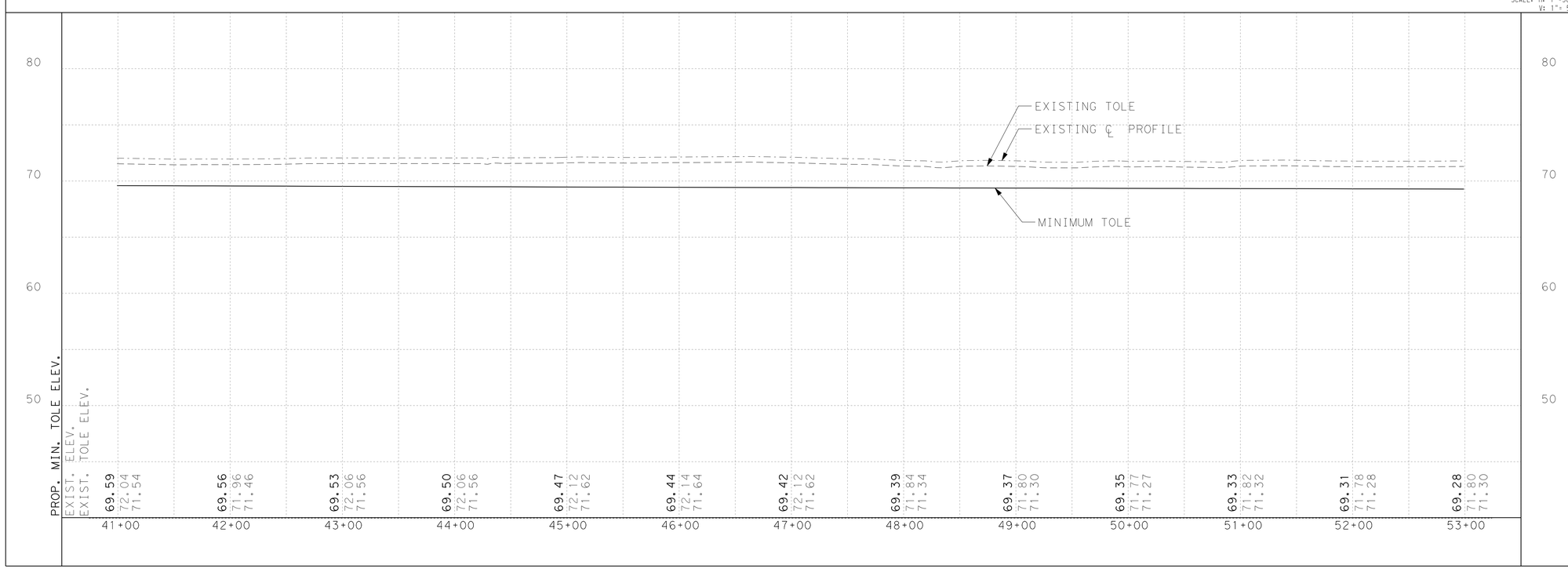
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1200	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC	1.5	
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 41+00 (R2) TO 53+00 (R2)

SHEET 14 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.14

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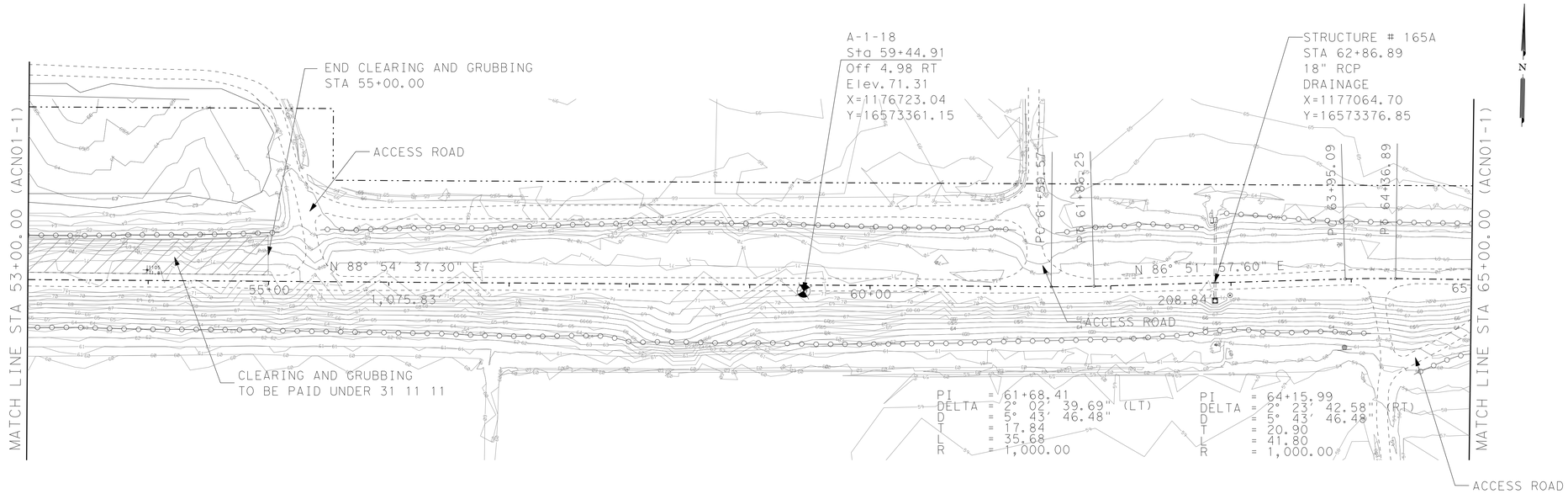


PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

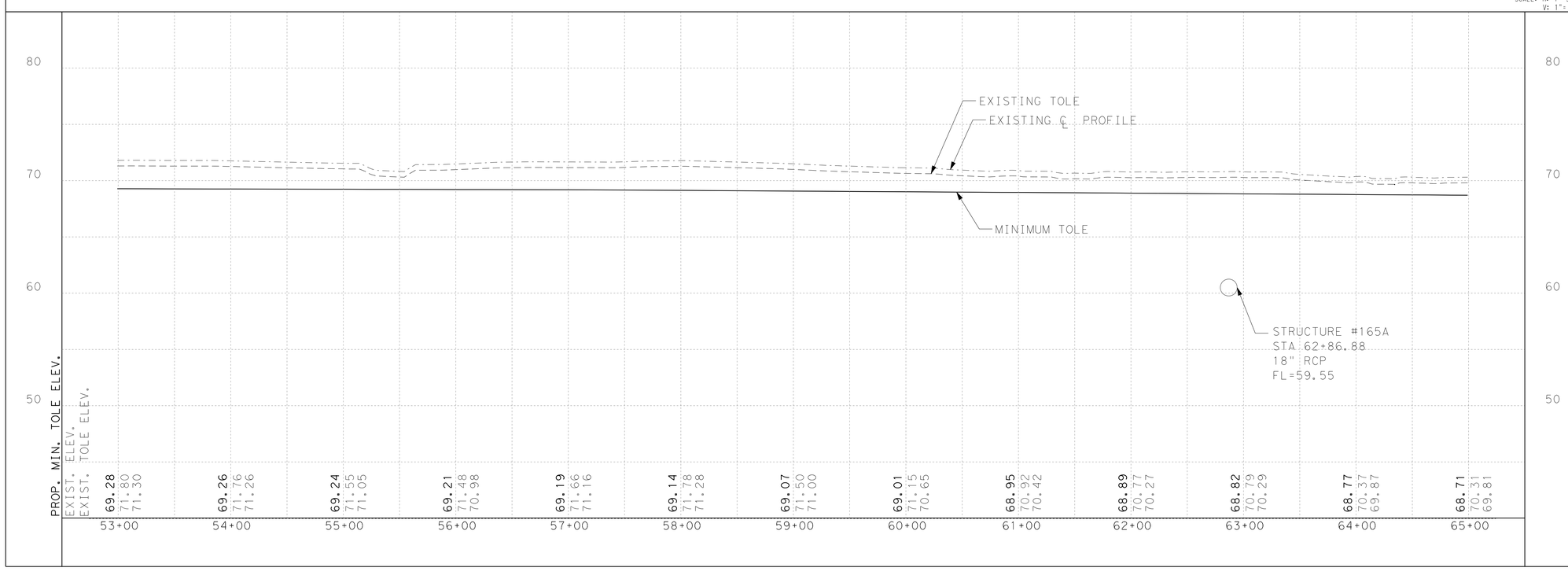
PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	200	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC	0.25	
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

SCALE: H: 1"=50'
V: 1"= 5'



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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 53+00 (R2) TO 65+00 (R2)

SHEET 15 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.15

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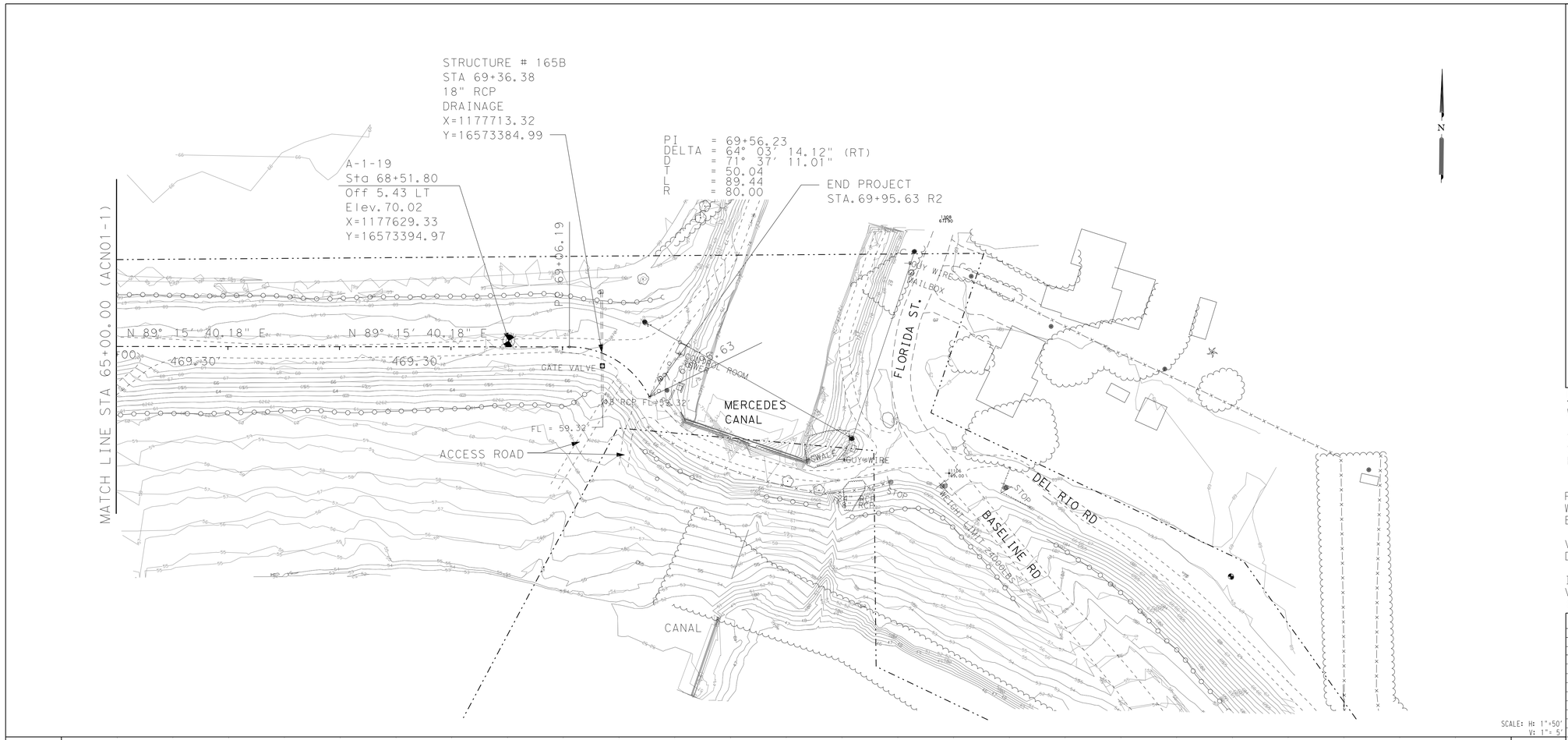
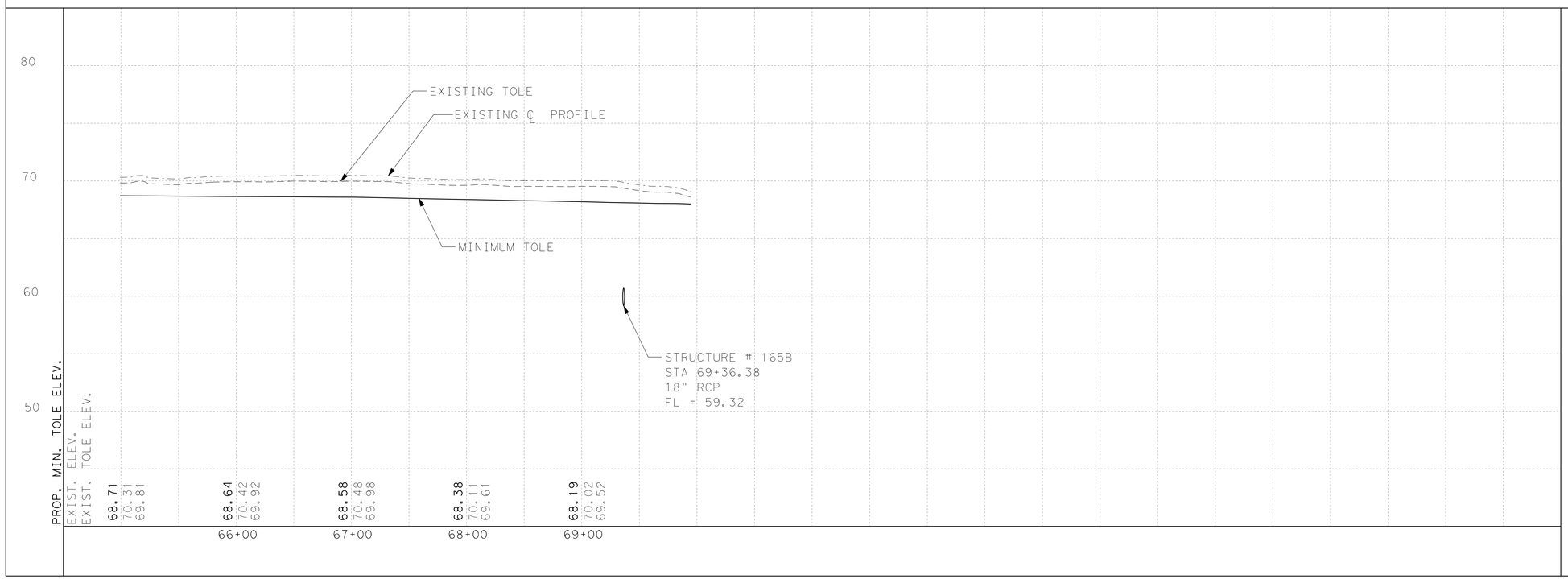


SCALE: H: 1"=50'
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

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PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE

STA 65+00 (R2) TO END

SHEET 16 OF 29 SHEET

STATE	COUNTY	DRAWN BY: BP	CHECKED BY: HG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.16

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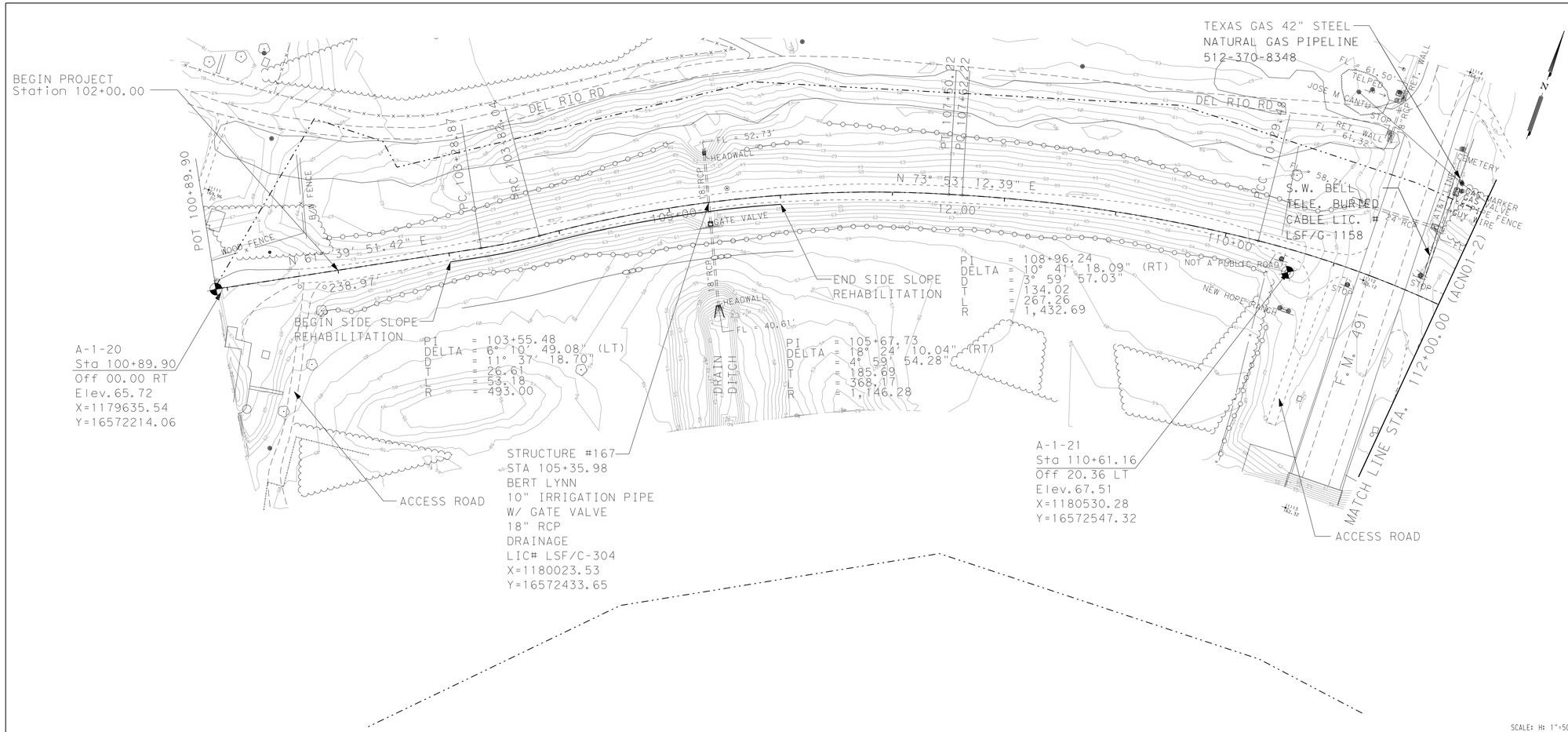
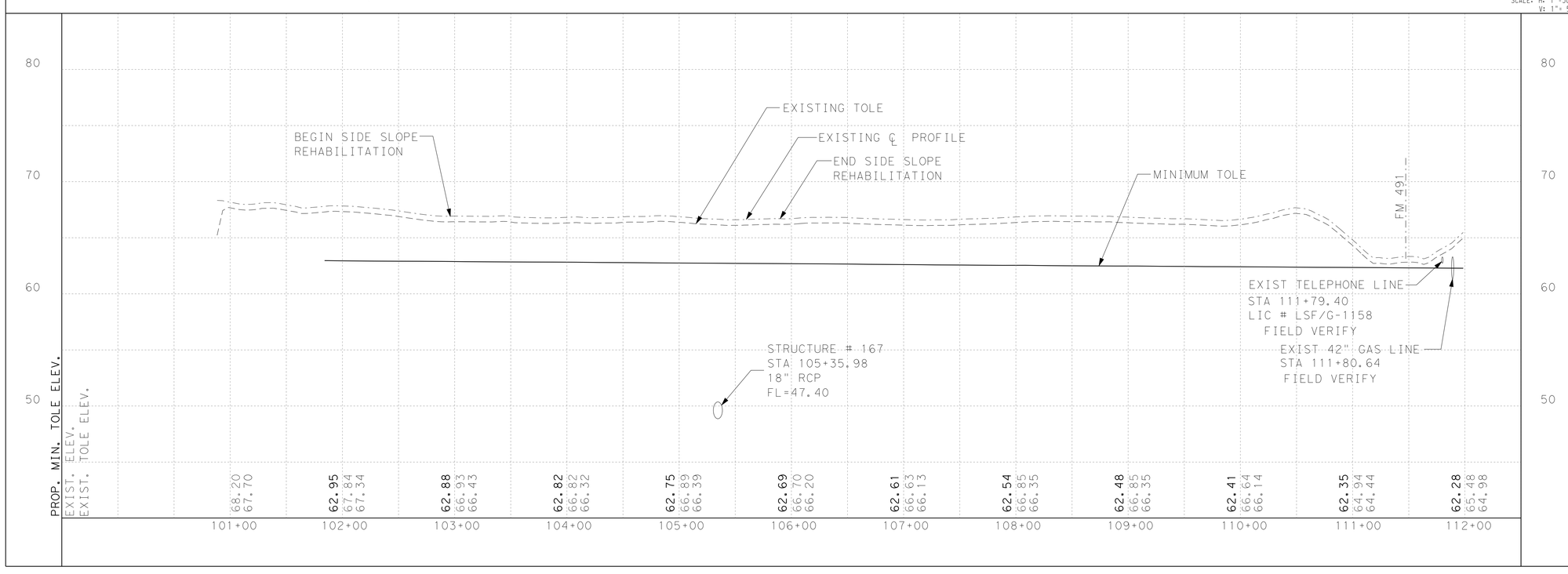


PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

SCALE: H: 1"=50'
V: 1"= 5'



NOTES:

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VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	300	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	3	
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY	750	
31	92	02	VEGETATIVE WATERING	MG	3	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	106	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	632	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	770	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	125	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	85	
90	79	01	VEHICULAR GATE	EA		

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STATE OF TEXAS
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 100+89.90 TO STA 112+00

SHEET 17 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.17

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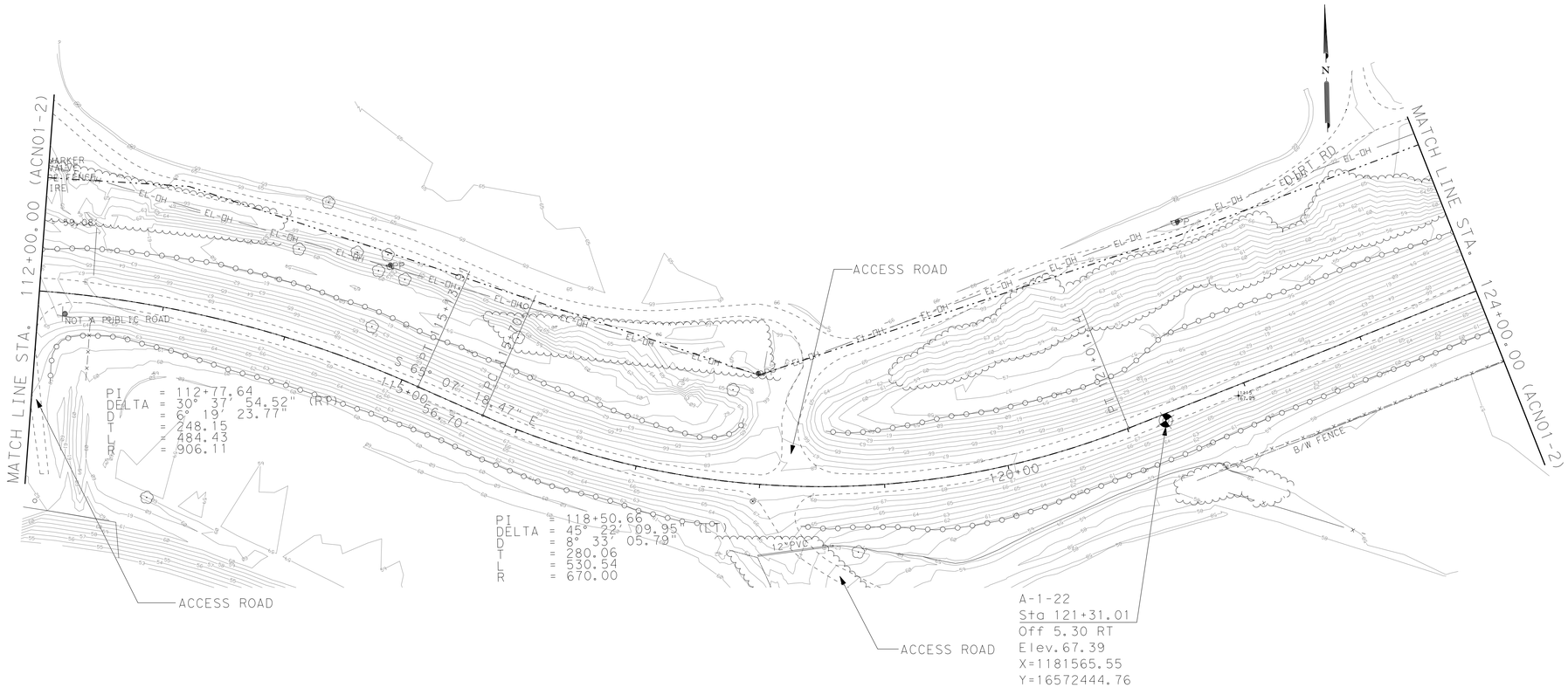

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-DH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

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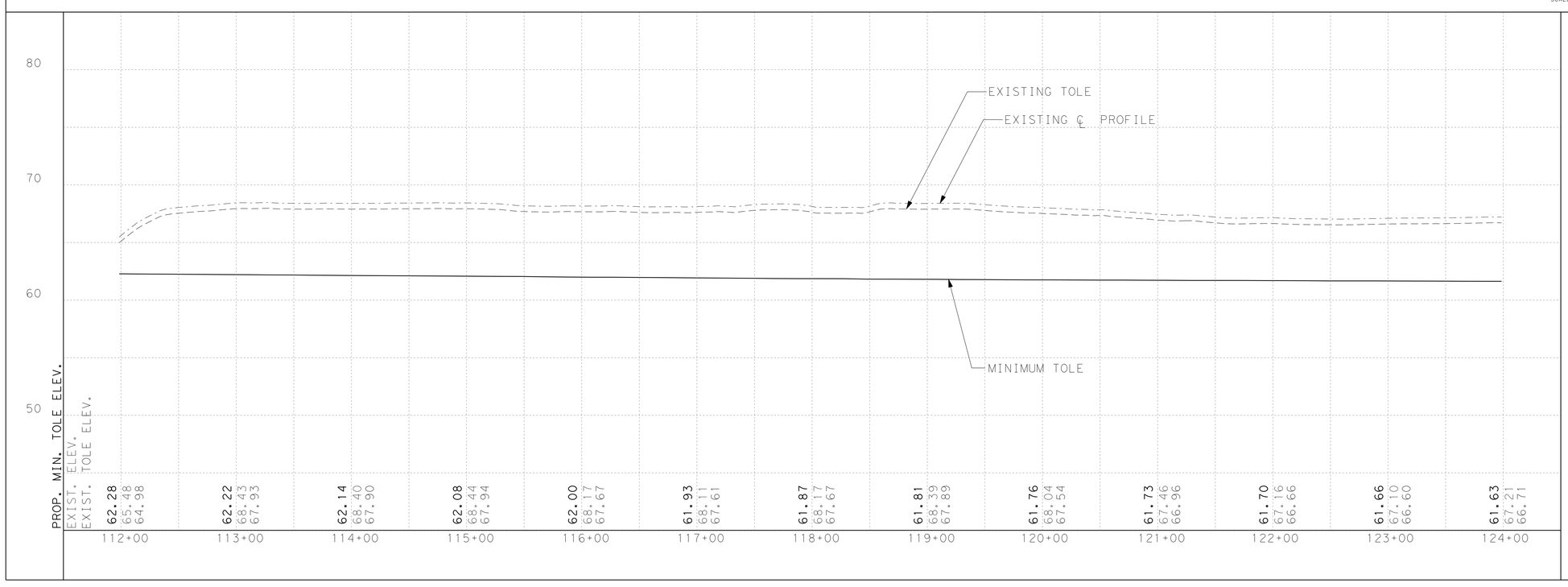
DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

SCALE: H: 1"=50'
V: 1"= 5'



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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 112+00 TO STA 124+00

SHEET 18 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.18

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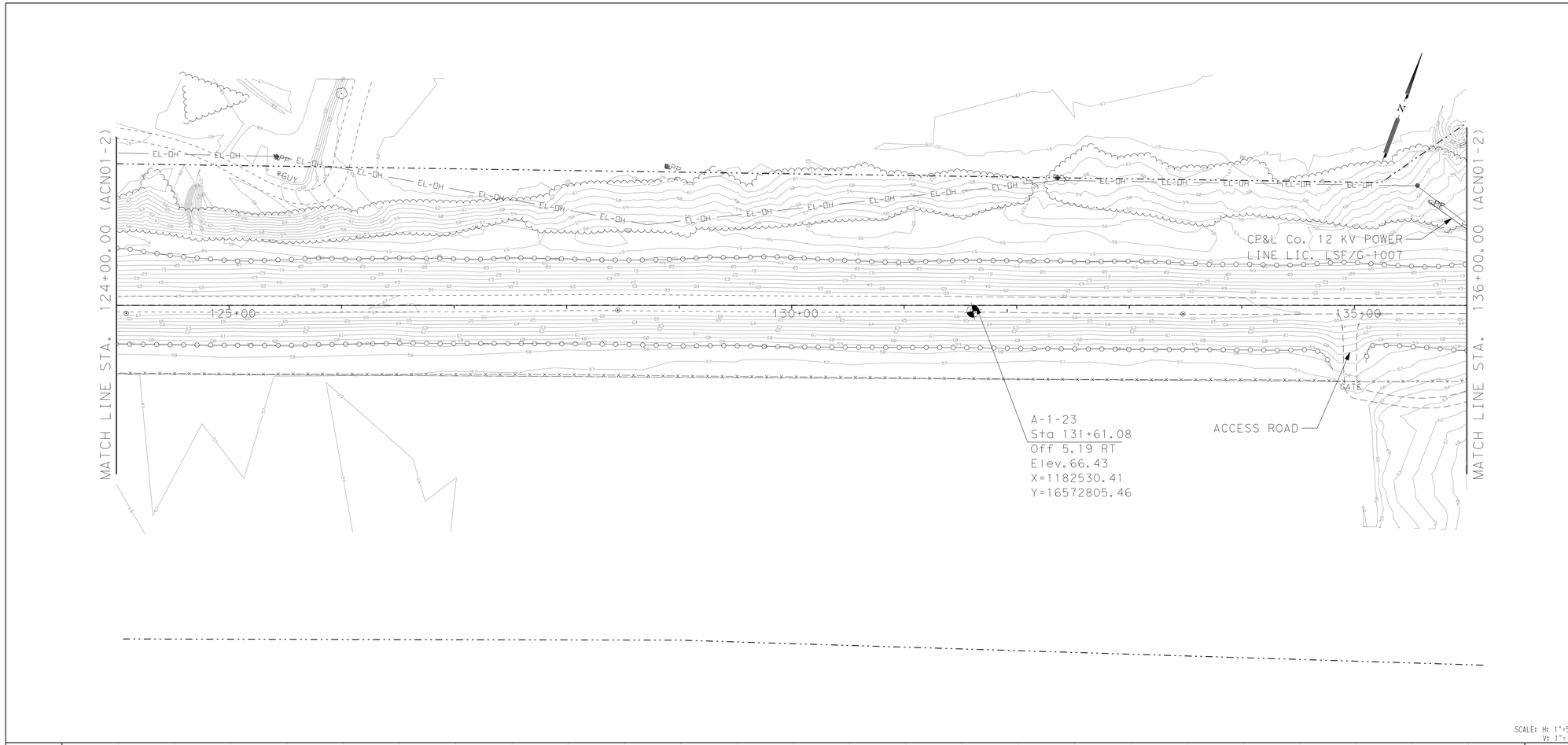

SCALE: H: 1"=50'
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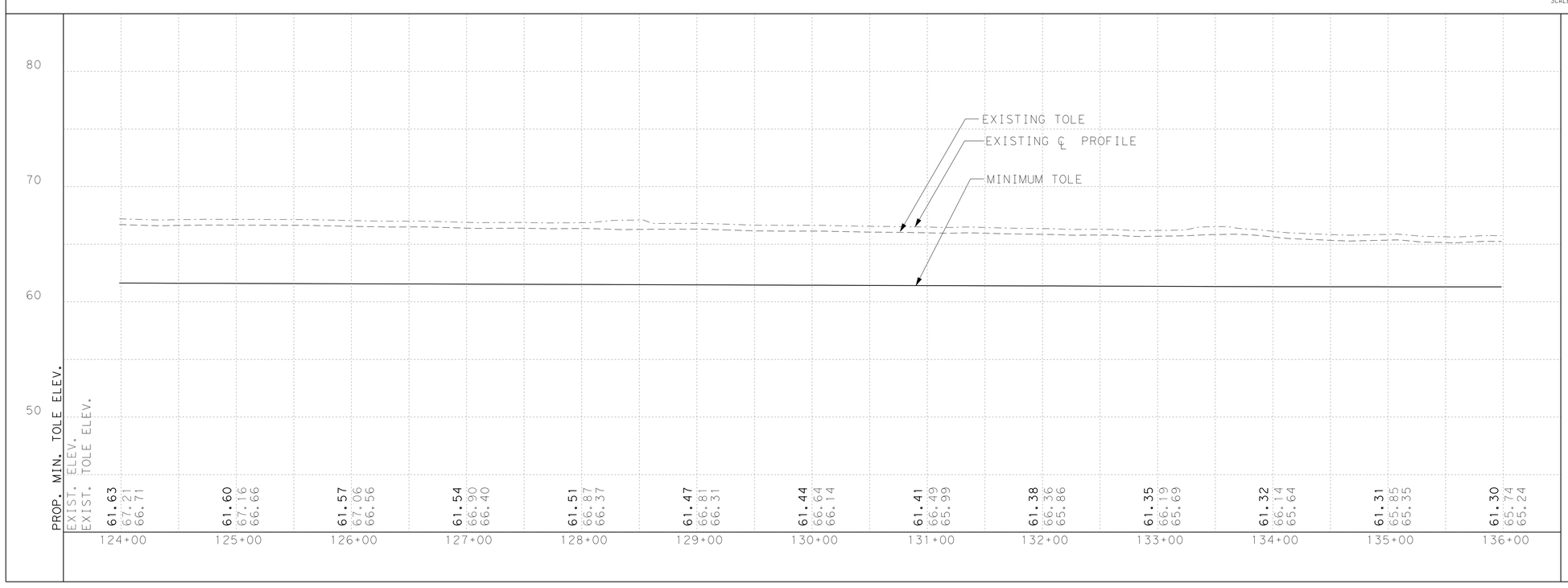

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
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NOTES:

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VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 124+00 TO STA 136+00

SHEET 19 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.19

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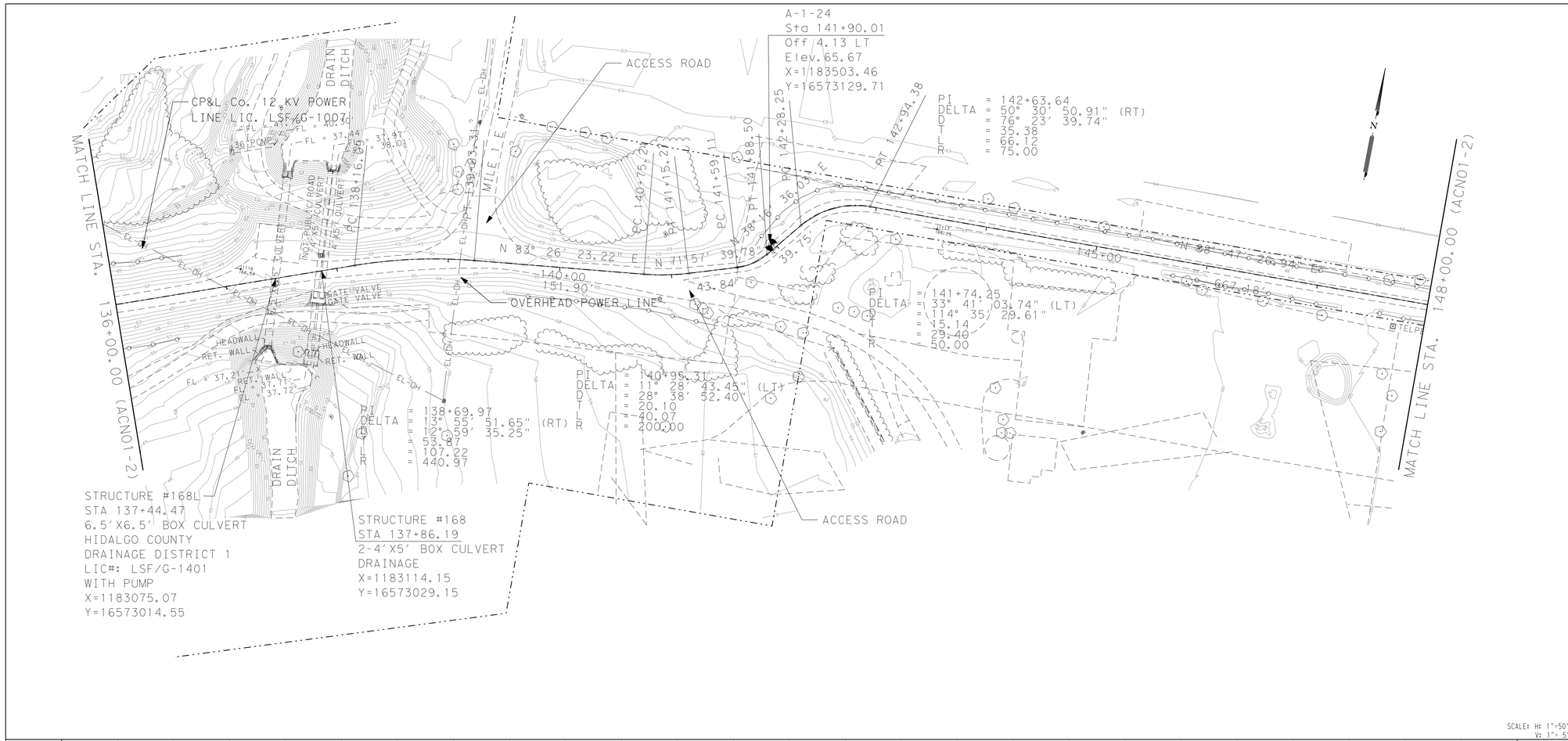

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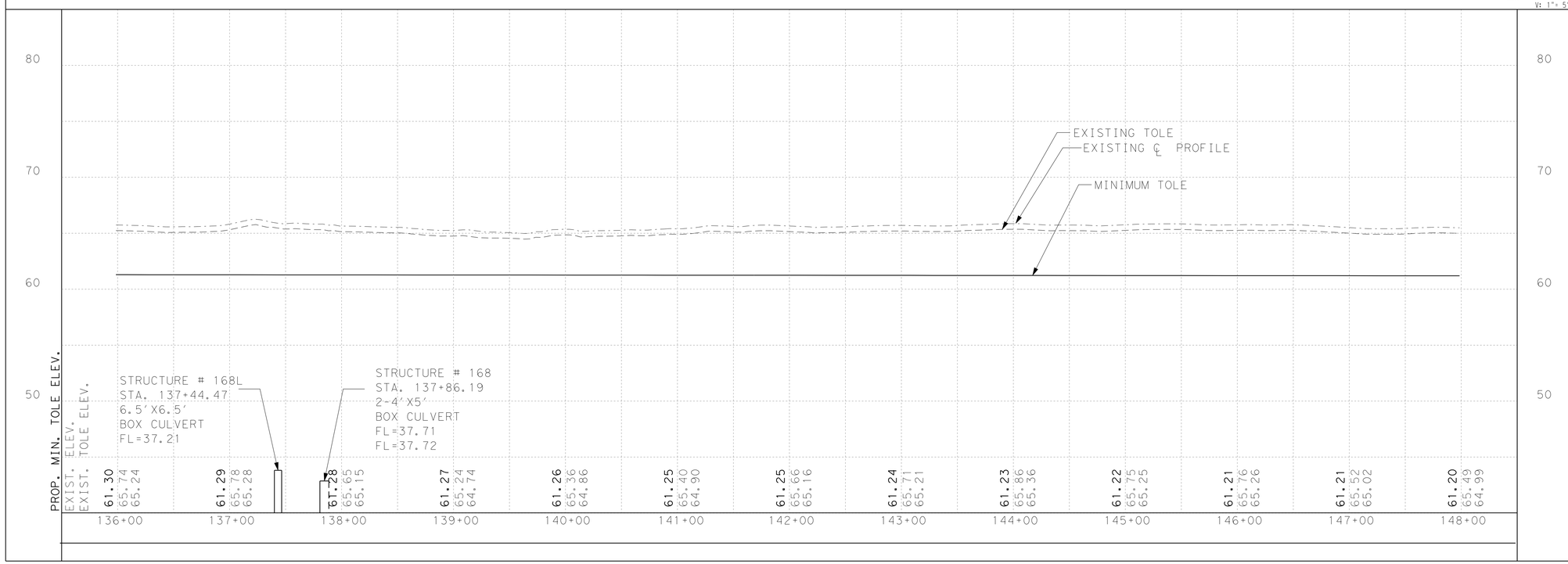

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

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01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
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S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by DARIO V. GUERRA III P.E. 64669, on September 30 09

ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 136+00 TO STA 148+00

SHEET 20 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.20

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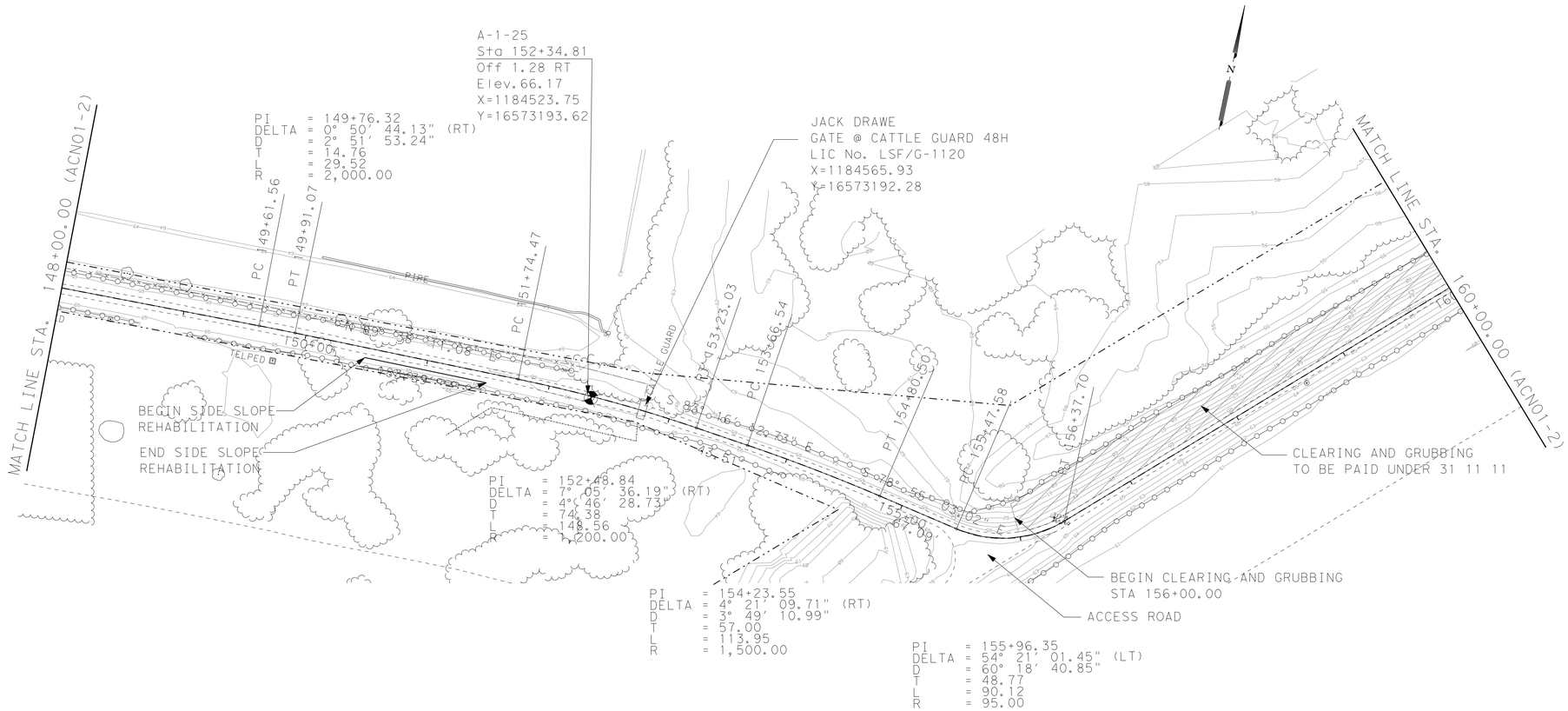

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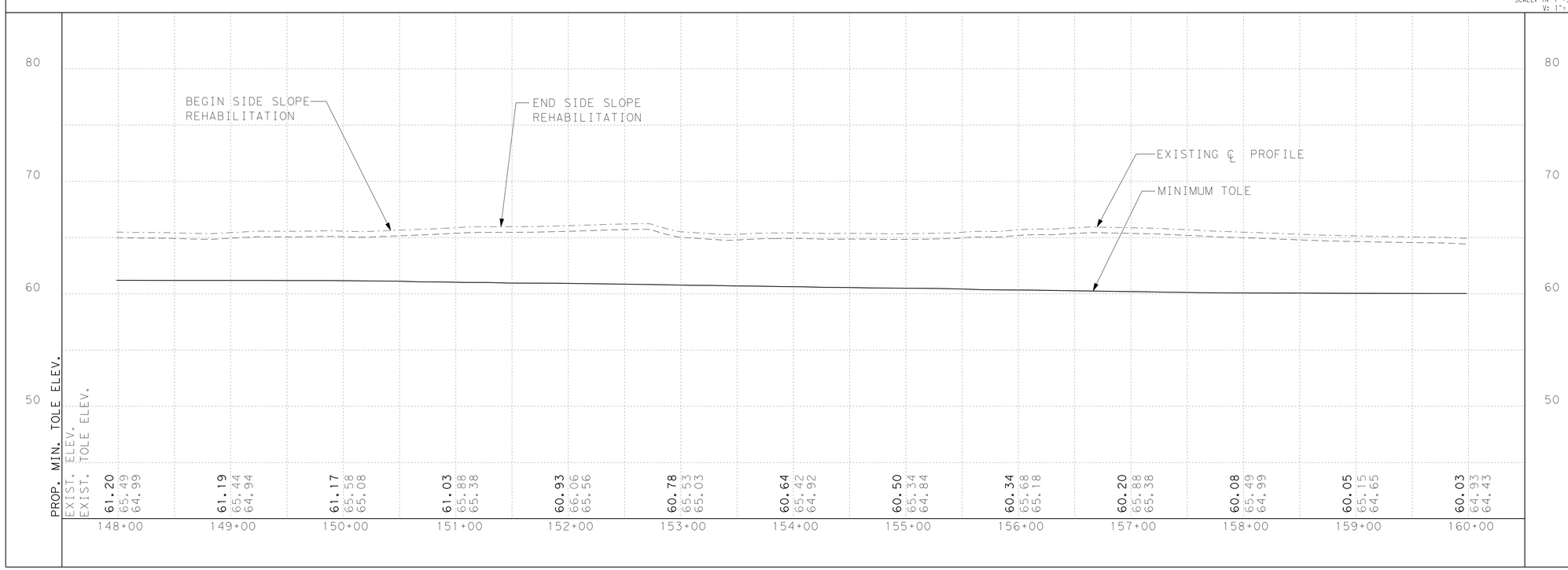
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	500	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	1	
31	11	11	CLEARING AND GRUBBING	AC	0.50	
31	92	01	SEEDING (PERM)	SY	282	
31	92	02	VEGETATIVE WATERING	MG	1	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	22	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	385	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	407	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	47	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	52	
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

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STATE OF TEXAS
DARIO V. GUERRA III
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 148+00 TO STA 160+00

SHEET 21 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.21

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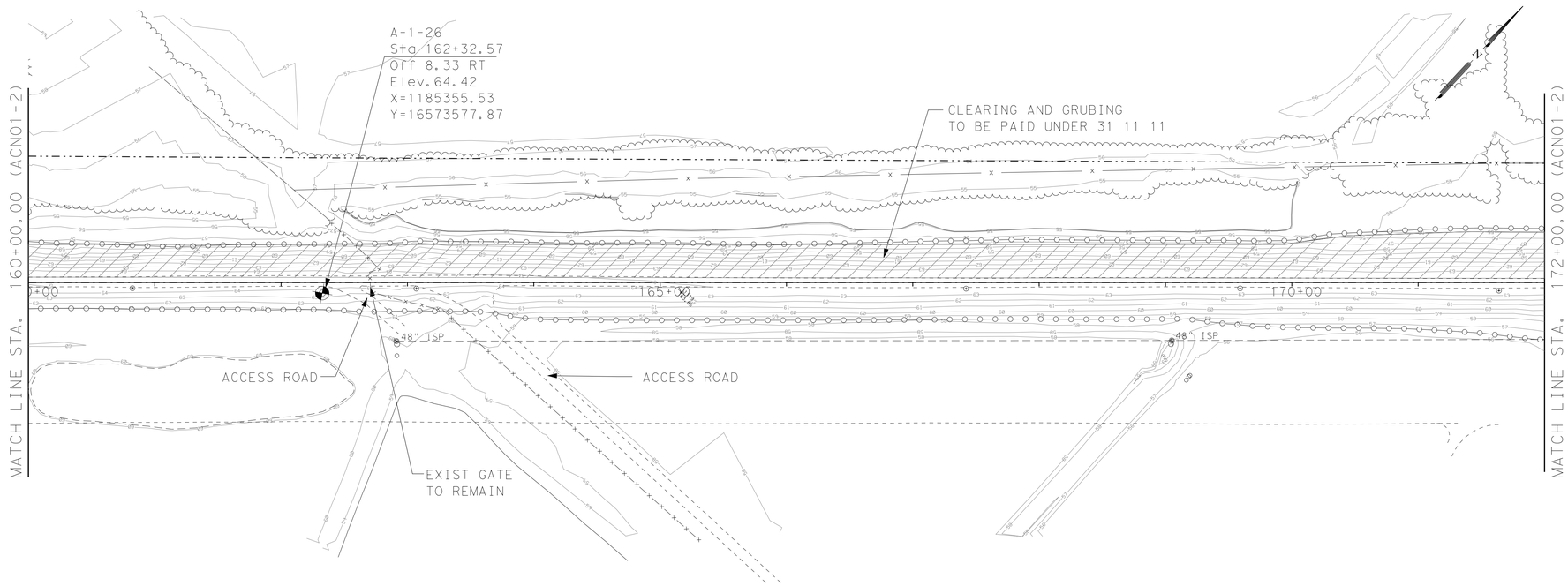
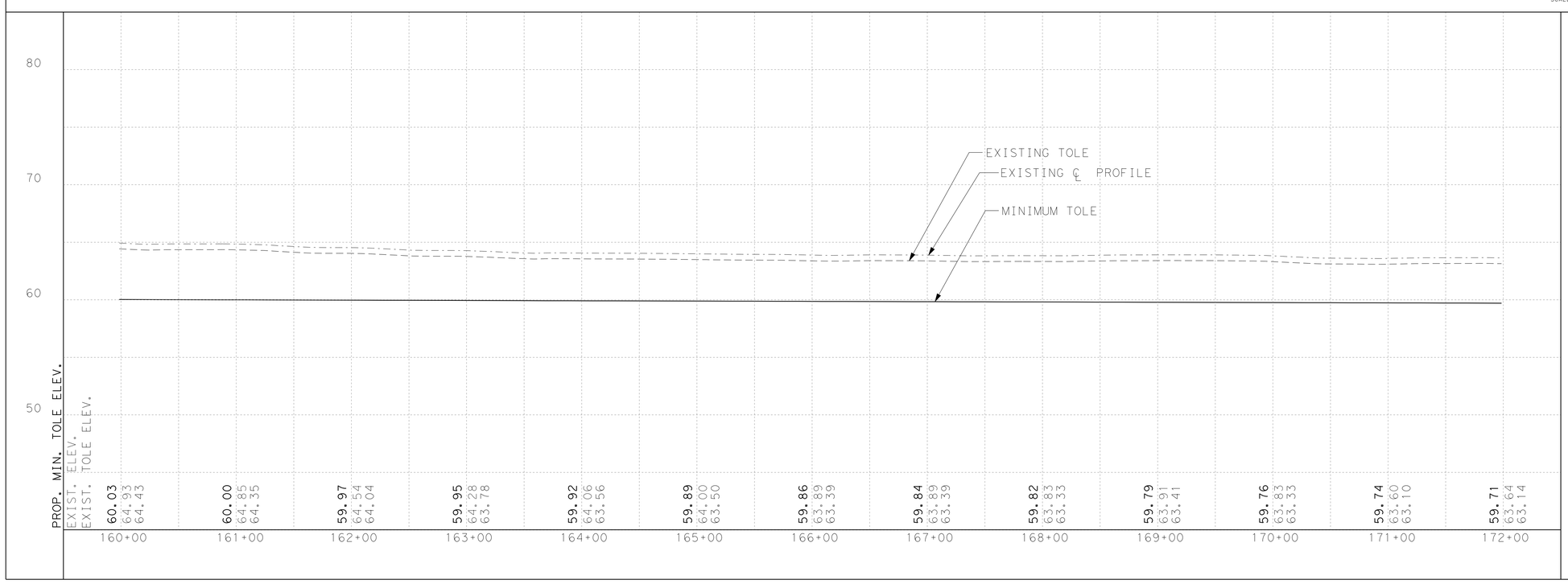


SCALE: H: 1"=50'
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1200	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC	1.54	
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

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STATE OF TEXAS
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 160+00 TO STA 172+00

SHEET 22 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.22

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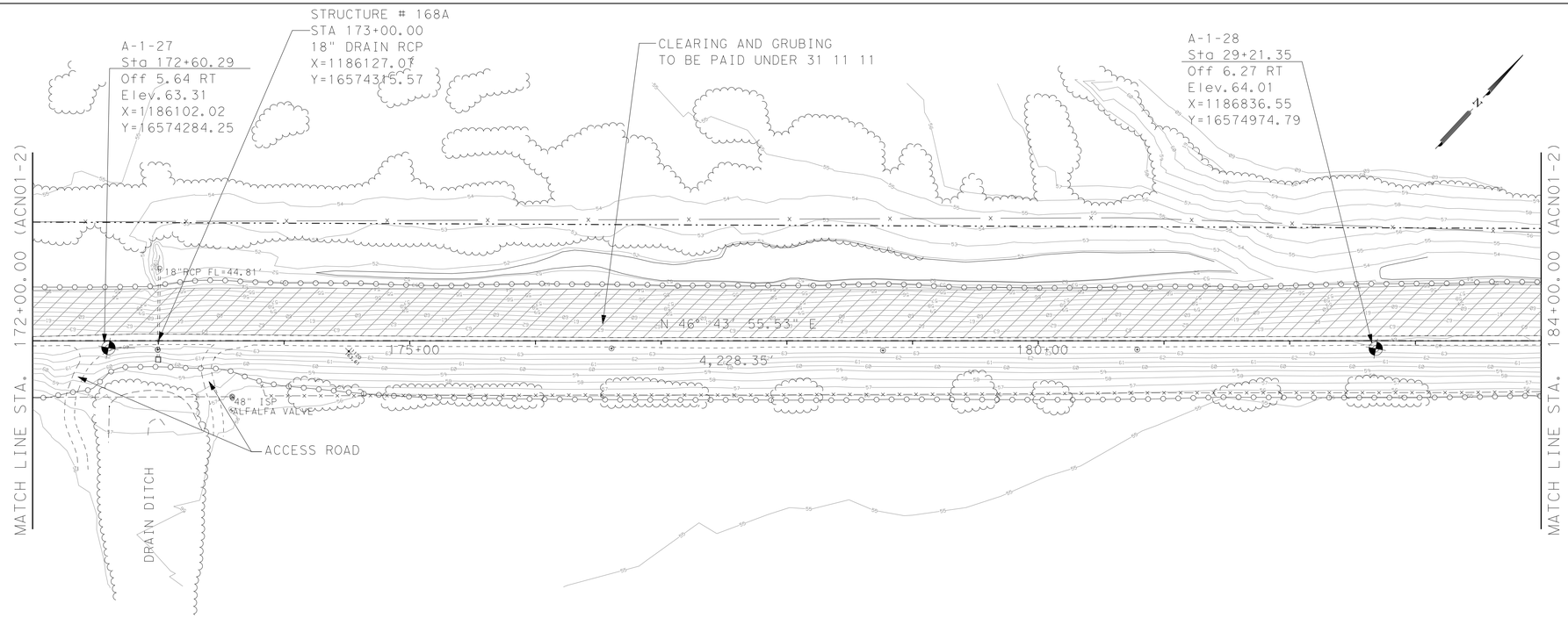

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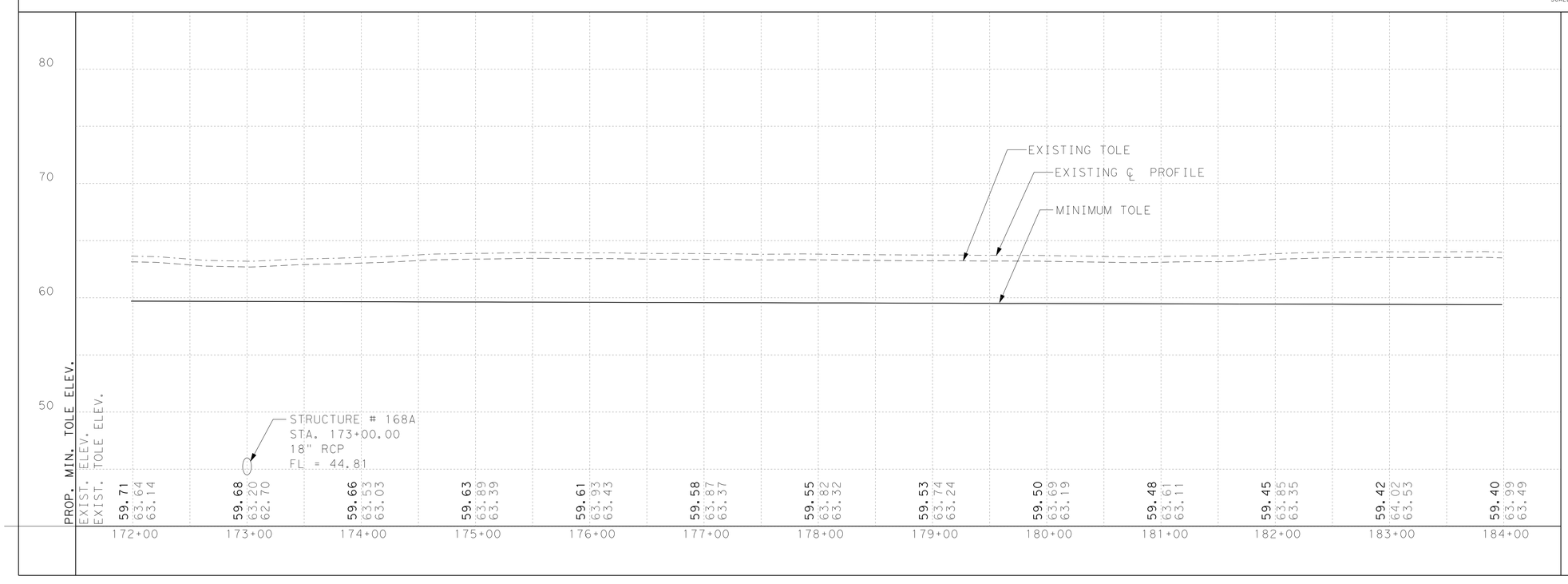
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1200	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC	1.54	
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISIÓN INTERNACIONAL DE LIMITES Y AGUAS

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Engineering Management Technology

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STATE OF TEXAS
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE STA 172+00 TO STA 184+00

SHEET 23 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.23

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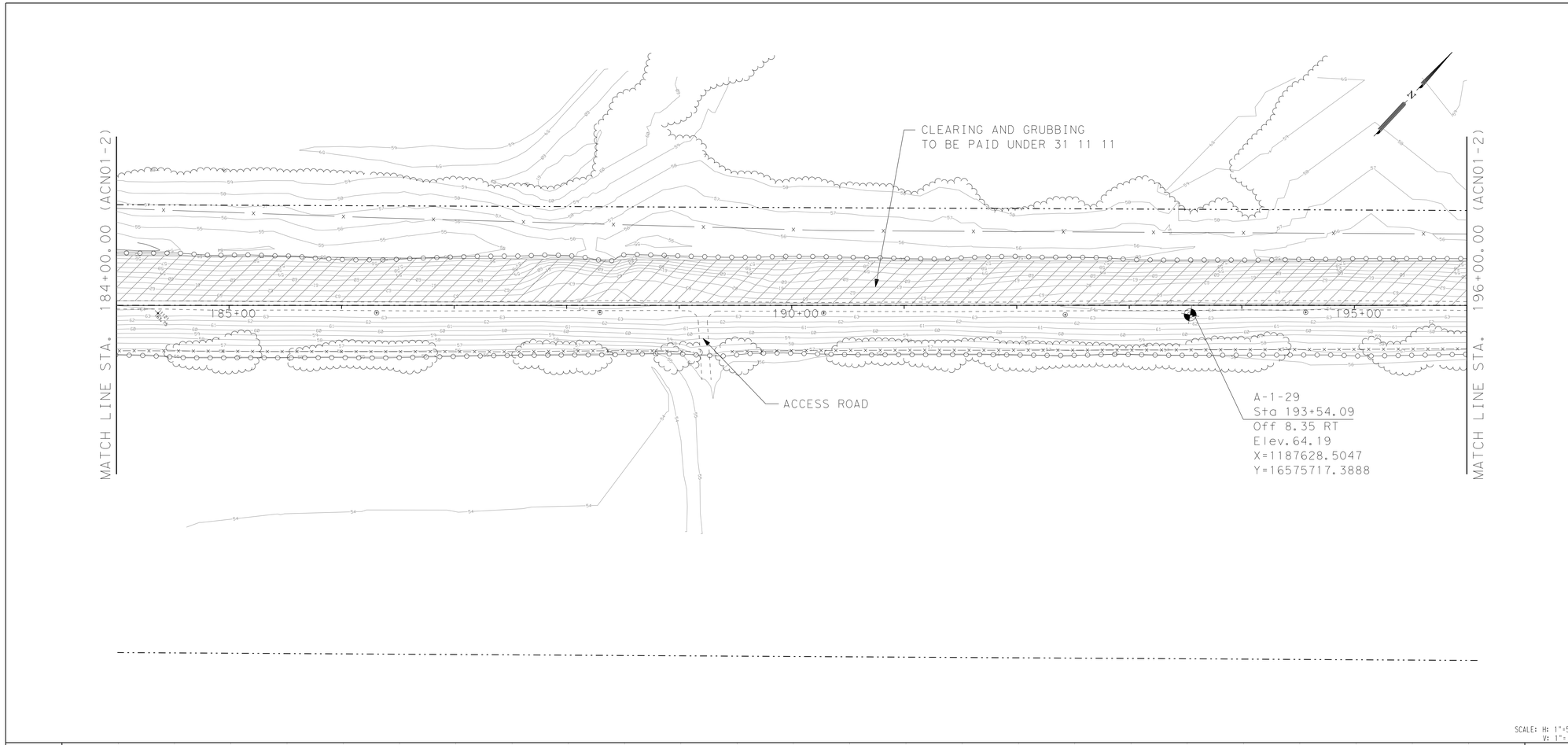

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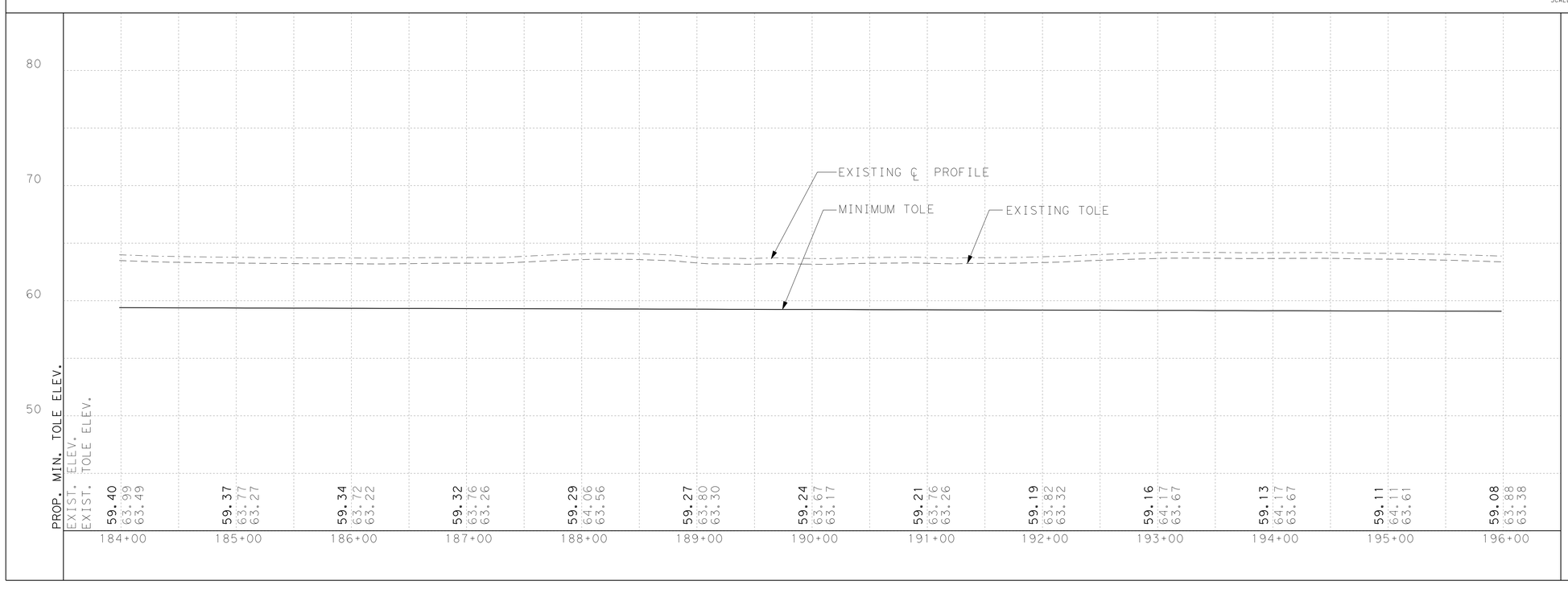

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

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PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1200	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC	1.54	
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 184+00 TO STA 196+00

SHEET 24 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.24

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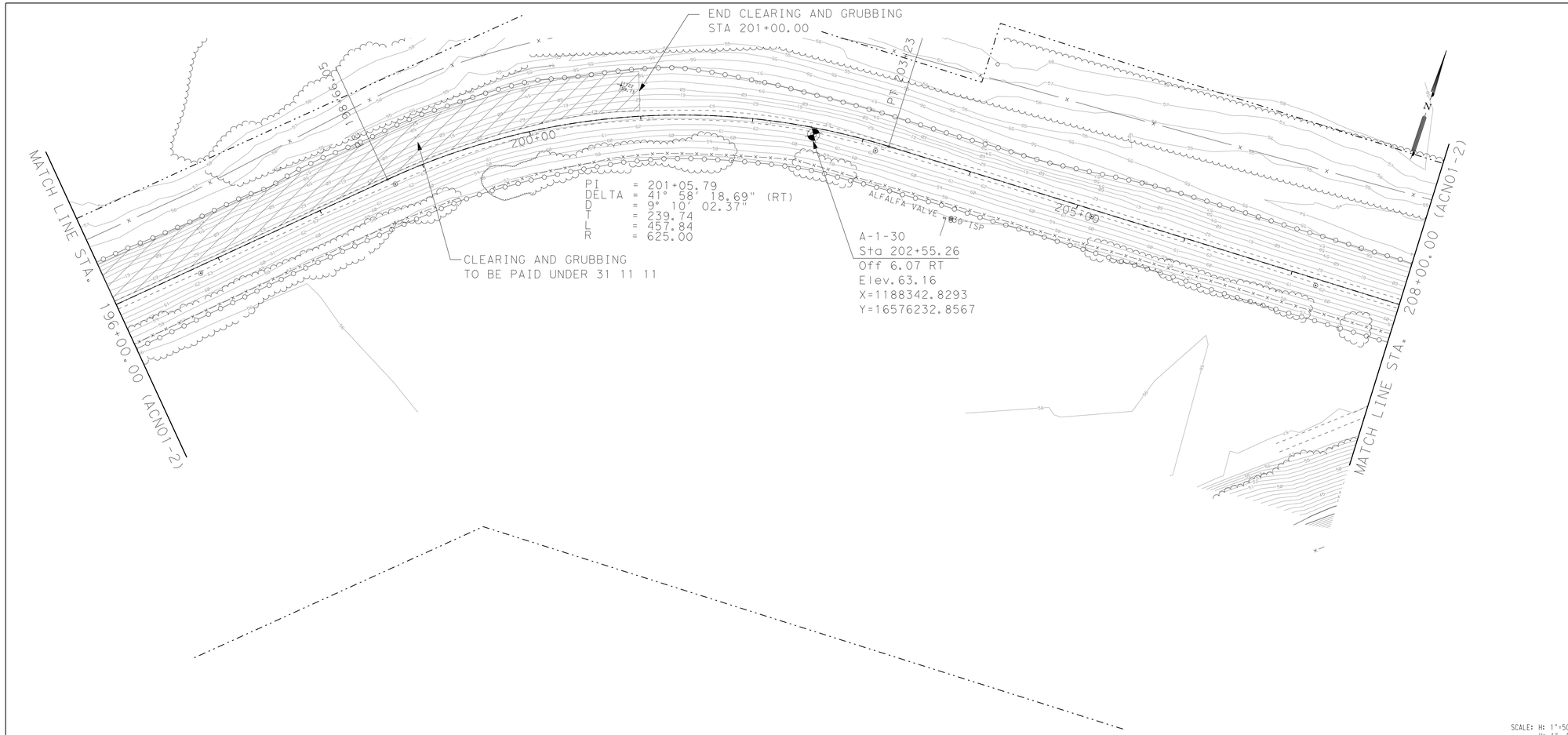

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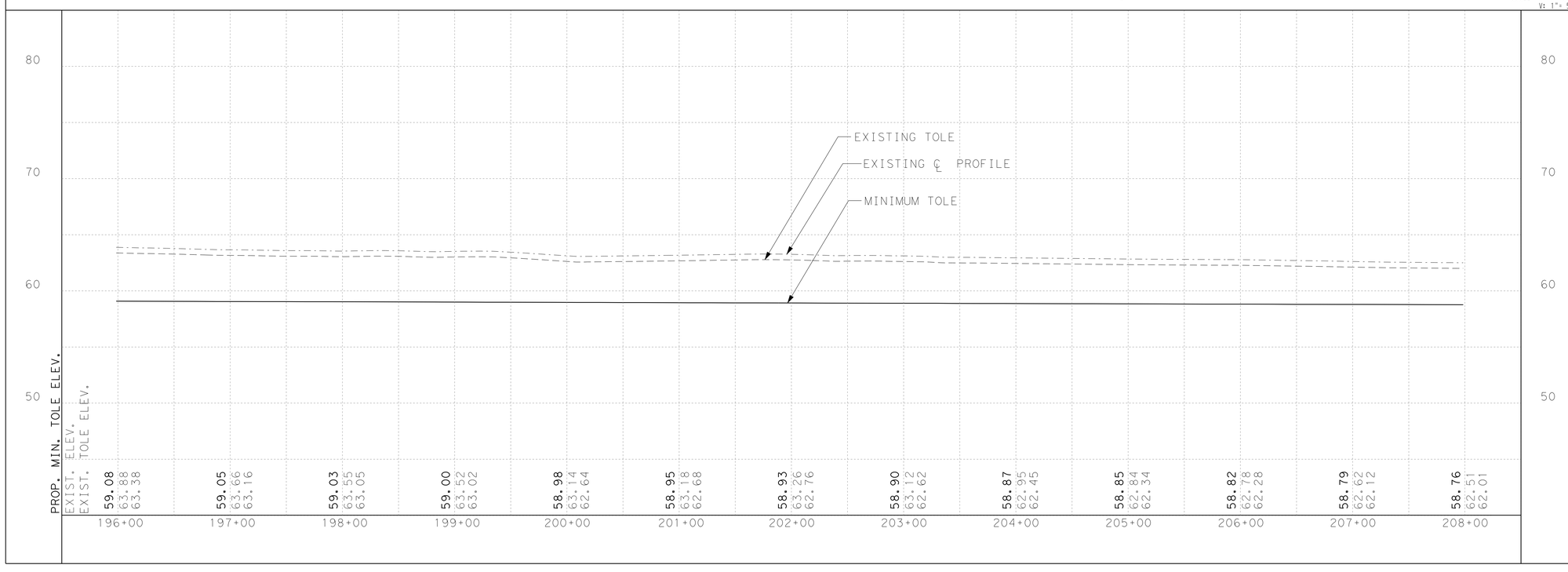

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

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PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	500	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC	0.64	
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISIÓN INTERNACIONAL DE LÍMITES Y AGUAS

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE STA 196+00 TO STA 208+00

SHEET 25 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.25

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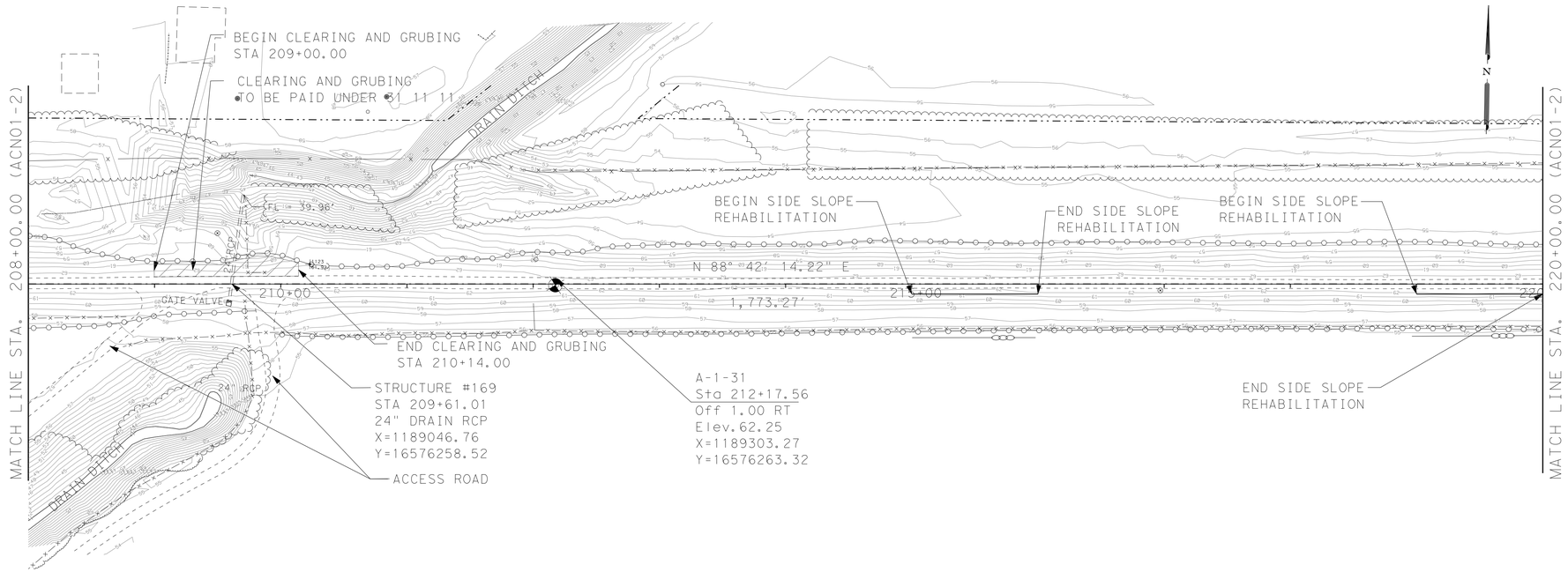


PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

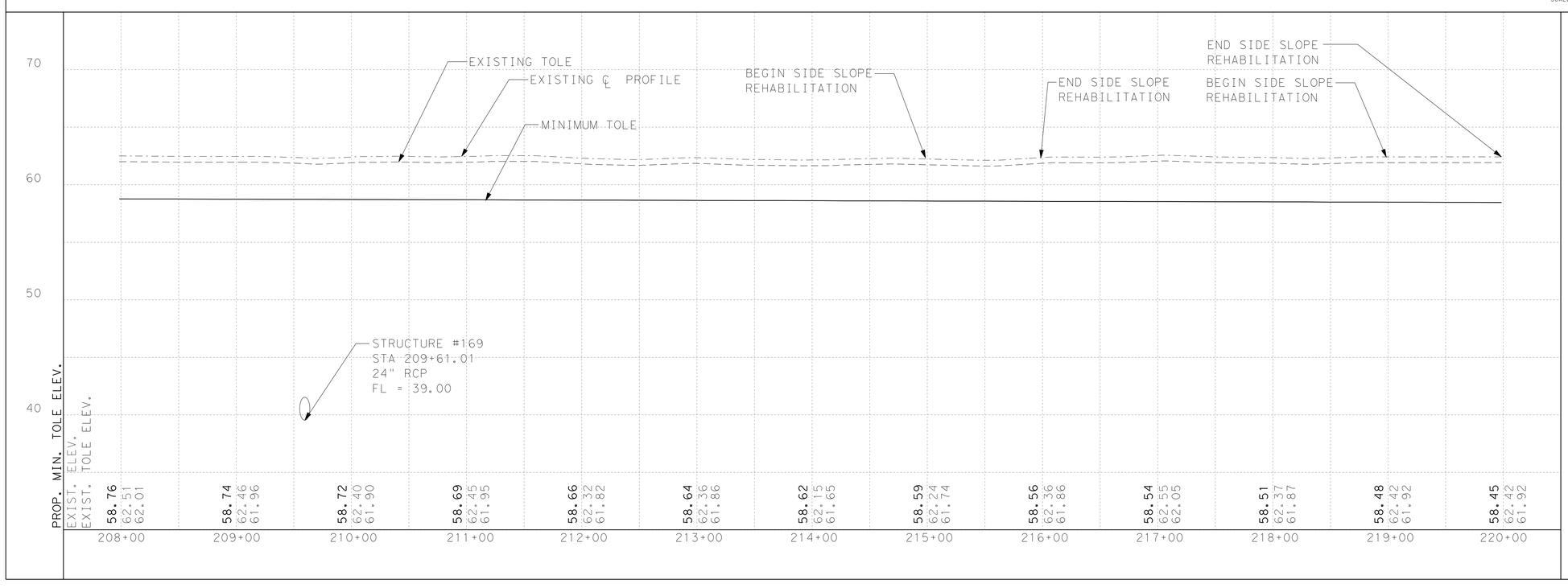
PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	314	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA	2	
31	11	11	CLEARING AND GRUBBING	AC	0.08	
31	92	01	SEEDING (PERM)	SY	786	
31	92	02	VEGETATIVE WATERING	MG	3	
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY	114	
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY	873	
35	41	02	RAISE LEVEE (EMBANKMENT)	CY	994	
35	41	03	RAISE LEVEE (TOP SOIL)	CY	131	
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	143	
90	79	01	VEHICULAR GATE	EA		

SCALE: H: 1"=50'
V: 1"= 5'



S&B INFRASTRUCTURE, LTD.
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 208+00 TO STA 220+00

SHEET 26 OF 29 SHEET

STATE	COUNTY	DRAWN BY:	CHECKED BY:	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.26

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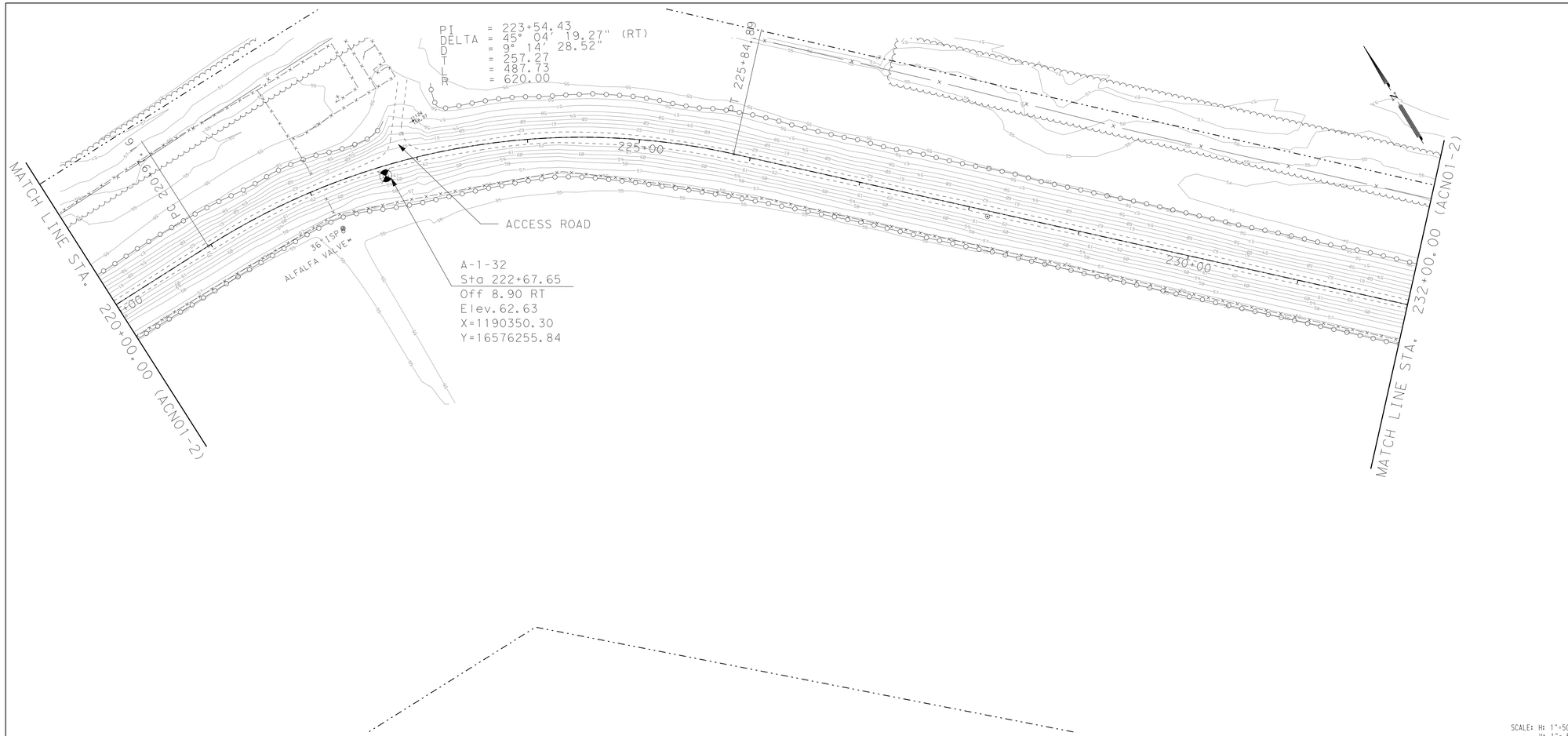

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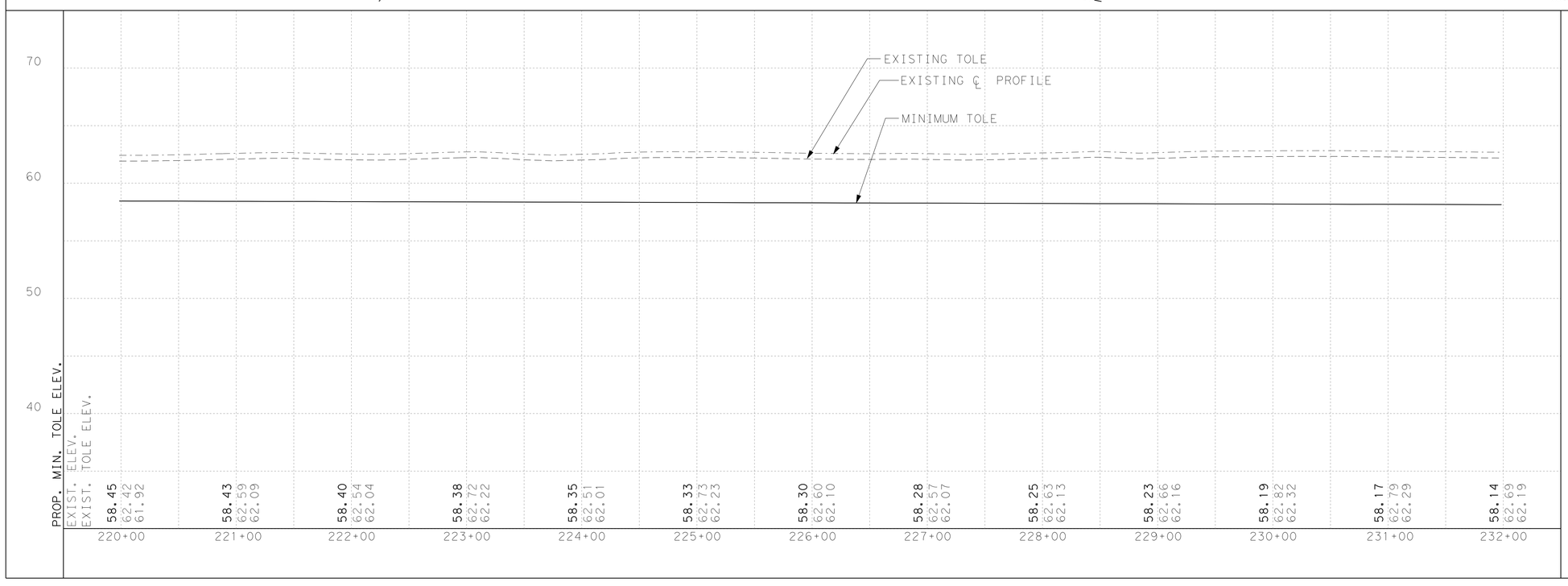

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 220+00 TO STA 232+00

SHEET 27 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.27

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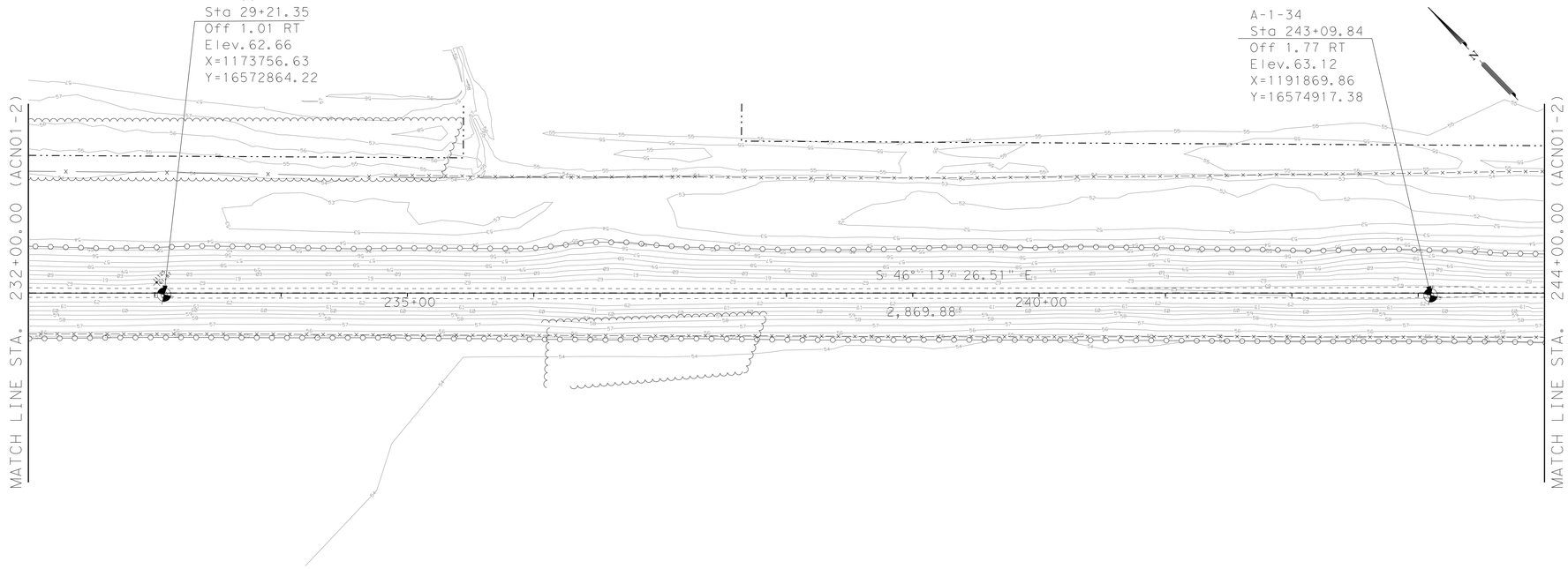

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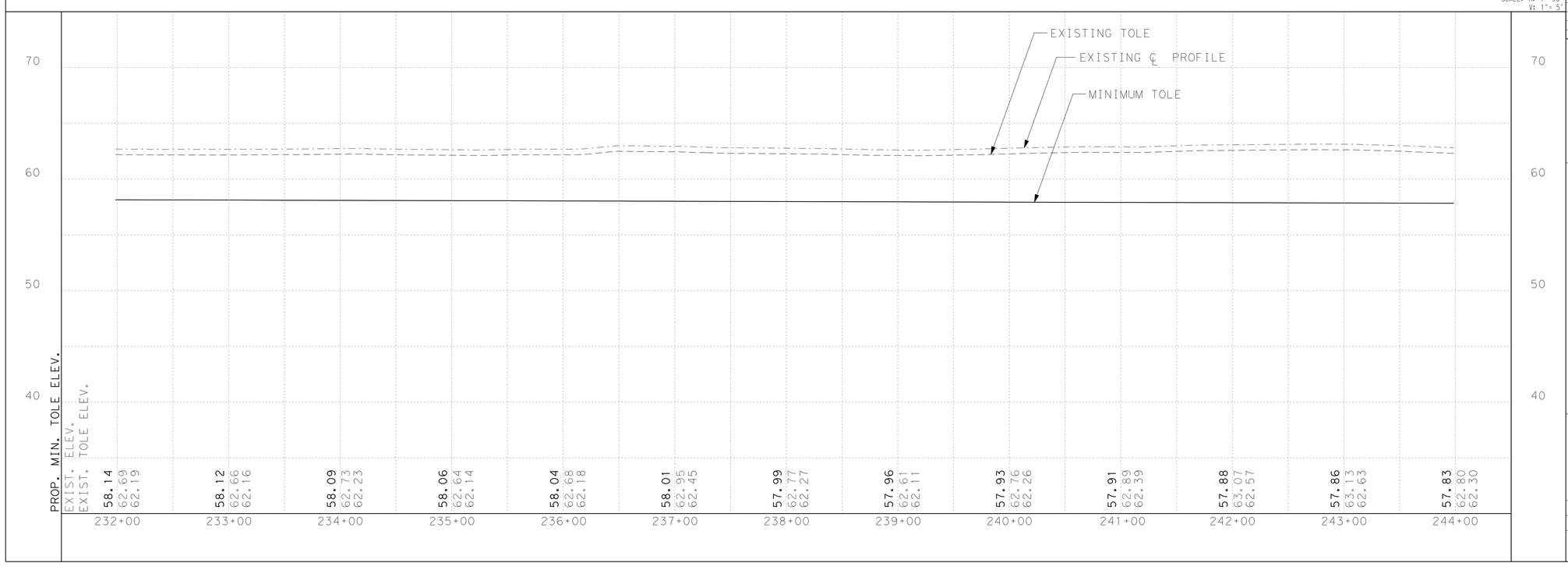
V: 1"= 5'



PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

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VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

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STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
PLAN & PROFILE
STA 232+00 TO STA 244+00

SHEET 28 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.28

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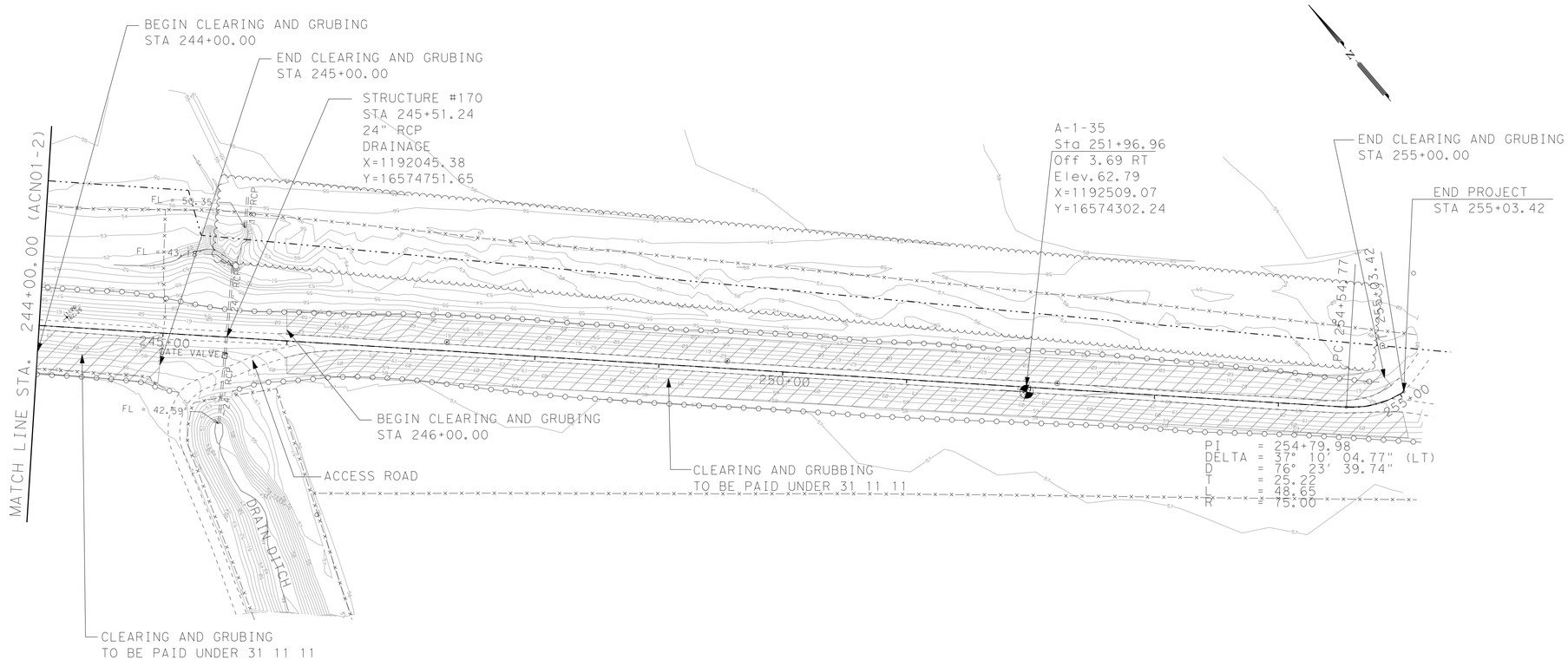

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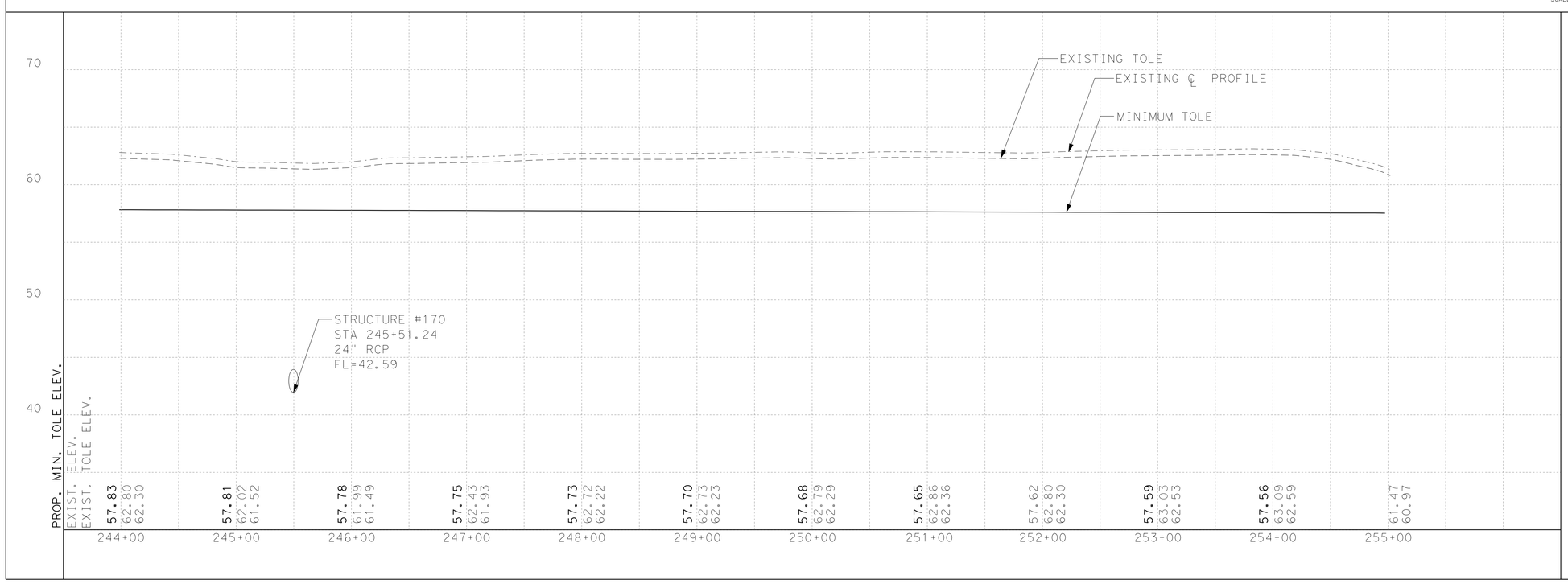

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

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VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

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DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF	1900	
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC	0.89	
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISIÓN INTERNACIONAL DE LIMITES Y AGUAS

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Engineering Management Technology

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STATE OF TEXAS
DARIO V. GUERRA III
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REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PLAN & PROFILE STA 244+00 TO STA 255+03.42

SHEET 29 OF 29 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				8.29

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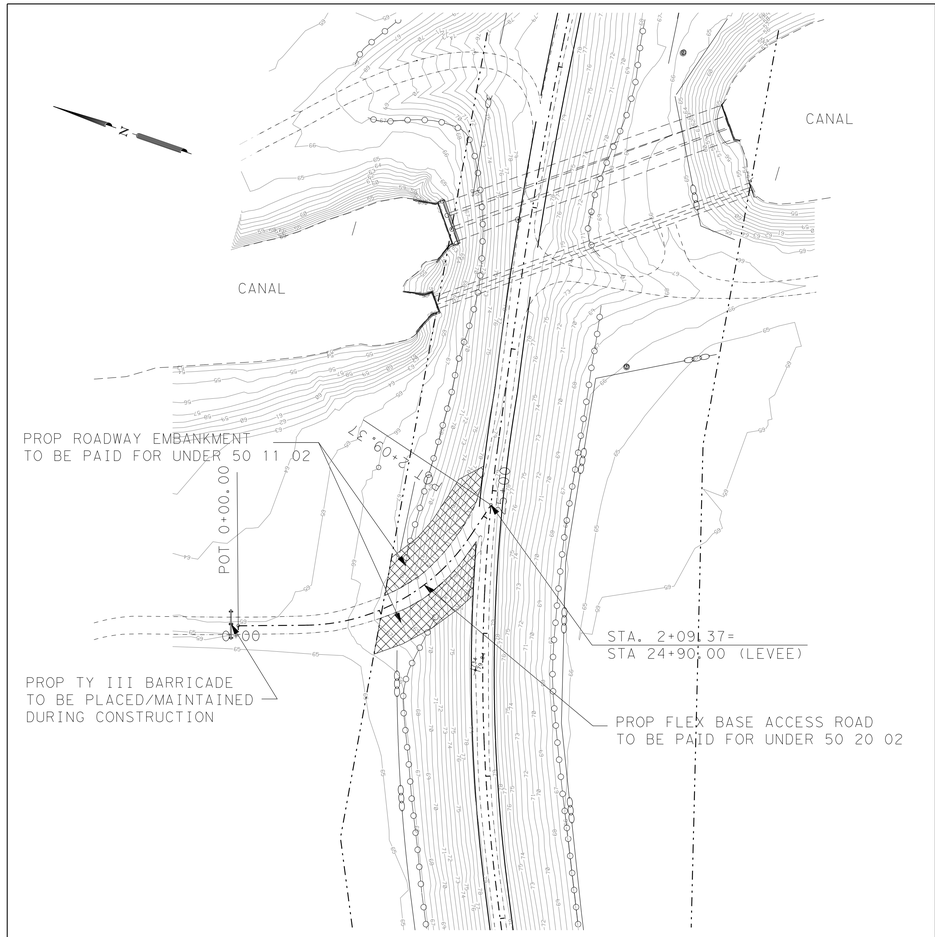

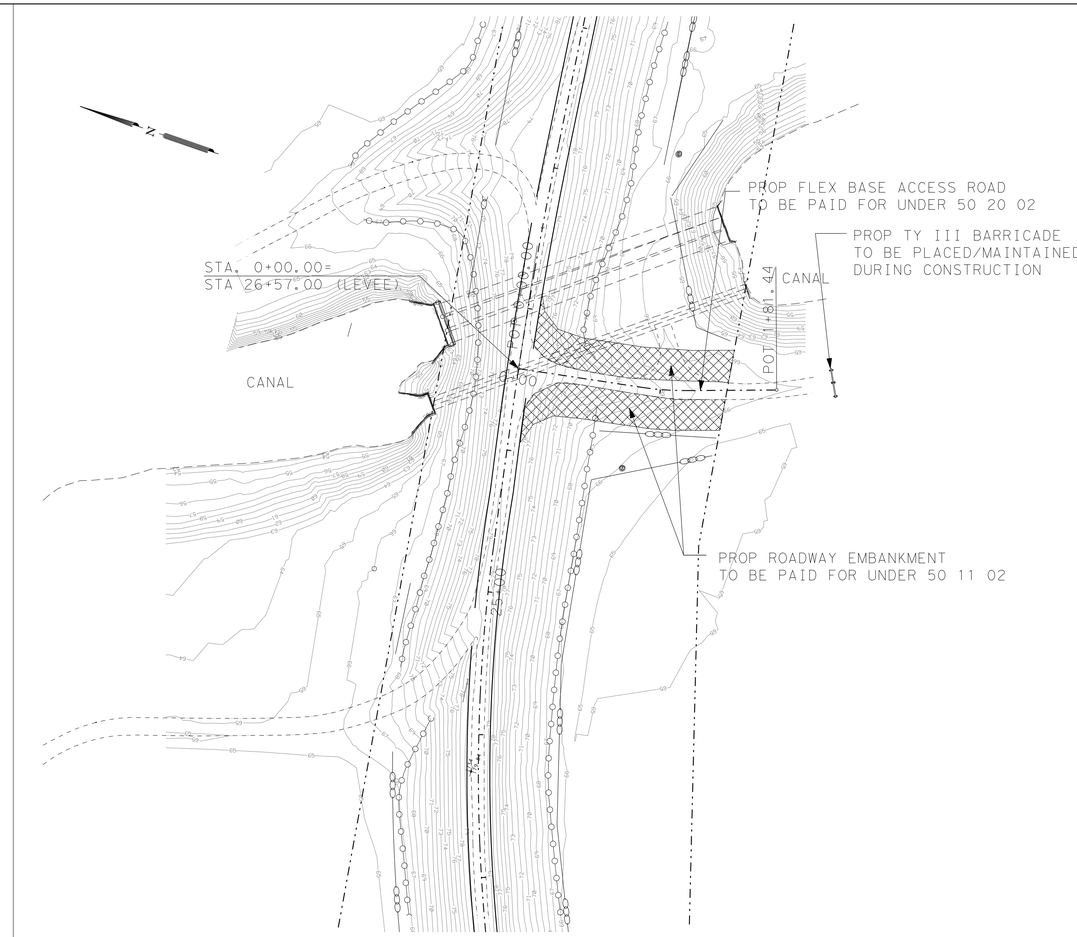

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

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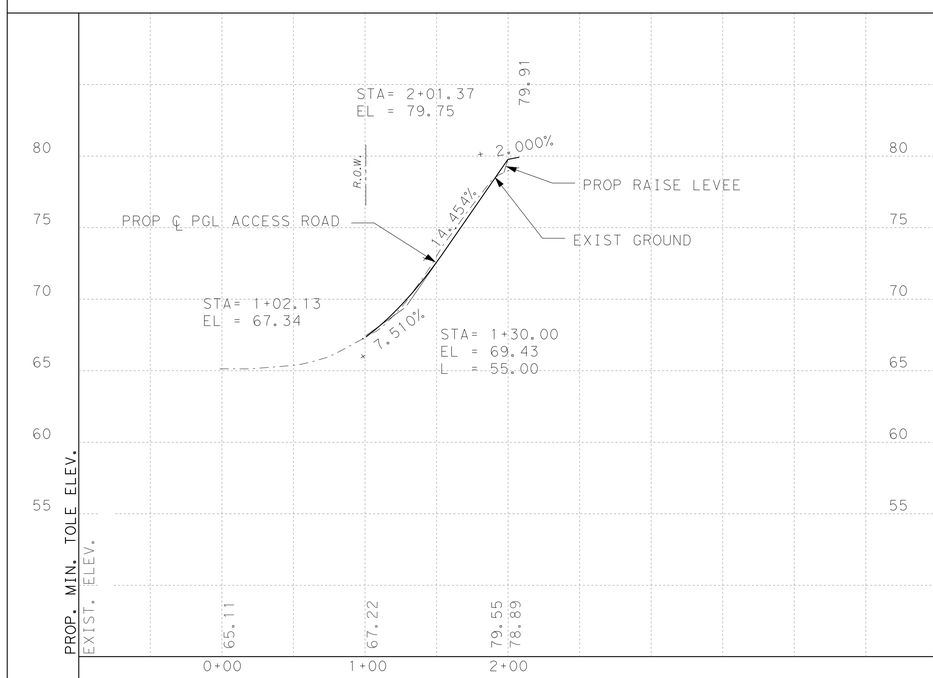
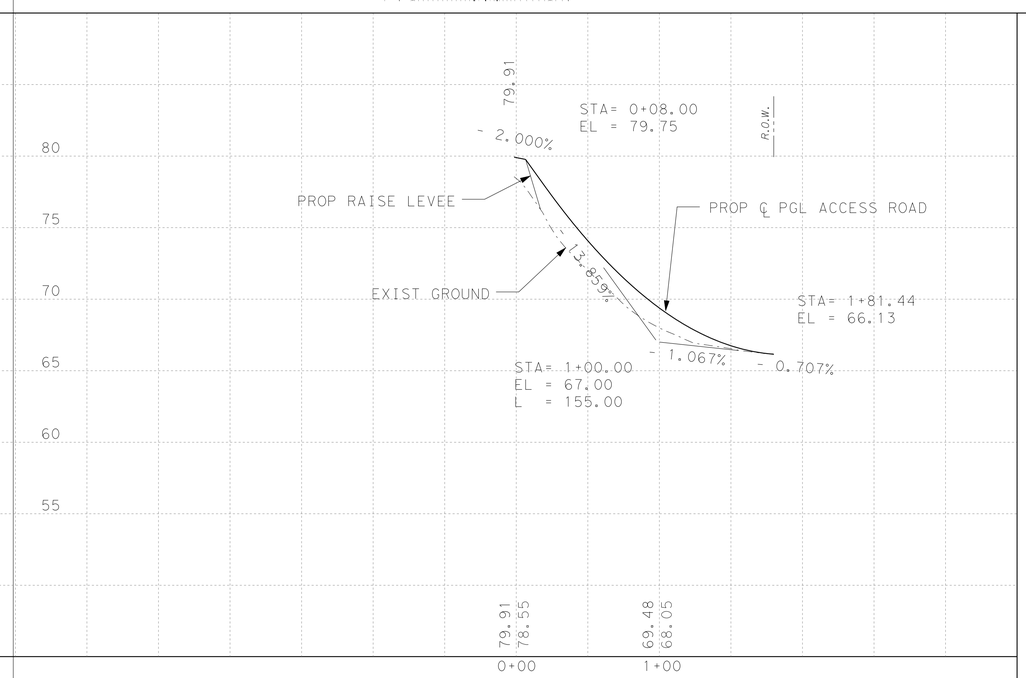
DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY	2431	
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	82	
			VEHICULAR GATE	EA		





S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

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STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by DARIO V. GUERRA III P.E. 64669, on September 30 2022

ADDENDUM No. 2

PLAN AND PROFILE
ACCESS ROAD
STA 24+90.00 / STA 26+57.00

SHEET 1 OF 4 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
TEXAS	NAME	PROJECT NO.		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				08.30

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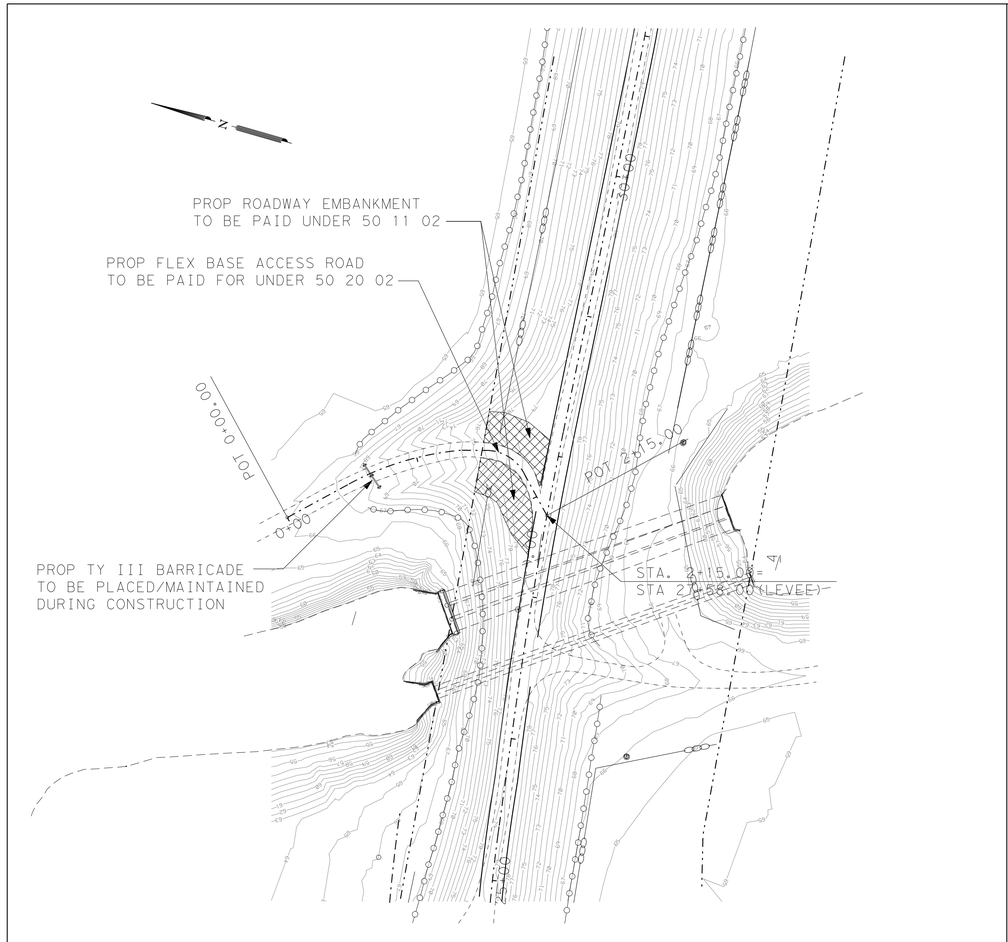

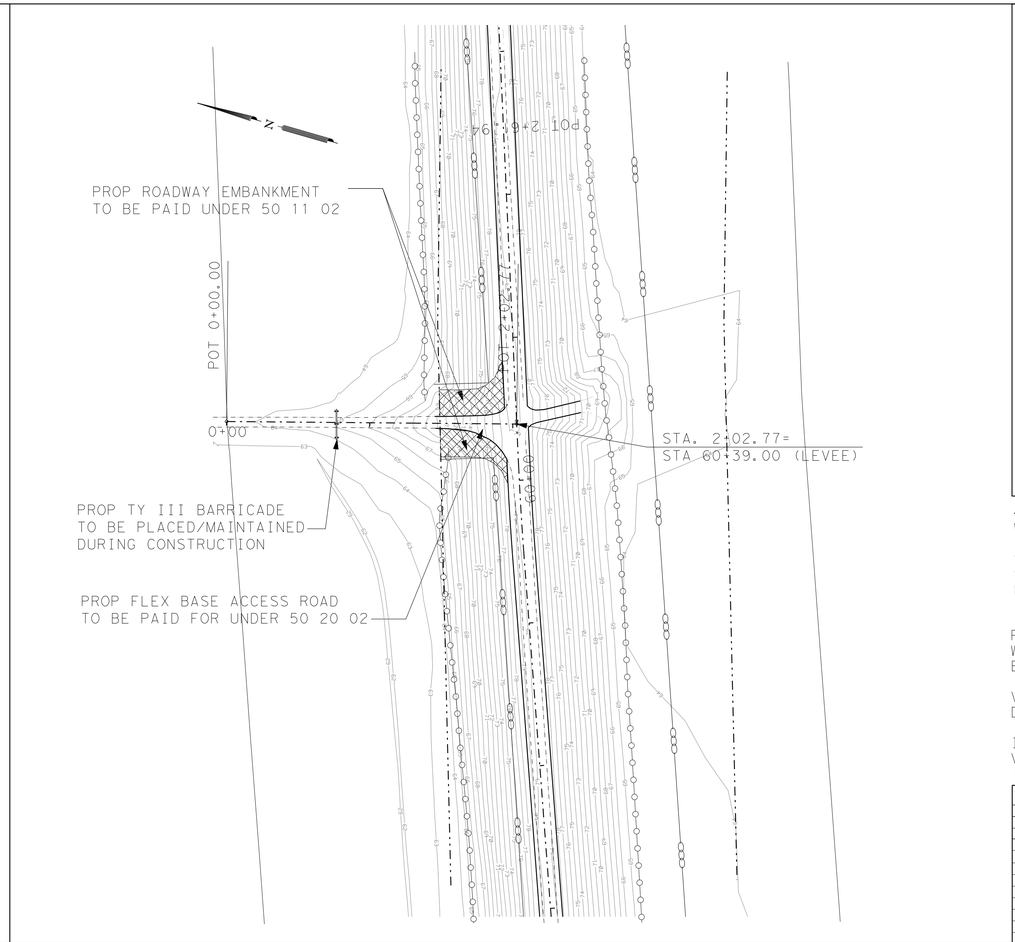

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

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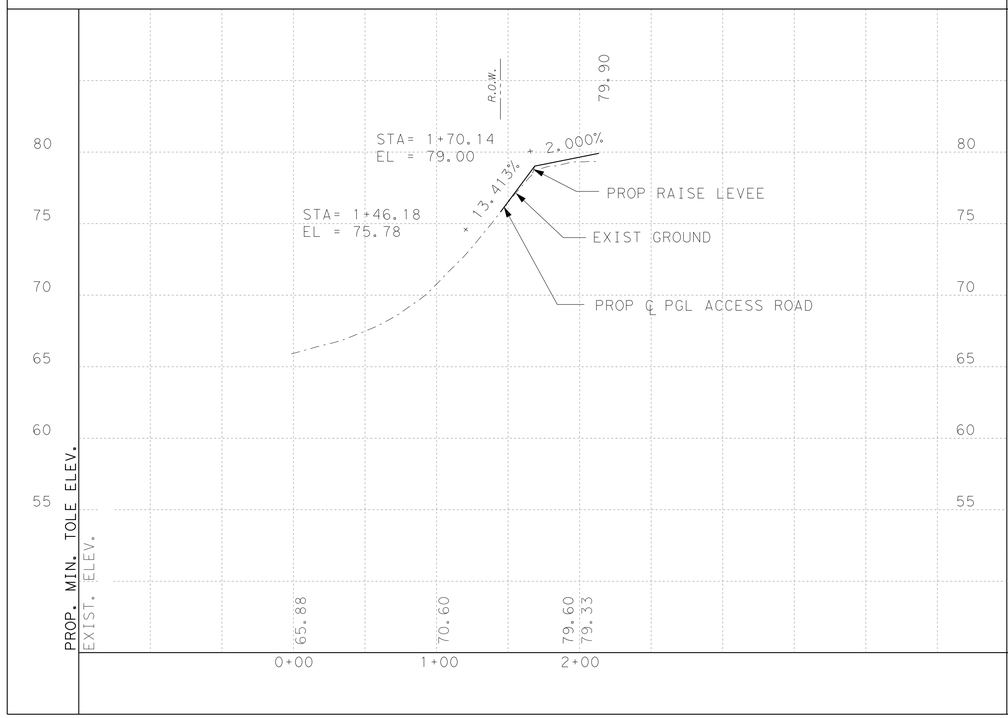
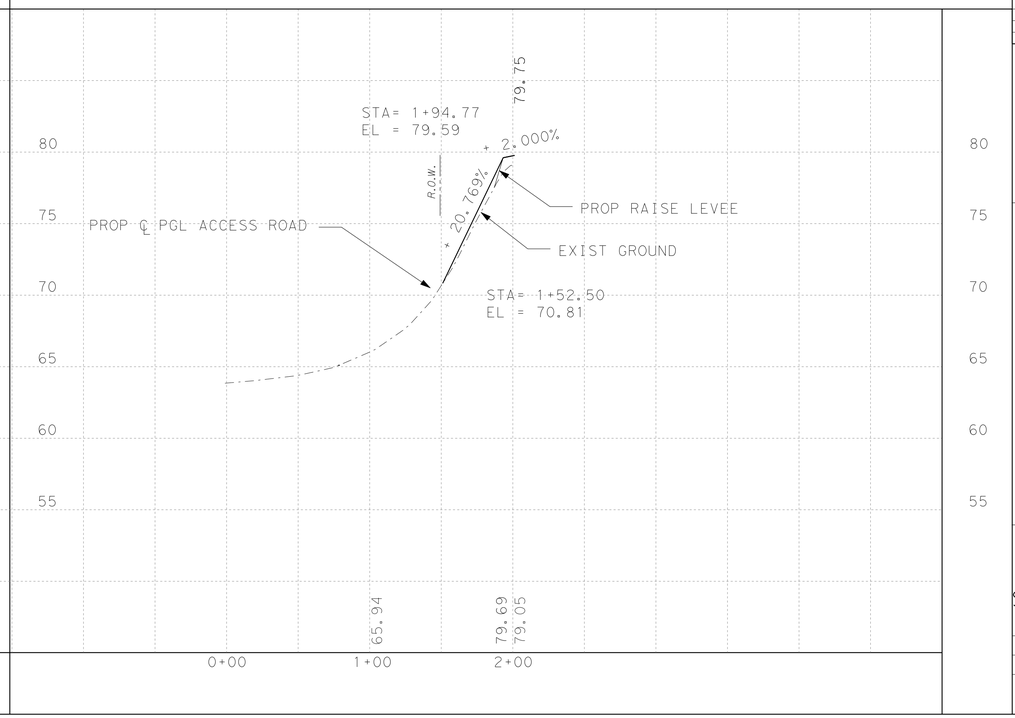
DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY	1501	
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	39	
			VEHICULAR GATE	EA		





S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
64669
REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by DARIO V. GUERRA III P.E. 64669, on September 30 2019

ADDENDUM No. 2

PLAN AND PROFILE

ACCESS ROAD
STA 27+58.00 / STA 60+39.00

SHEET 2 OF 4 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
TEXAS	NAME	PROJECT NO.		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				08.31

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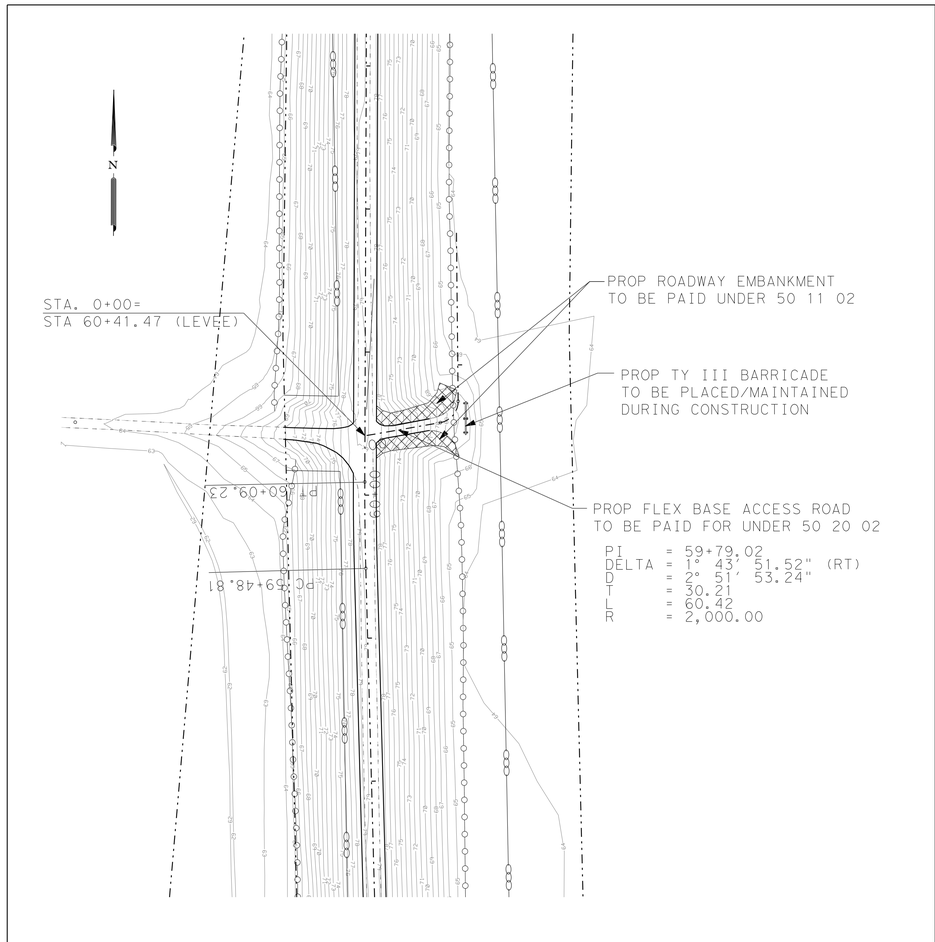

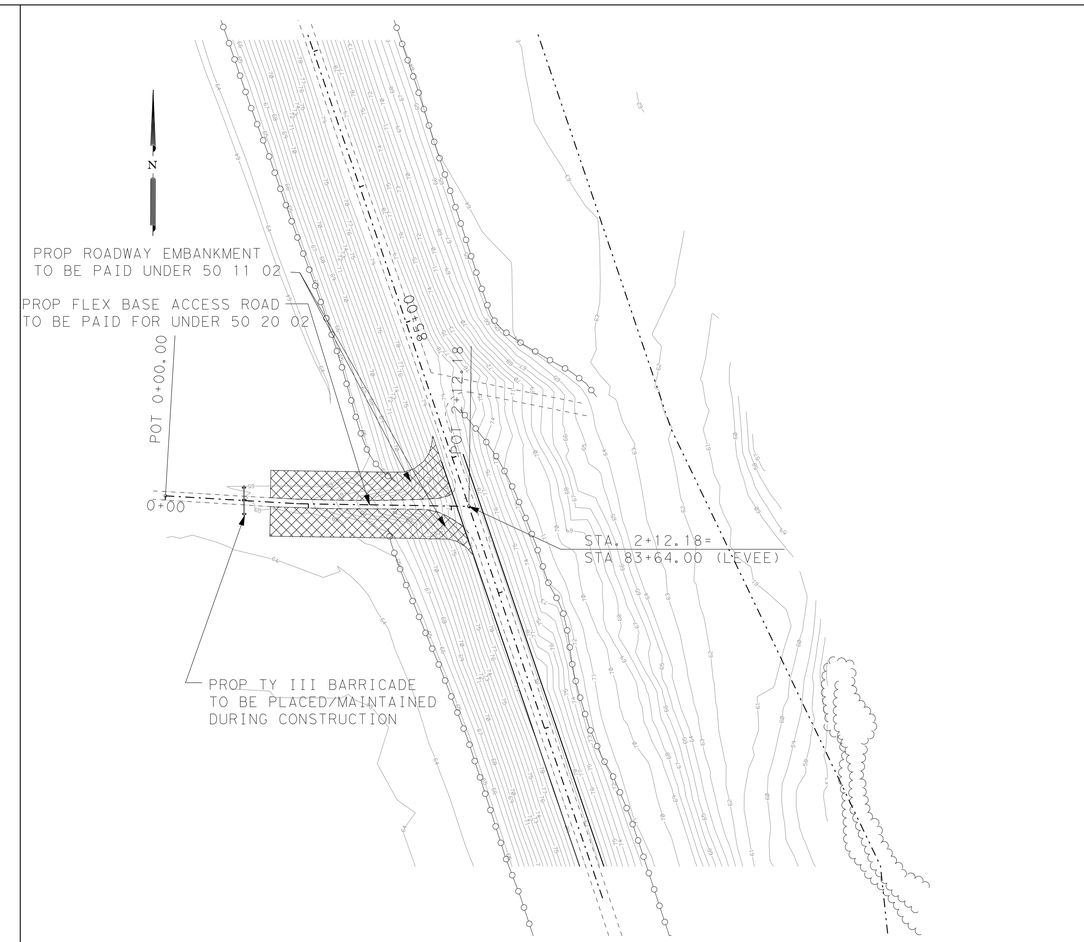

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
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- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
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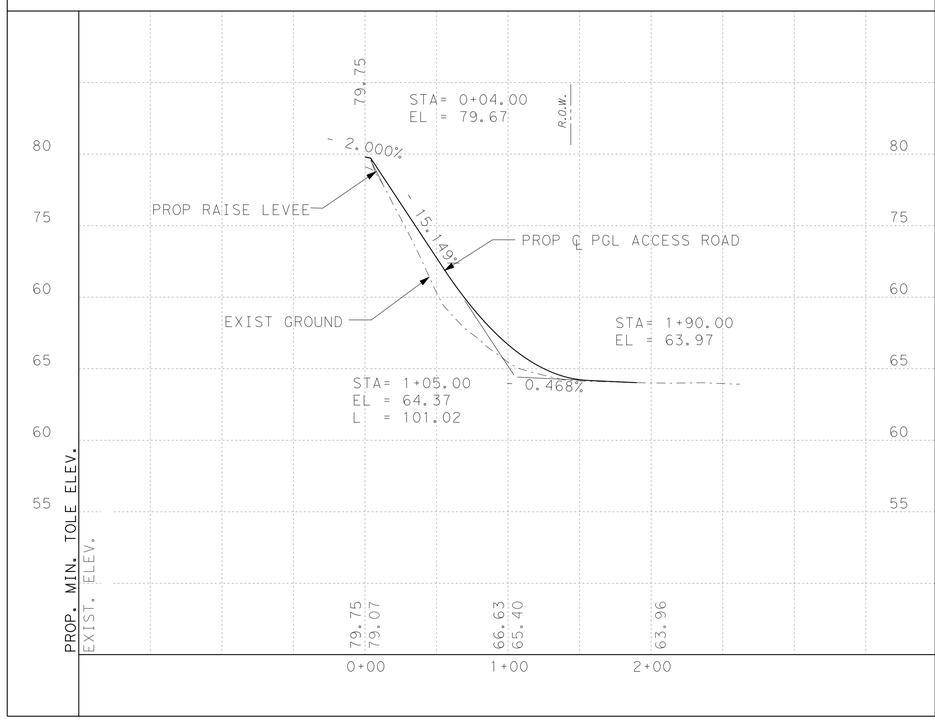
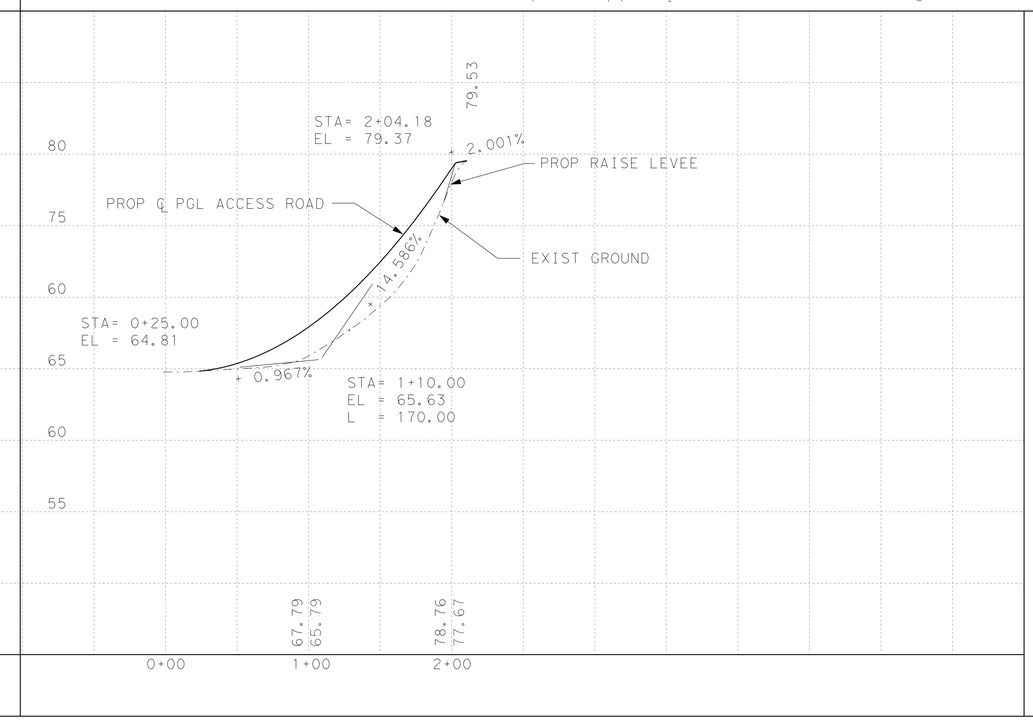
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY	3658	
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	110	
			VEHICULAR GATE	EA		





S&B INFRASTRUCTURE, LTD.
Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
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REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM NO. 2

PLAN AND PROFILE

ACCESS ROAD
STA 60+41.47/STA 83+64.00

SHEET 3 OF 4 SHEET

STATE	COUNTY	DRAWN BY: DAI	CHECKED BY: DG	
TEXAS	NAME	PROJECT NO.		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				08.32

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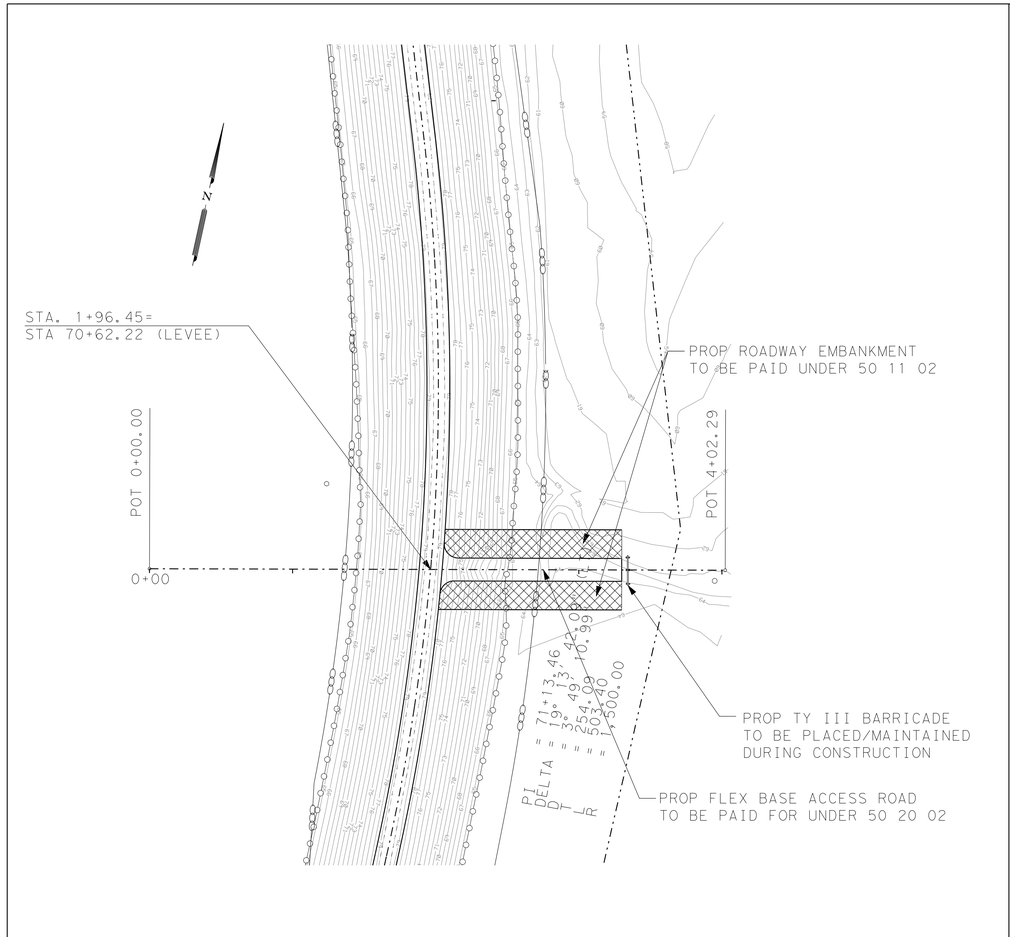
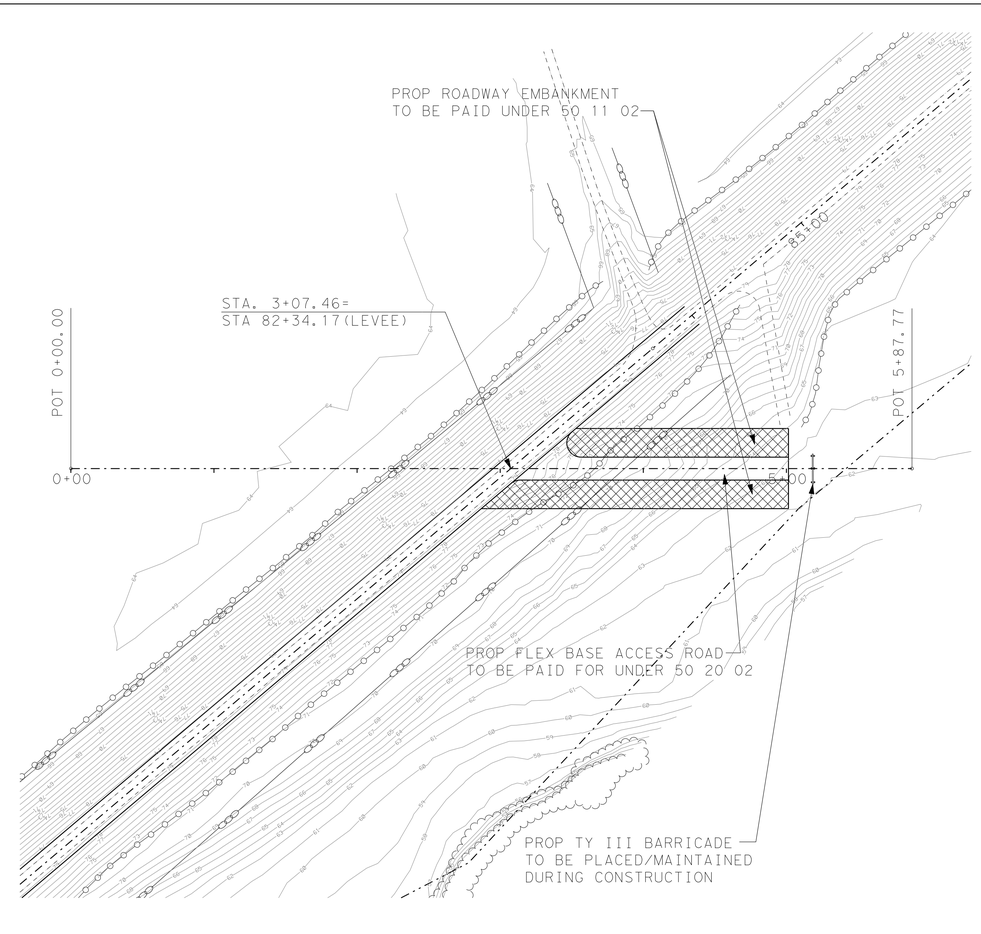




PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

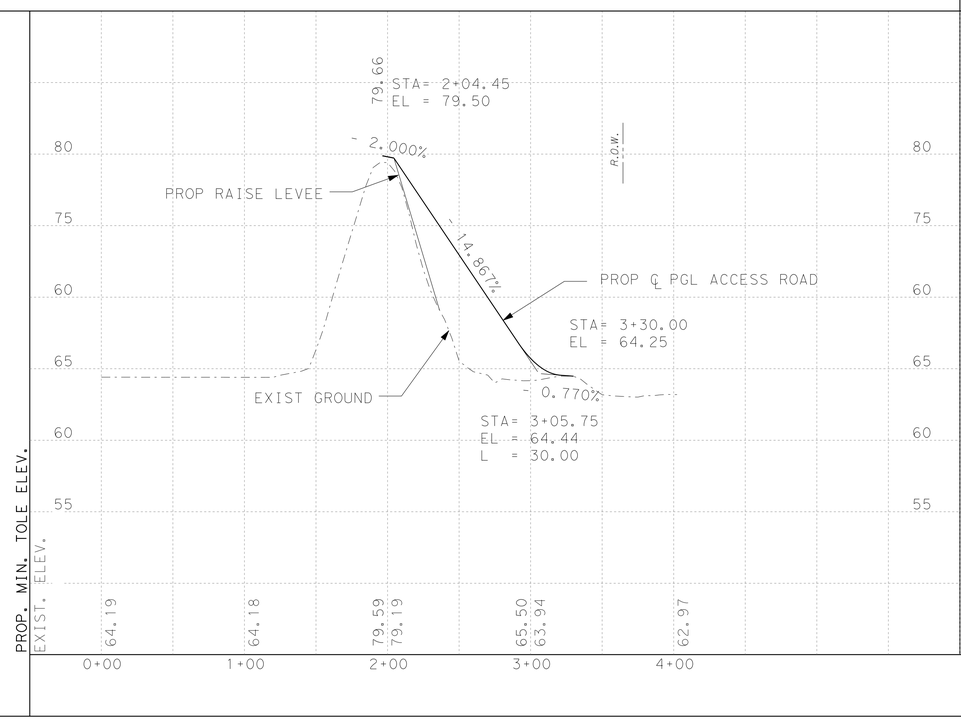
WHEN EXISTING TOP OF LEVEEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

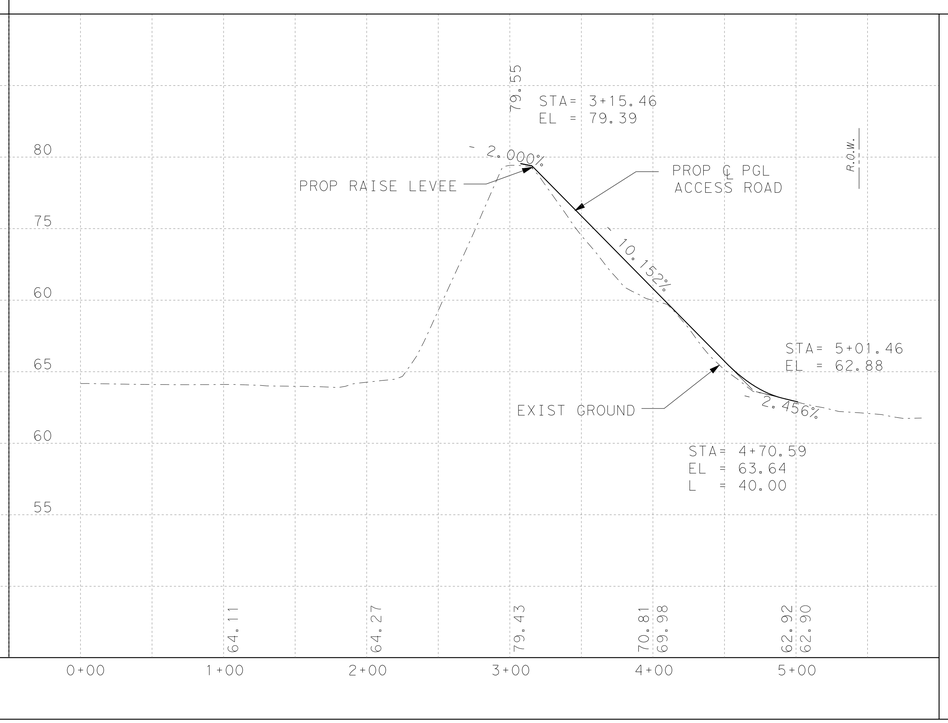
PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY	4178	
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY	94	
			VEHICULAR GATE	EA		





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ADDENDUM No. 2

PLAN AND PROFILE

ACCESS ROAD
STA 70+62.22/STA 82+34.17

SHEET 4 OF 4 SHEET

STATE	COUNTY	DRAWN BY: JS/JJL	CHECKED BY:DG	
TEXAS	NAME	PROJECT NO.		SHEET NO.

REHABILITATION OF ARROYO COLORADO
NORTH LEVEE
(FM 1015 TO WILLACY CANAL)

8.33

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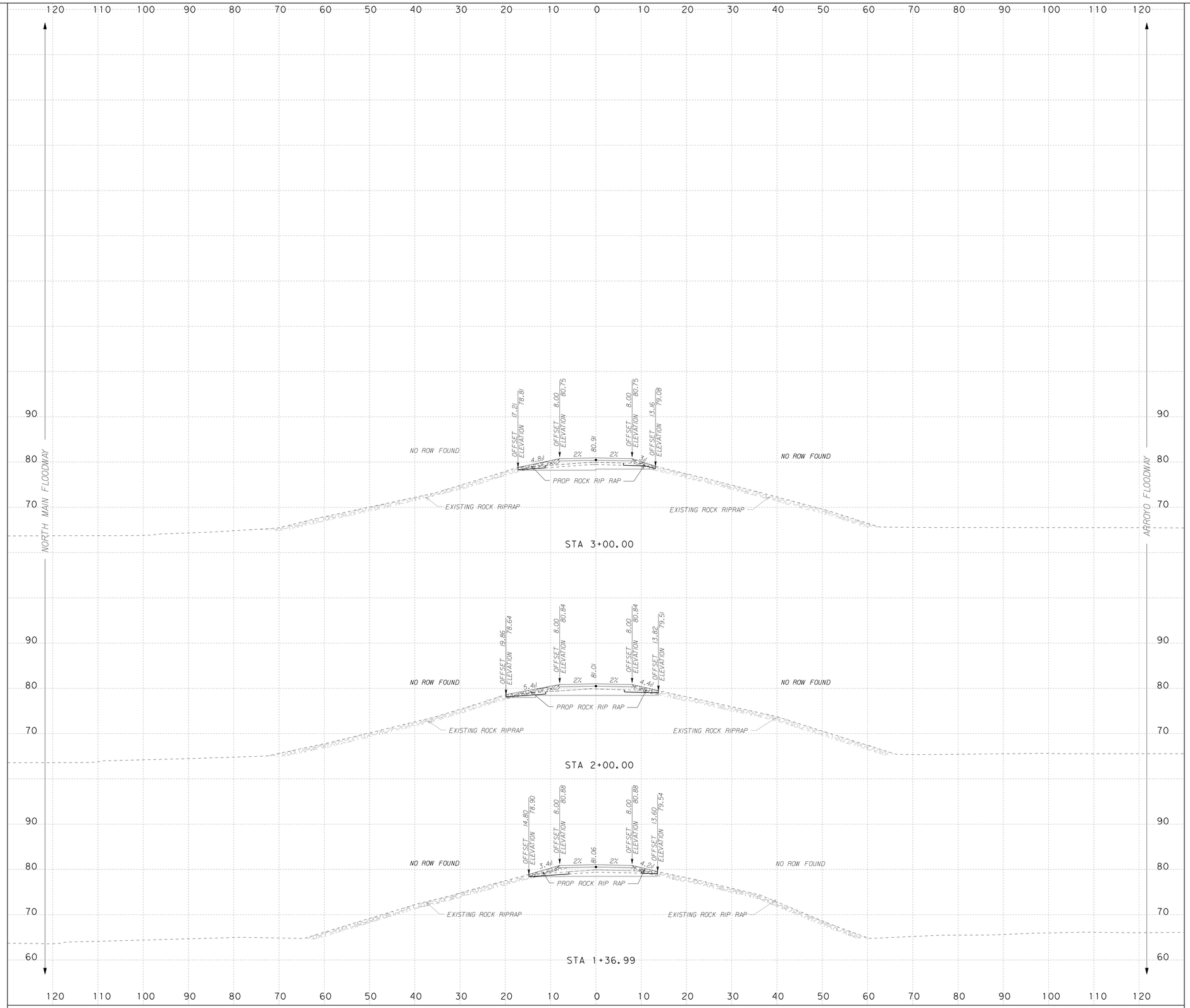

SCALE: H : 1"=10'
V : 1"=10'

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) PROP CROSS SECTIONS

SHEET 1 OF 73 SHEET

STATE	COUNTY	DRAWN BY:	CHECKED BY:	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				10.01

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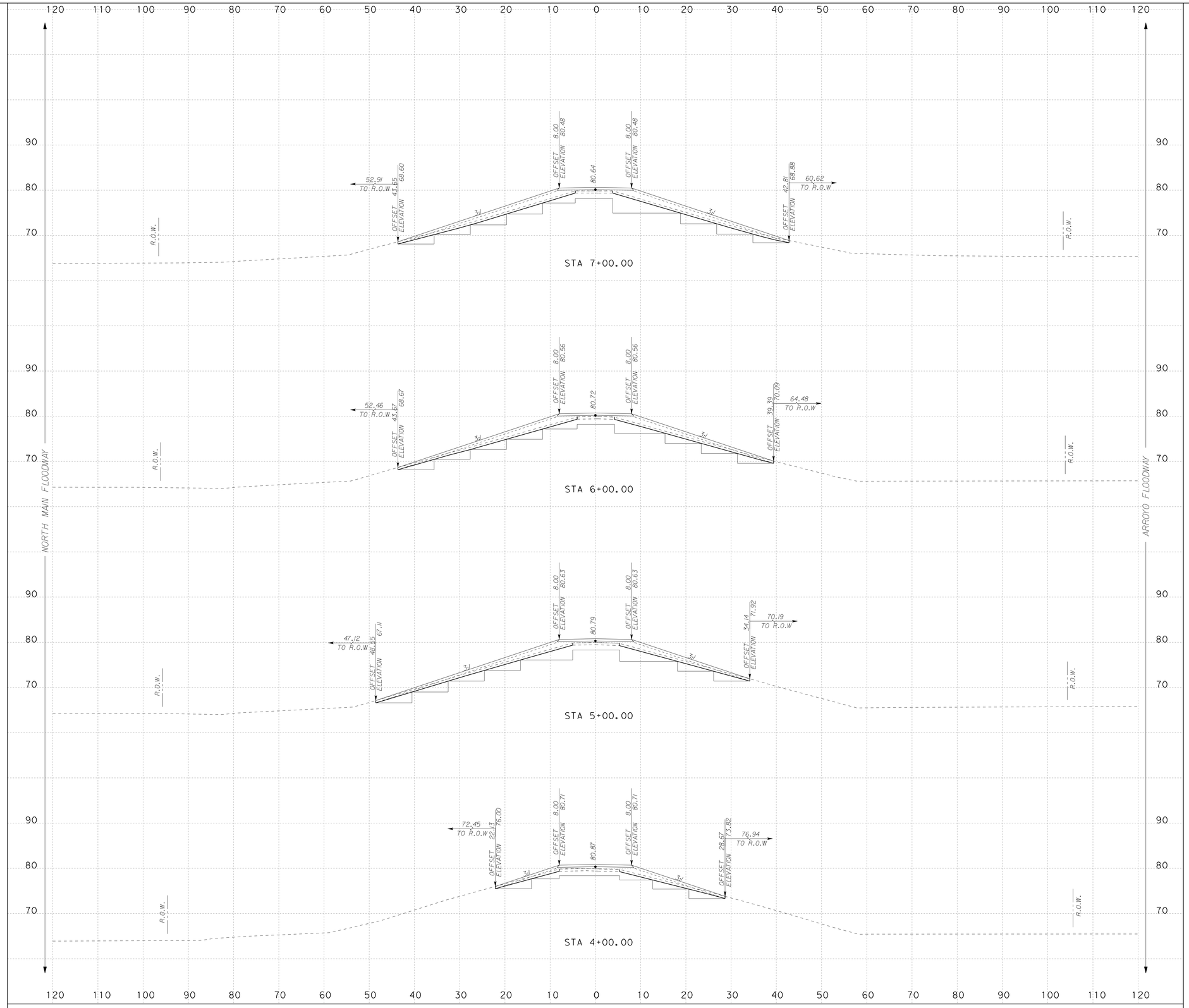

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V : 1"=10'

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 2 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.02

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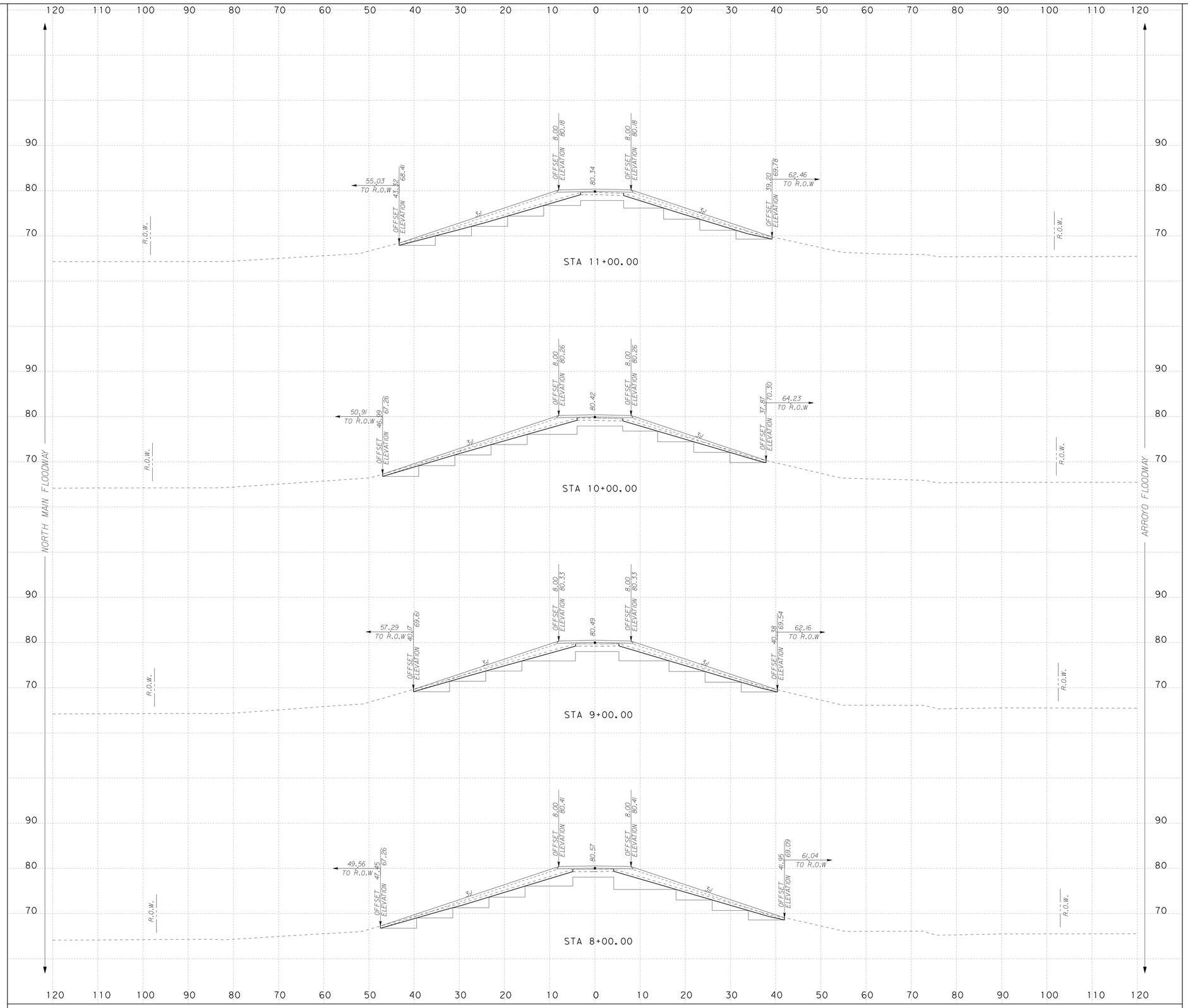

SCALE: H : 1"=10'
V : 1"=10'

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 3 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.03

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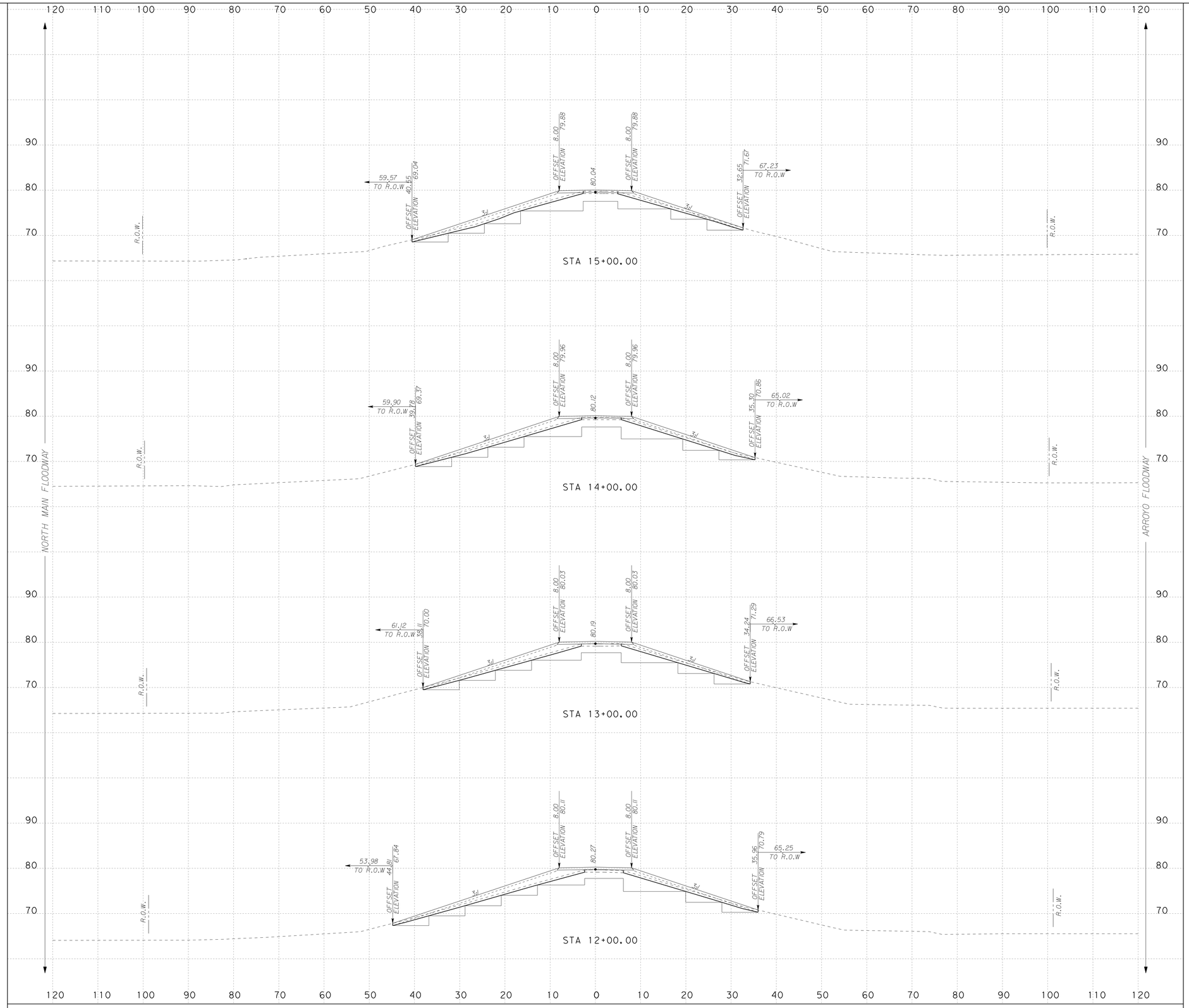

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 4 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.04

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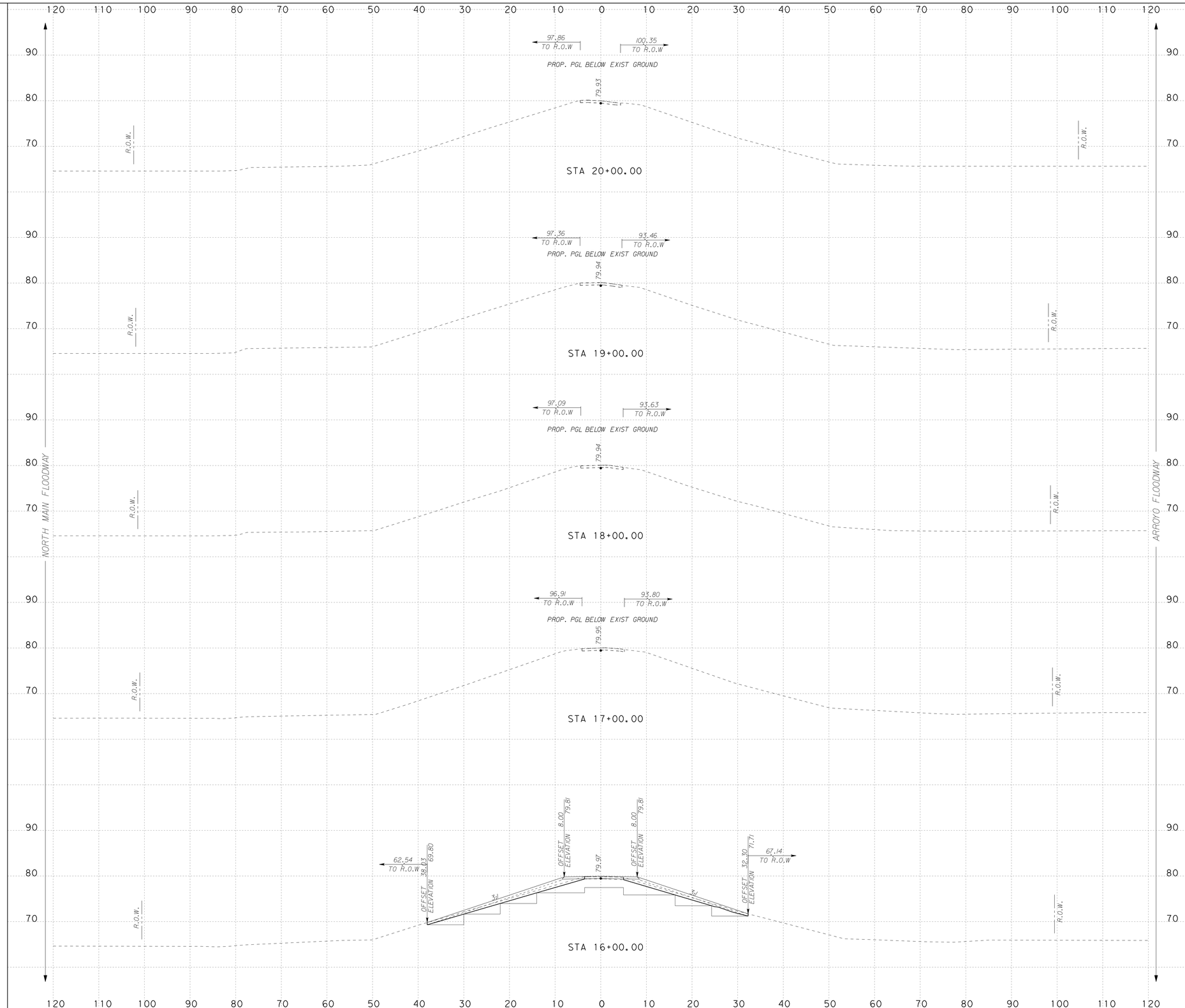

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1)
PROPOSED CROSS SECTIONS

SHEET 5 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.05

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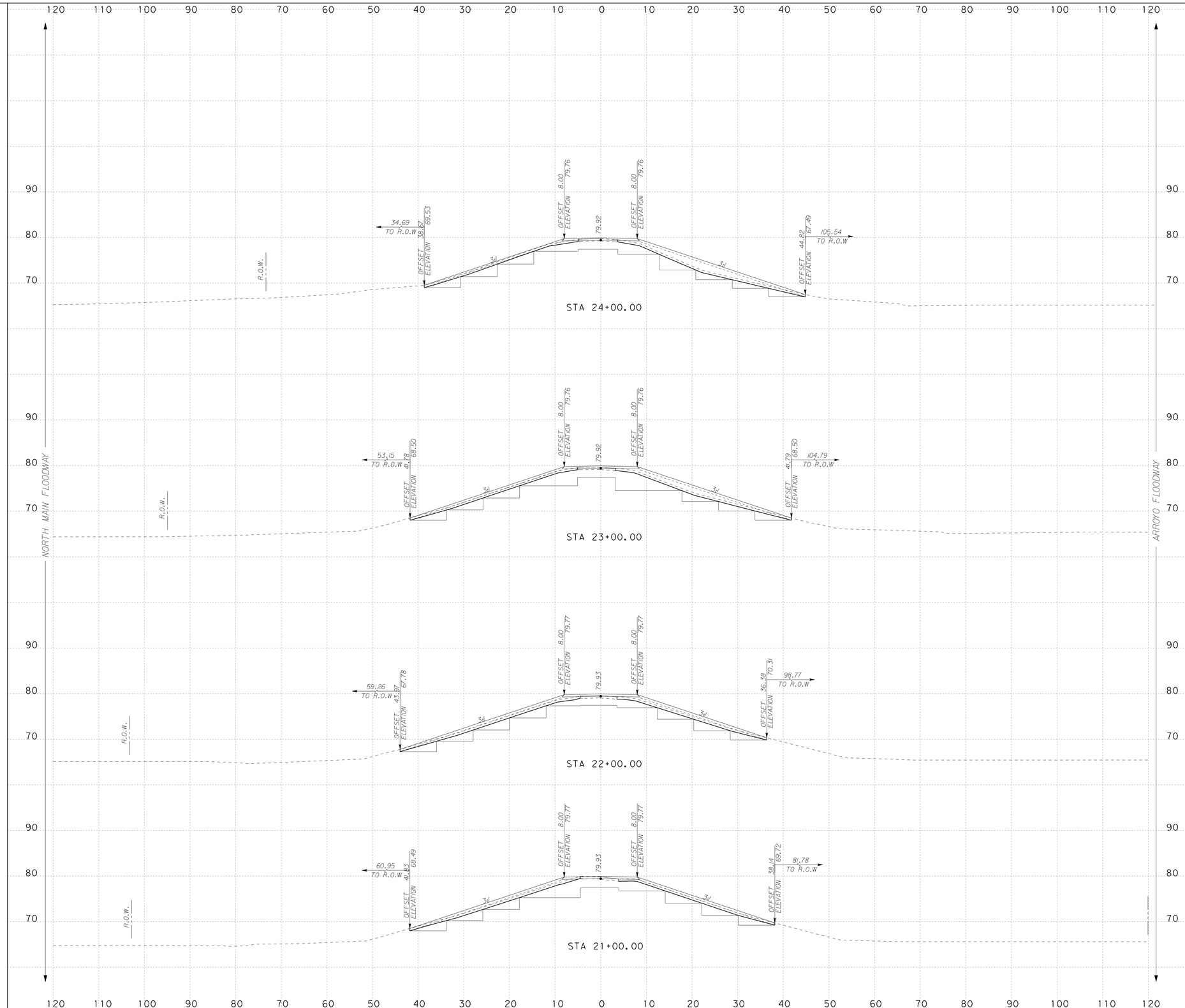

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V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 6 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.06

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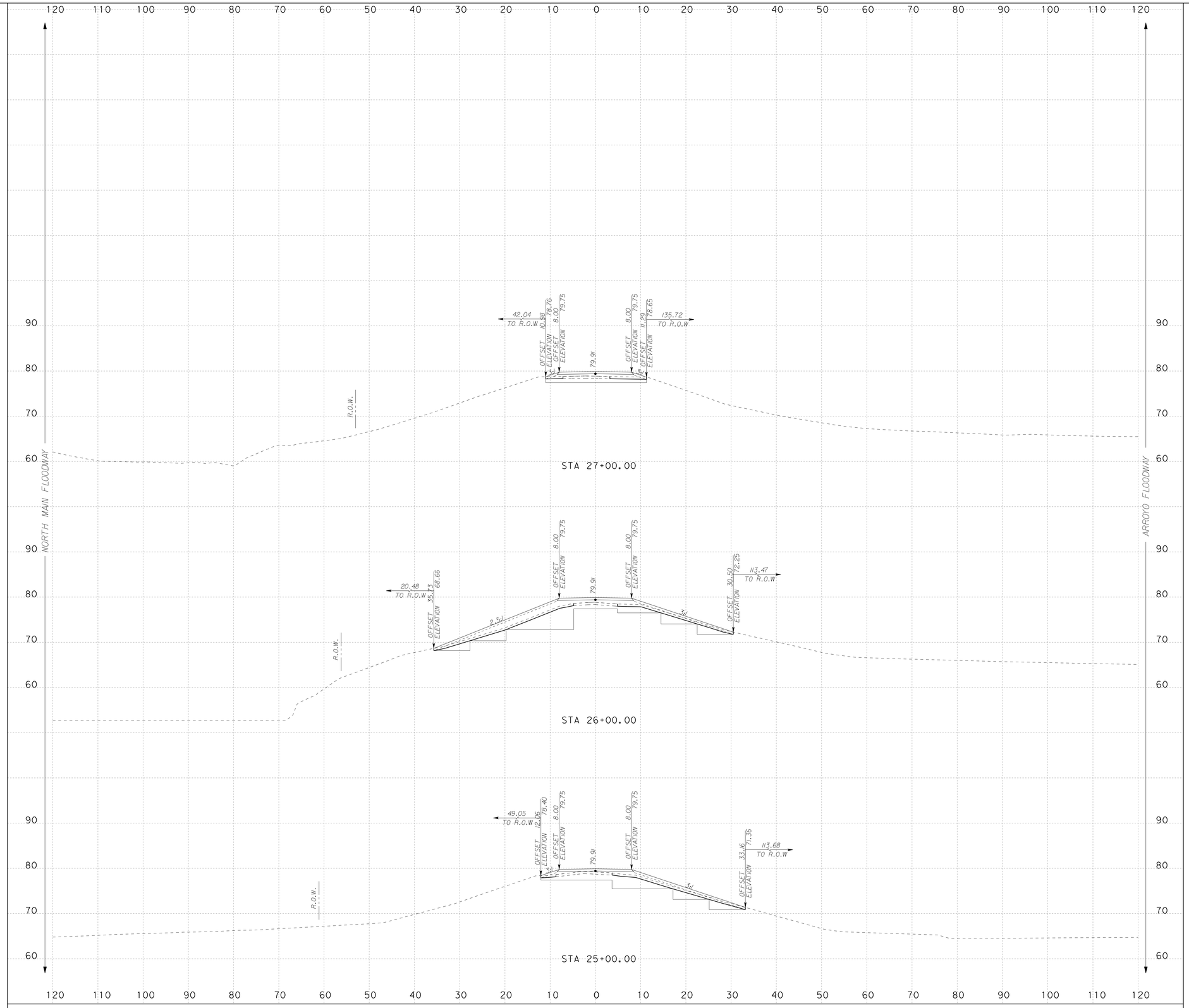

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 7 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.07

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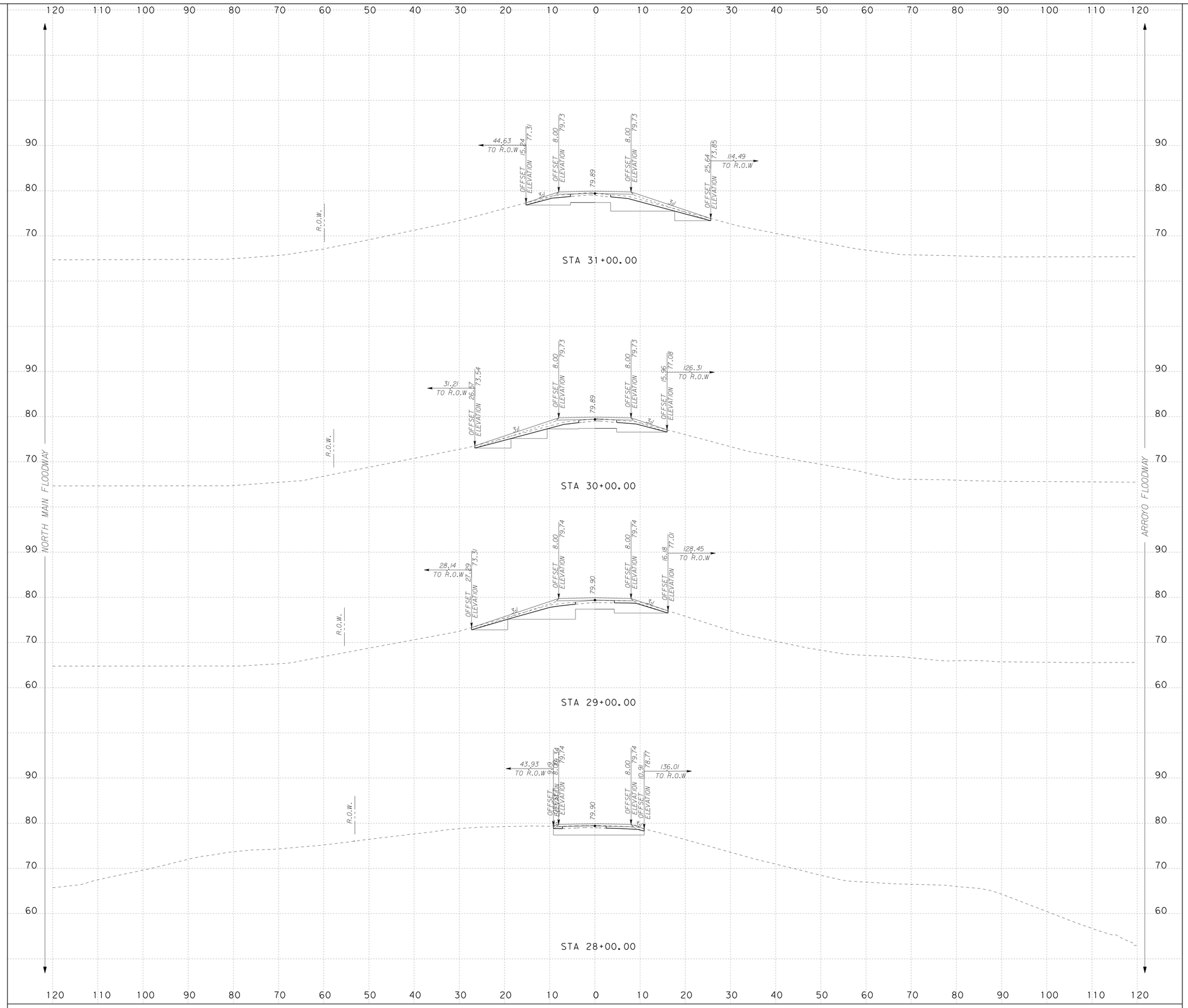

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 8 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.08

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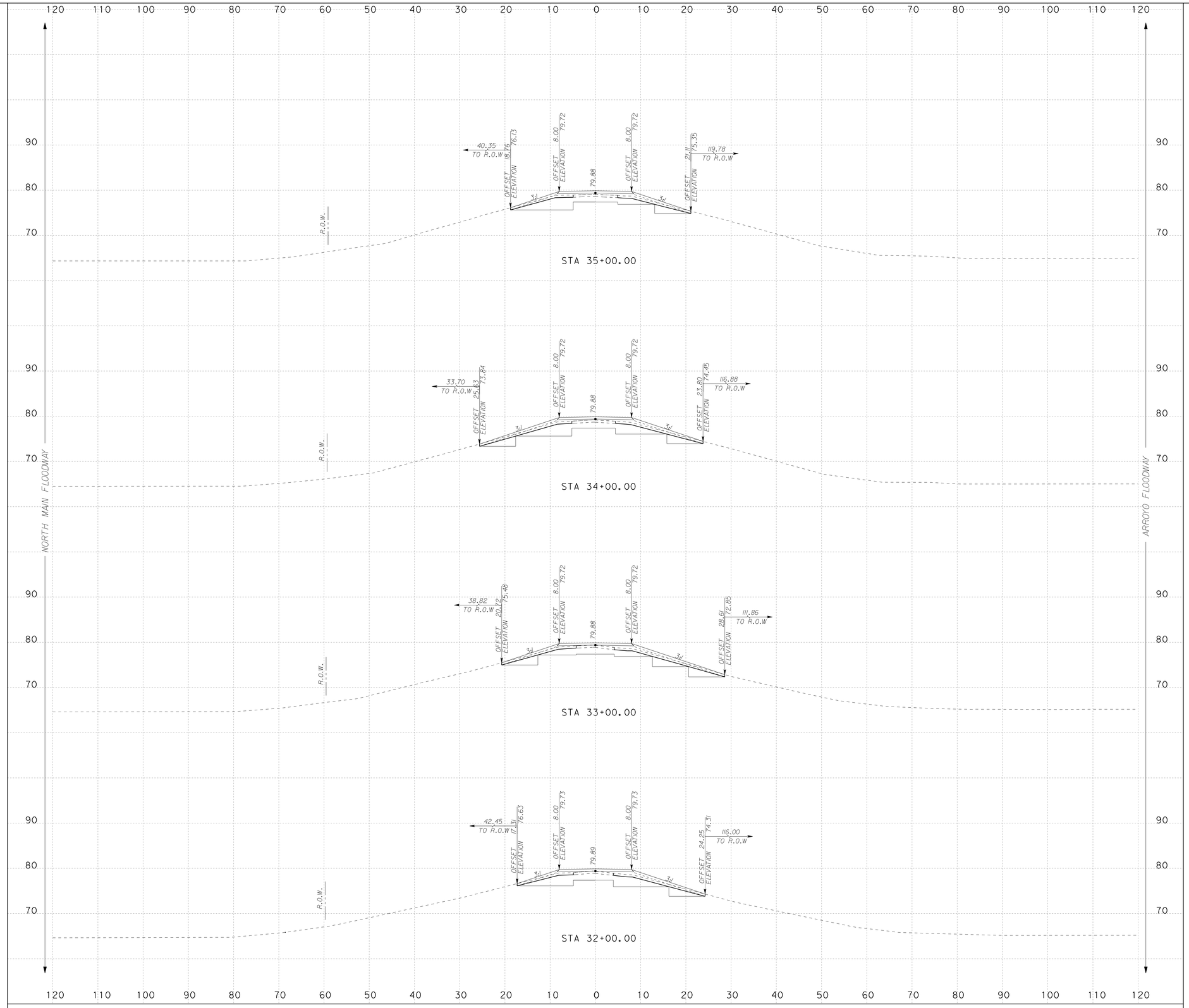

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 9 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.09

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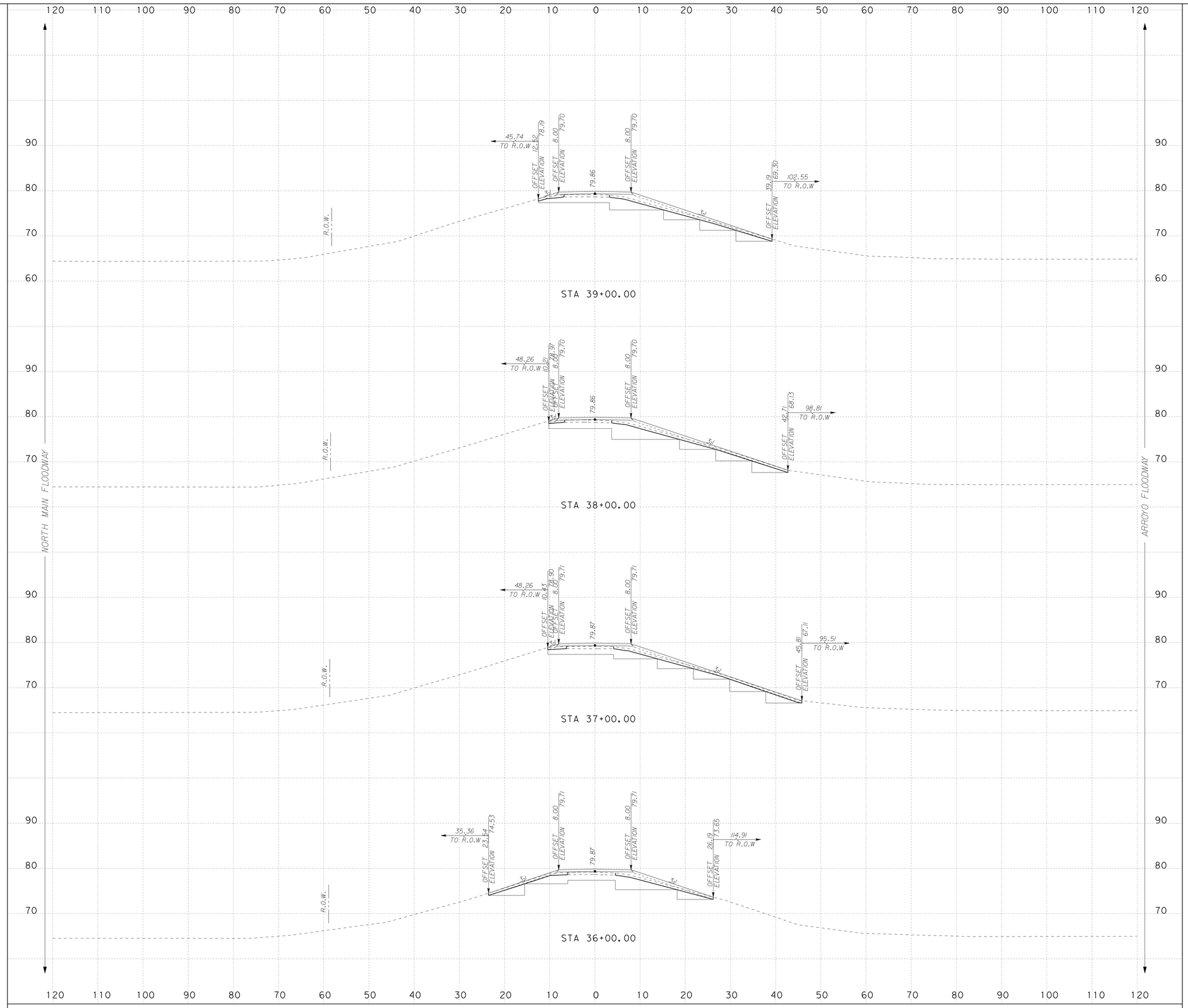

SCALE: H : 1"=10'
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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 10 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.10

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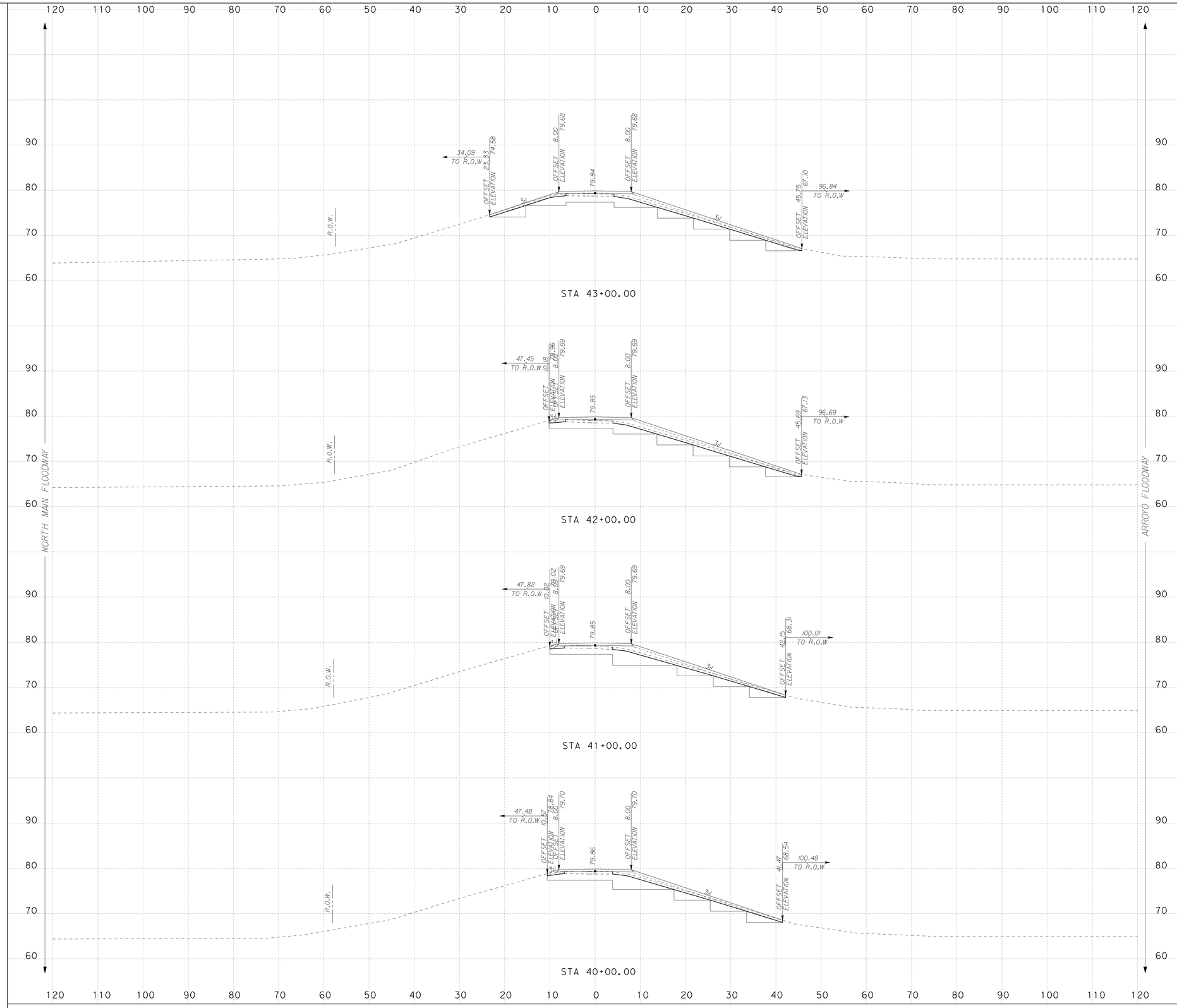

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE
(ACN 1)
PROPOSED CROSS SECTIONS

SHEET 11 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO.	IBM09T0018	SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.11

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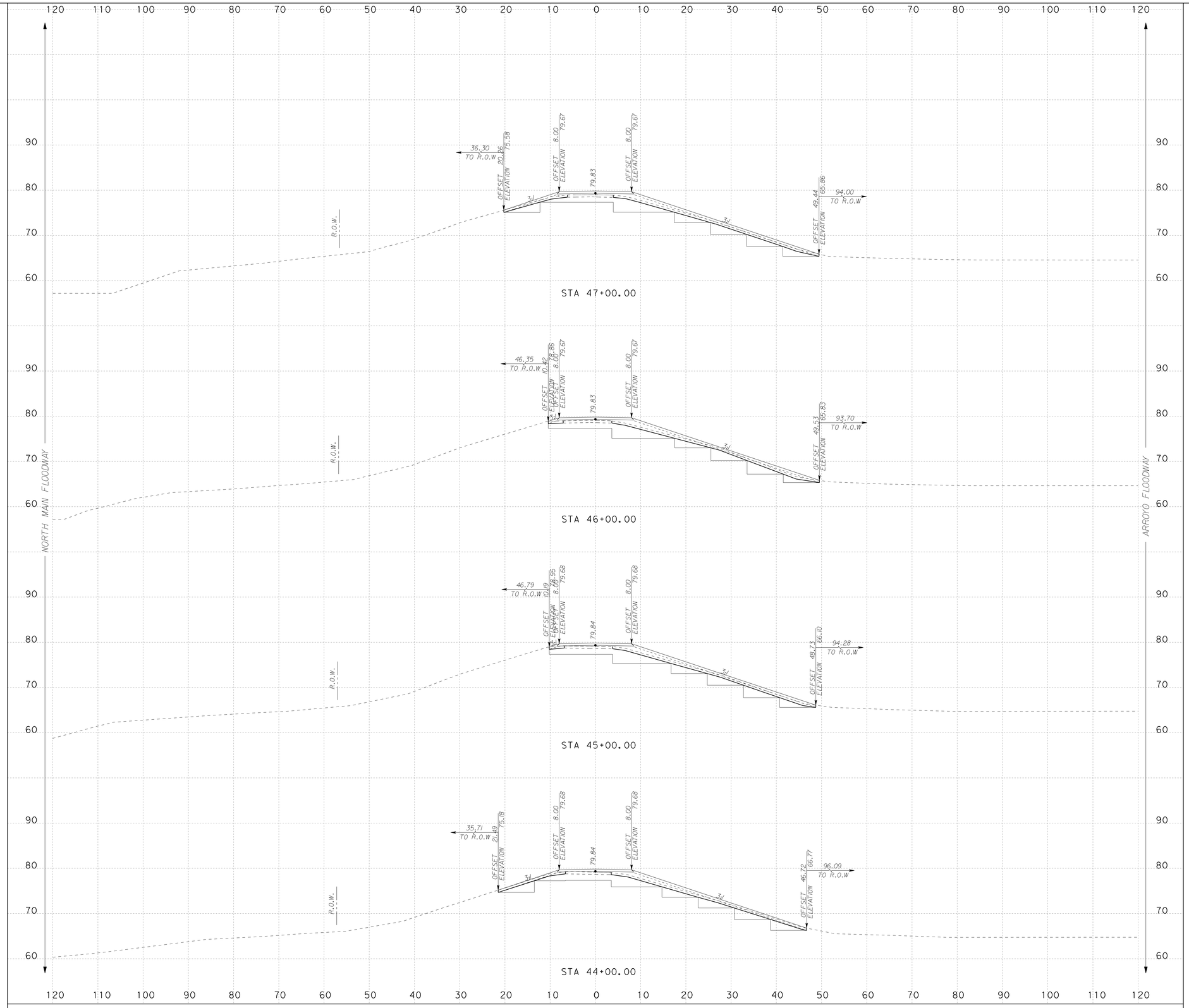

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1)
PROPOSED CROSS SECTIONS

SHEET 12 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.12

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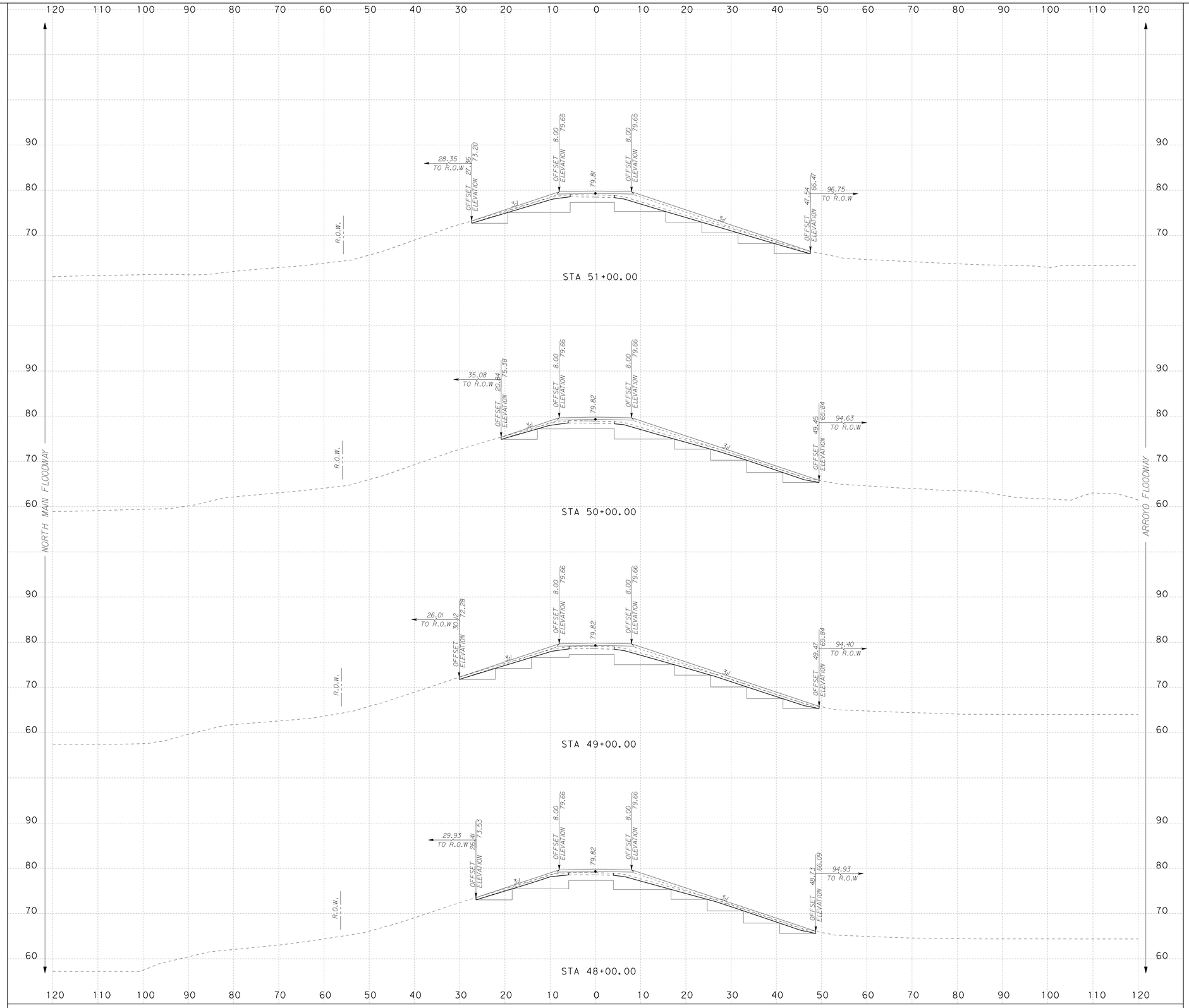

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 13 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.13

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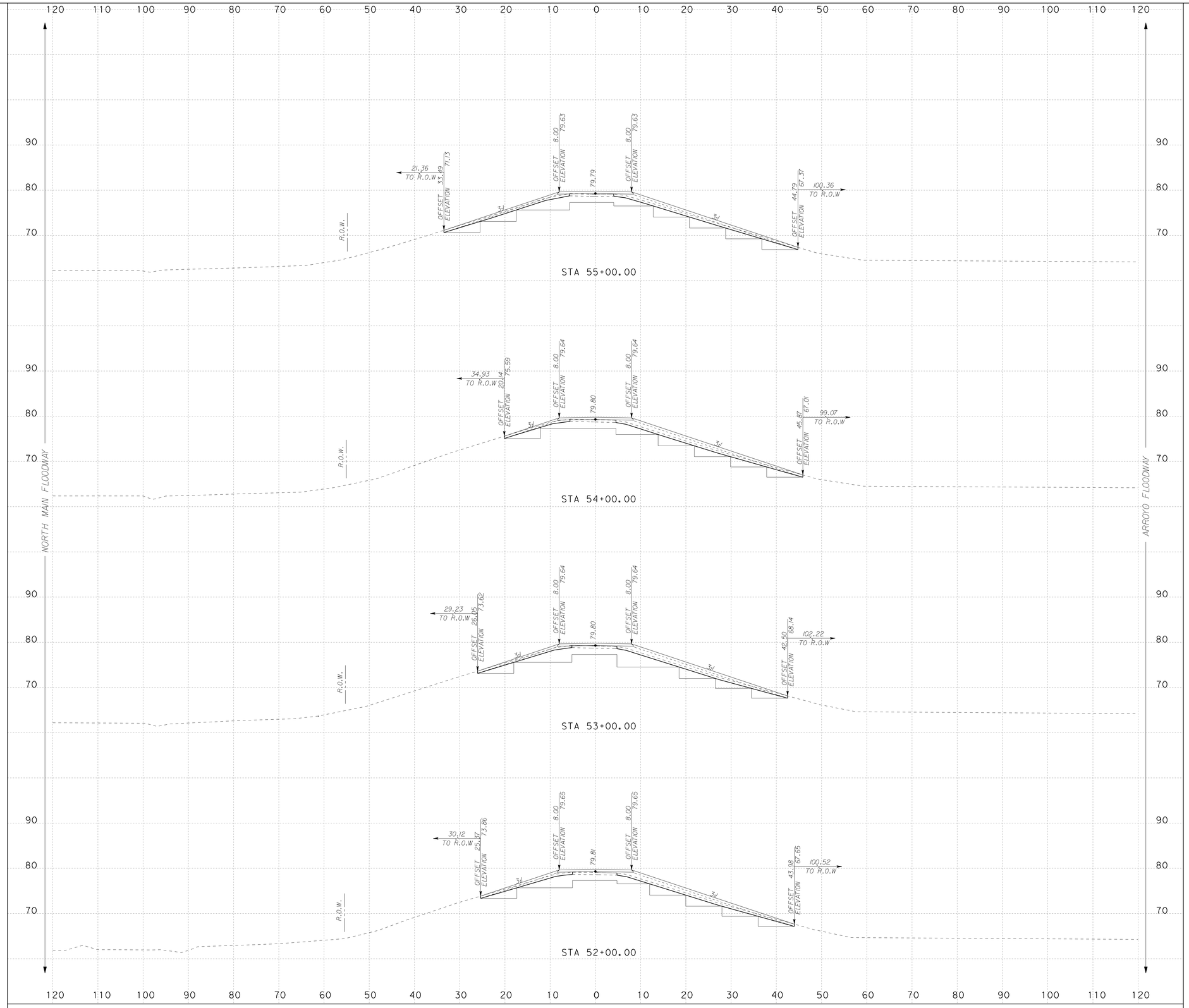

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 14 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.14

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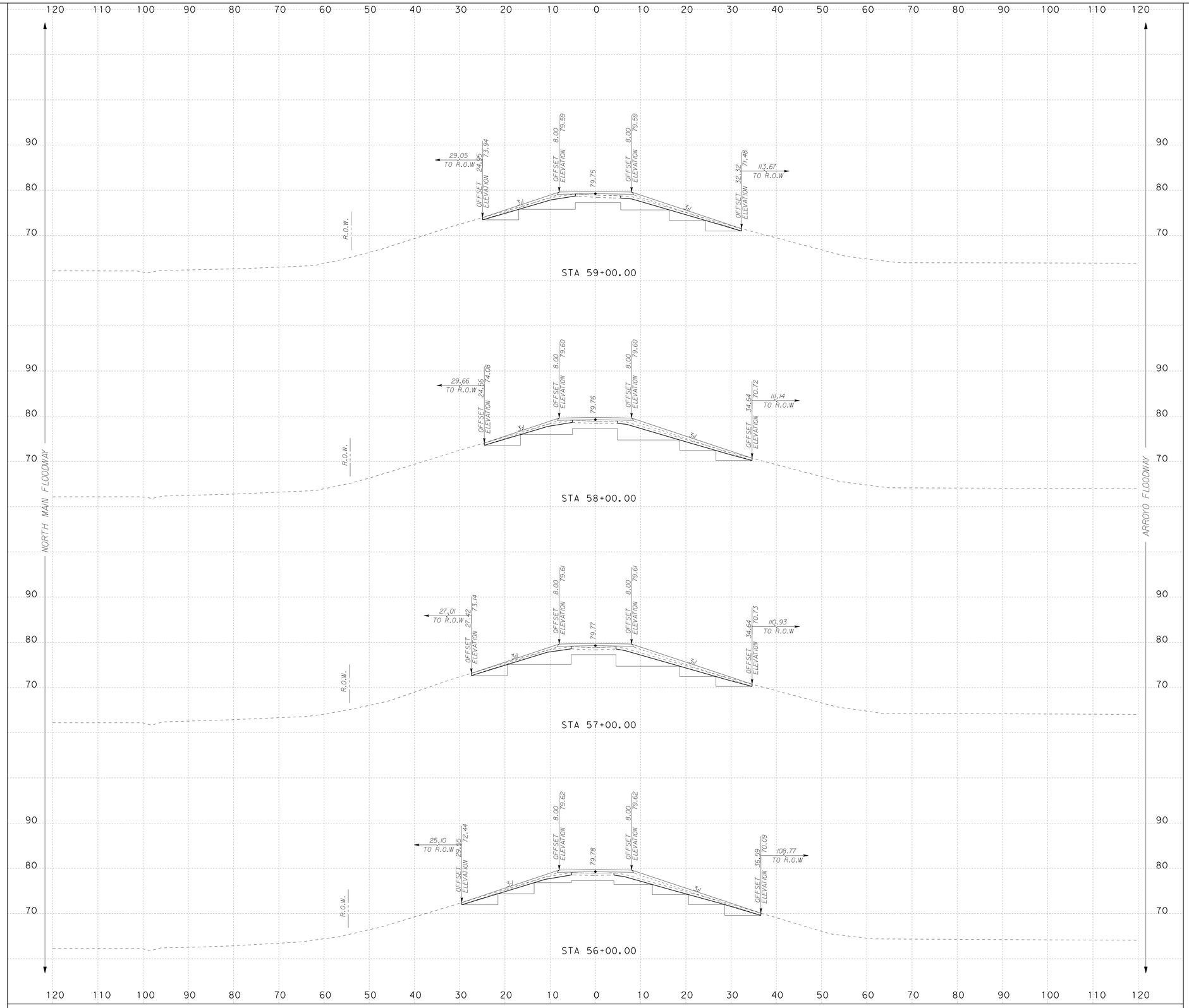

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 15 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.15

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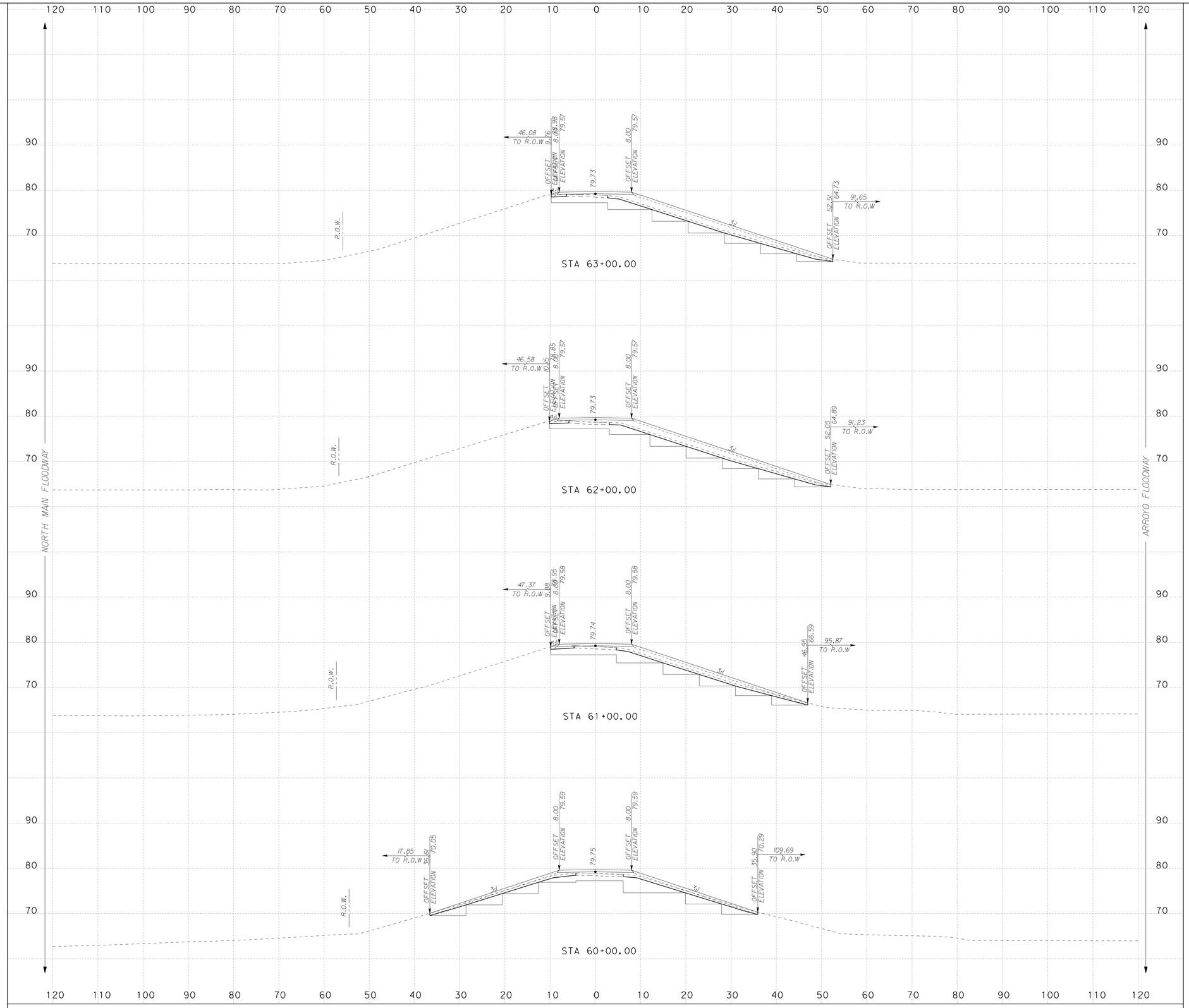

SCALE: H : 1"=10'
V : 1"=10'

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ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 16 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.16

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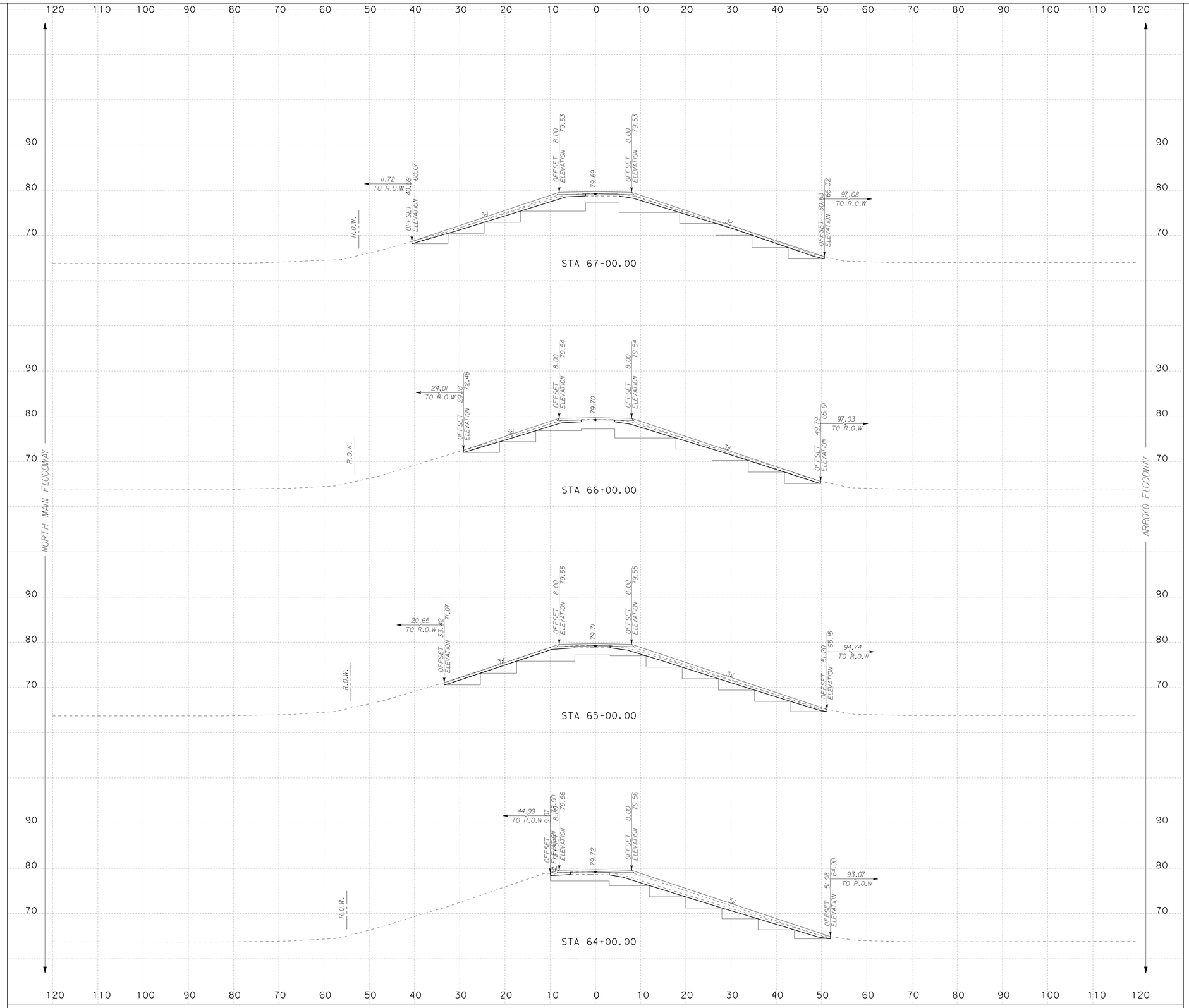

SCALE: H : 1"=10'
V : 1"=10'

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 17 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.17

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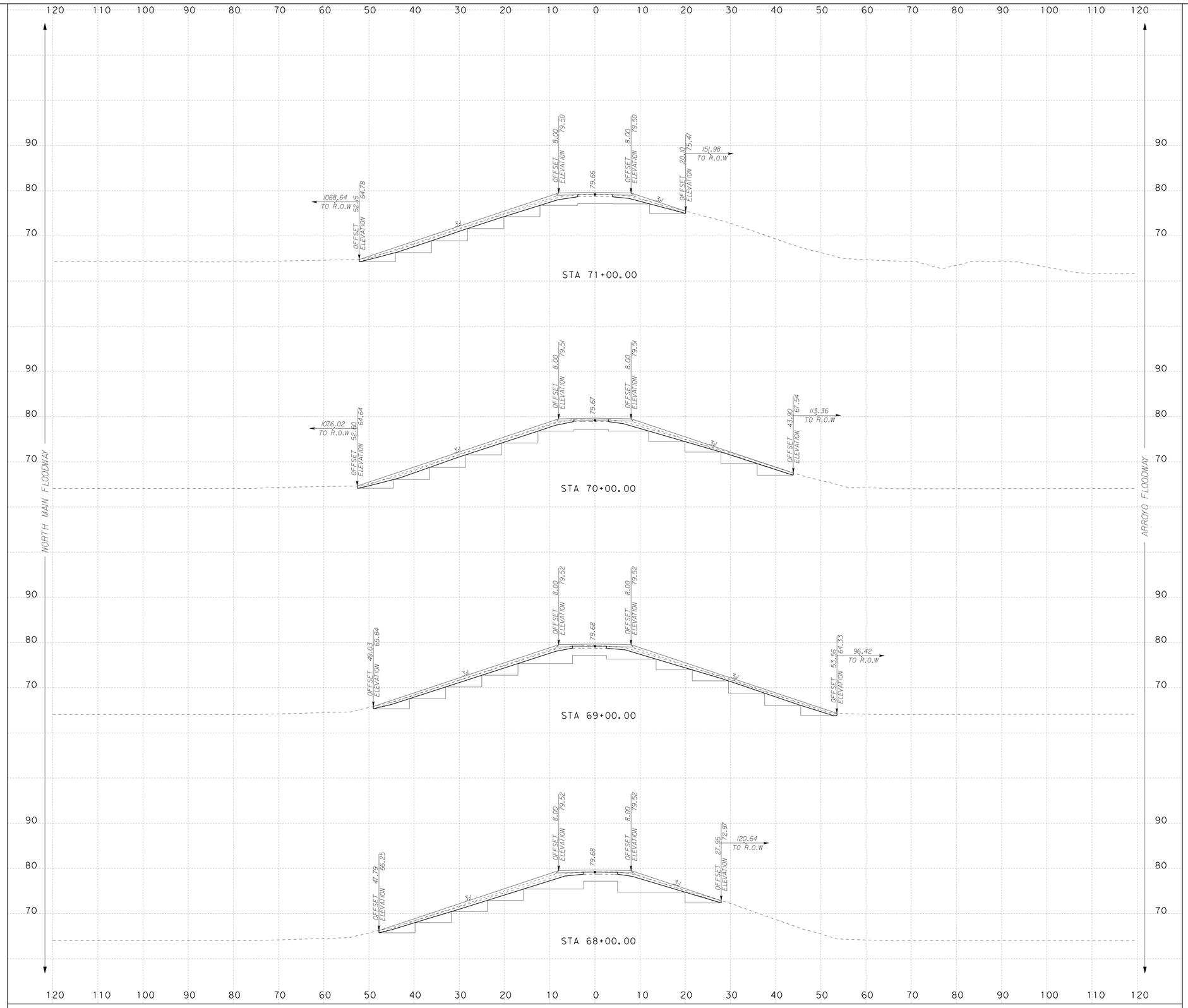

SCALE: H : 1"=10'
V : 1"=10'

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Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
DARIO V. GUERRA III
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 18 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.18

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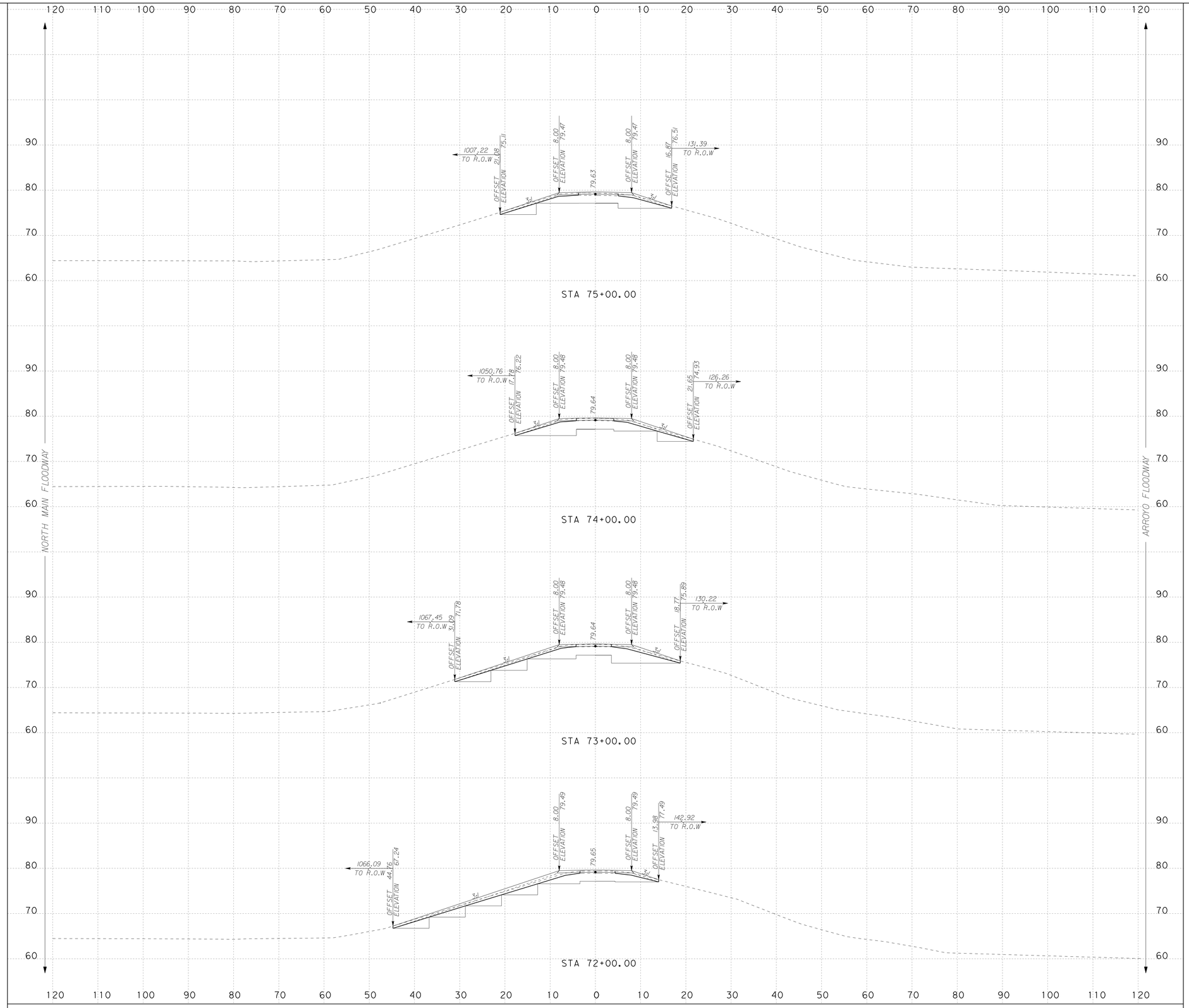

SCALE: H : 1"=10'
V : 1"=10'

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1)

PROPOSED CROSS SECTIONS

SHEET 19 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.19

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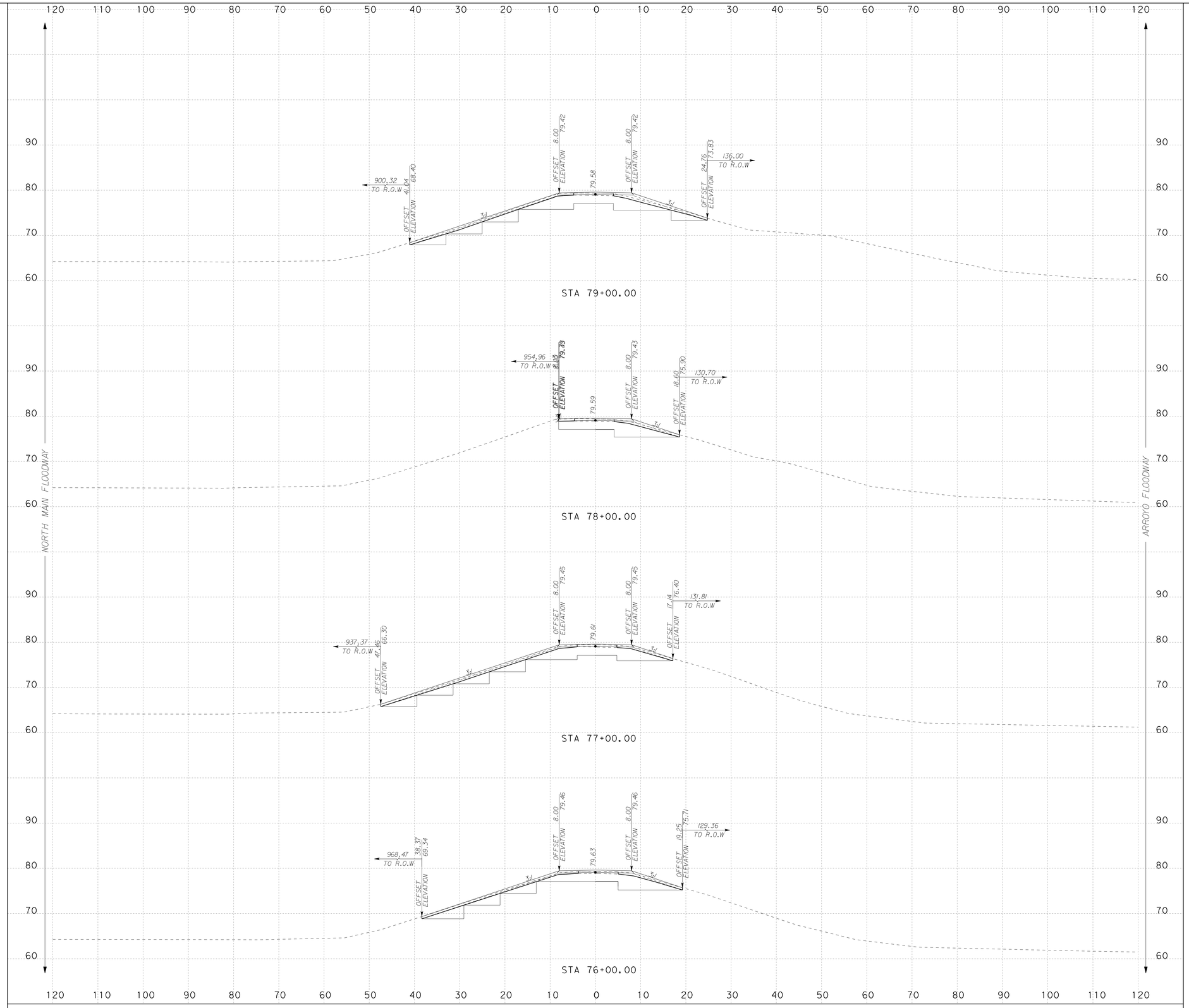

SCALE: H : 1"=10'
V : 1"=10'

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S&B Infrastructure, Ltd. Firm Registration Number: 1582

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1)

PROPOSED CROSS SECTIONS

SHEET 20 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.20

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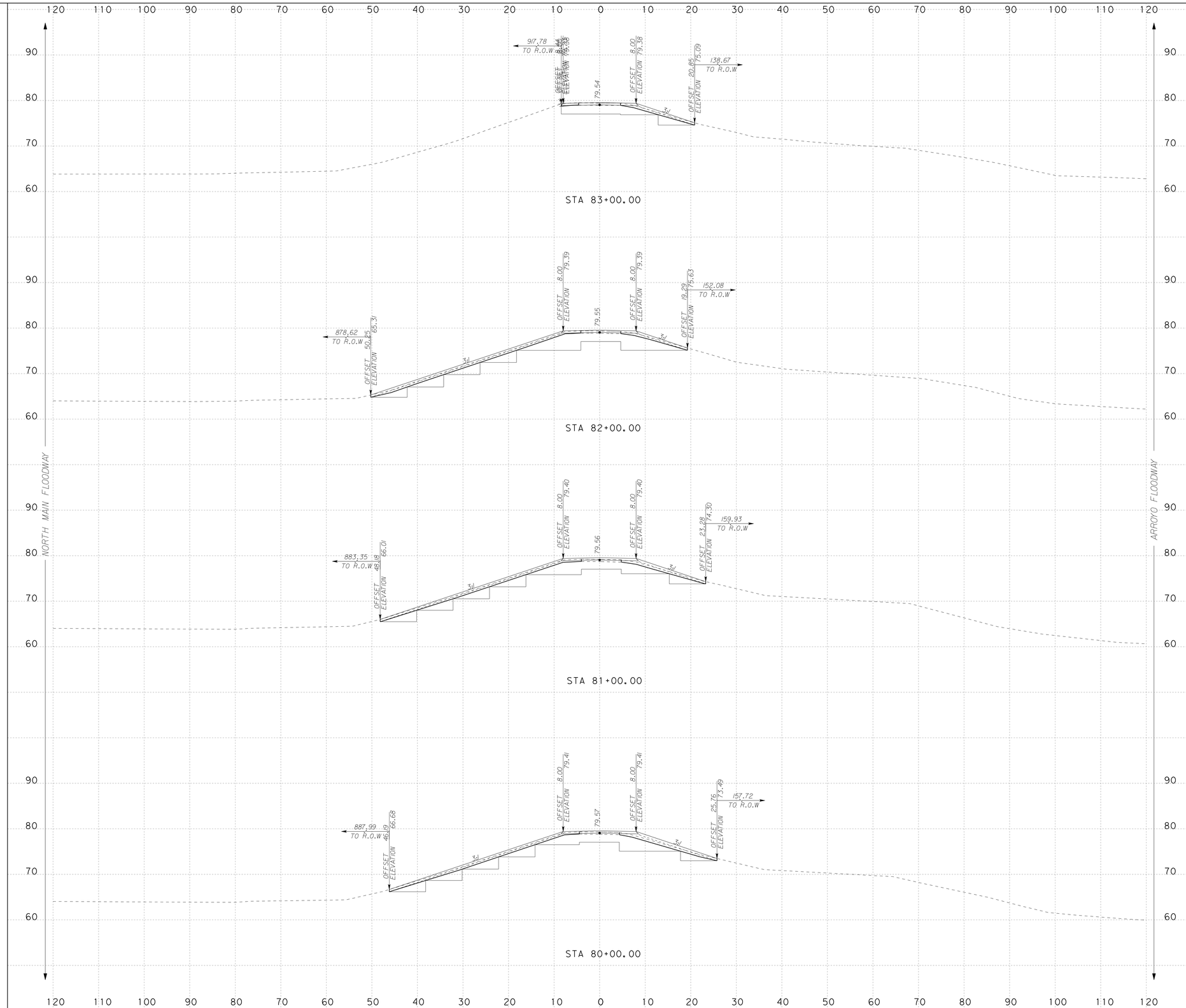

SCALE: H : 1"=10'
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1)
PROPOSED CROSS SECTIONS

SHEET 21 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.21

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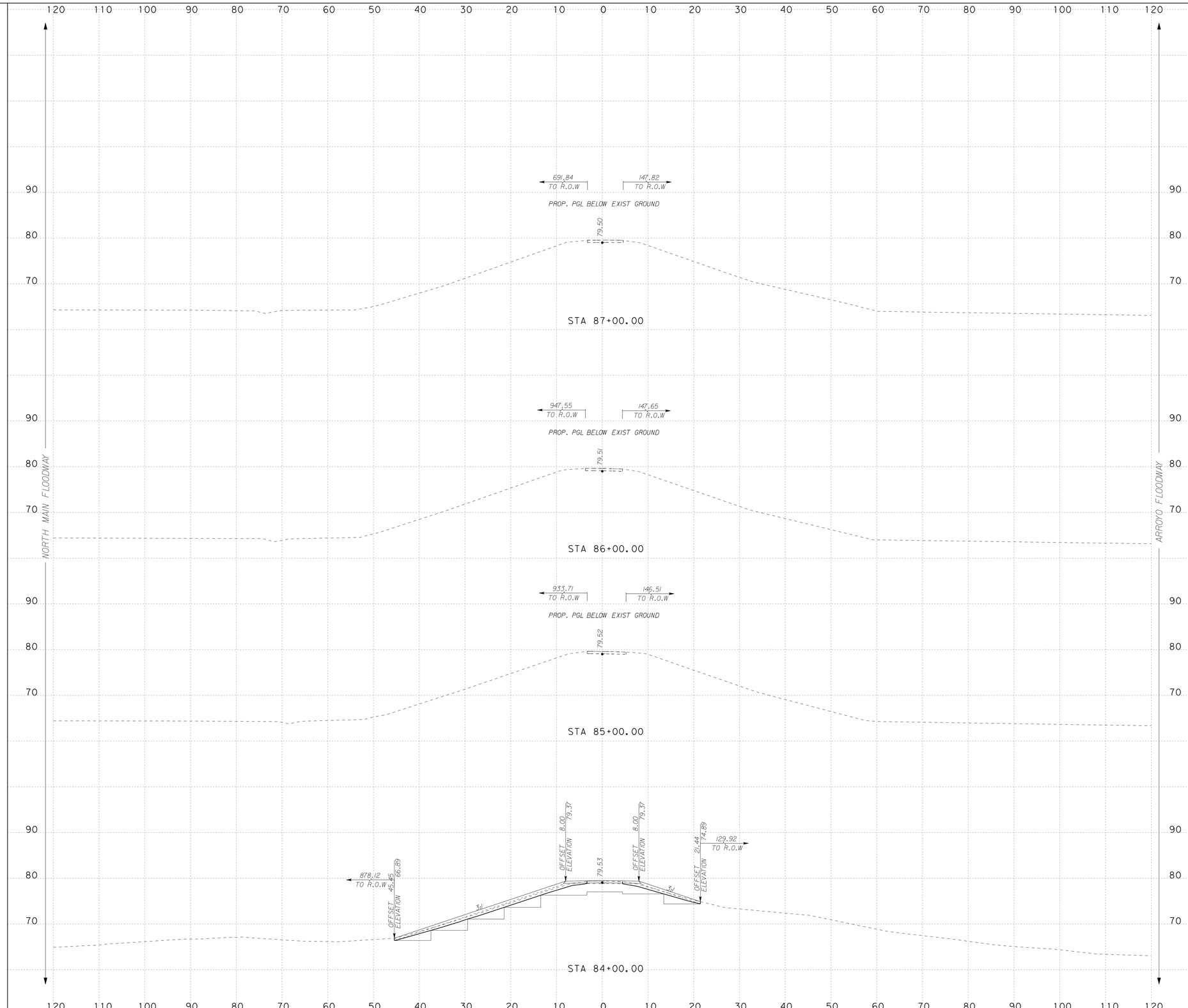

SCALE: H : 1"=10'
V : 1"=10'

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE
(ACN 1)
PROPOSED CROSS SECTIONS

SHEET 22 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.22

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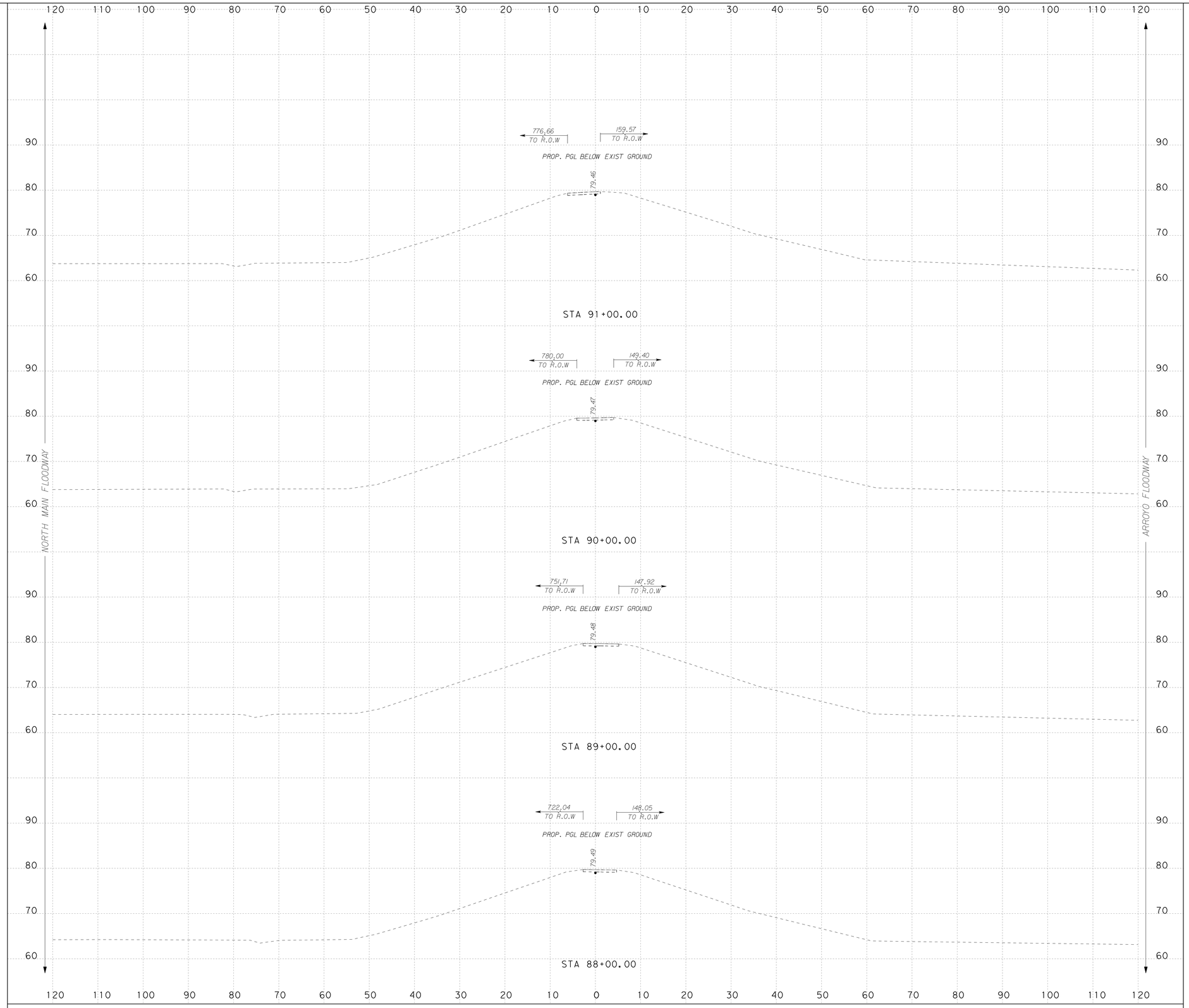

SCALE: H : 1"=10'
V : 1"=10'

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 23 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.23

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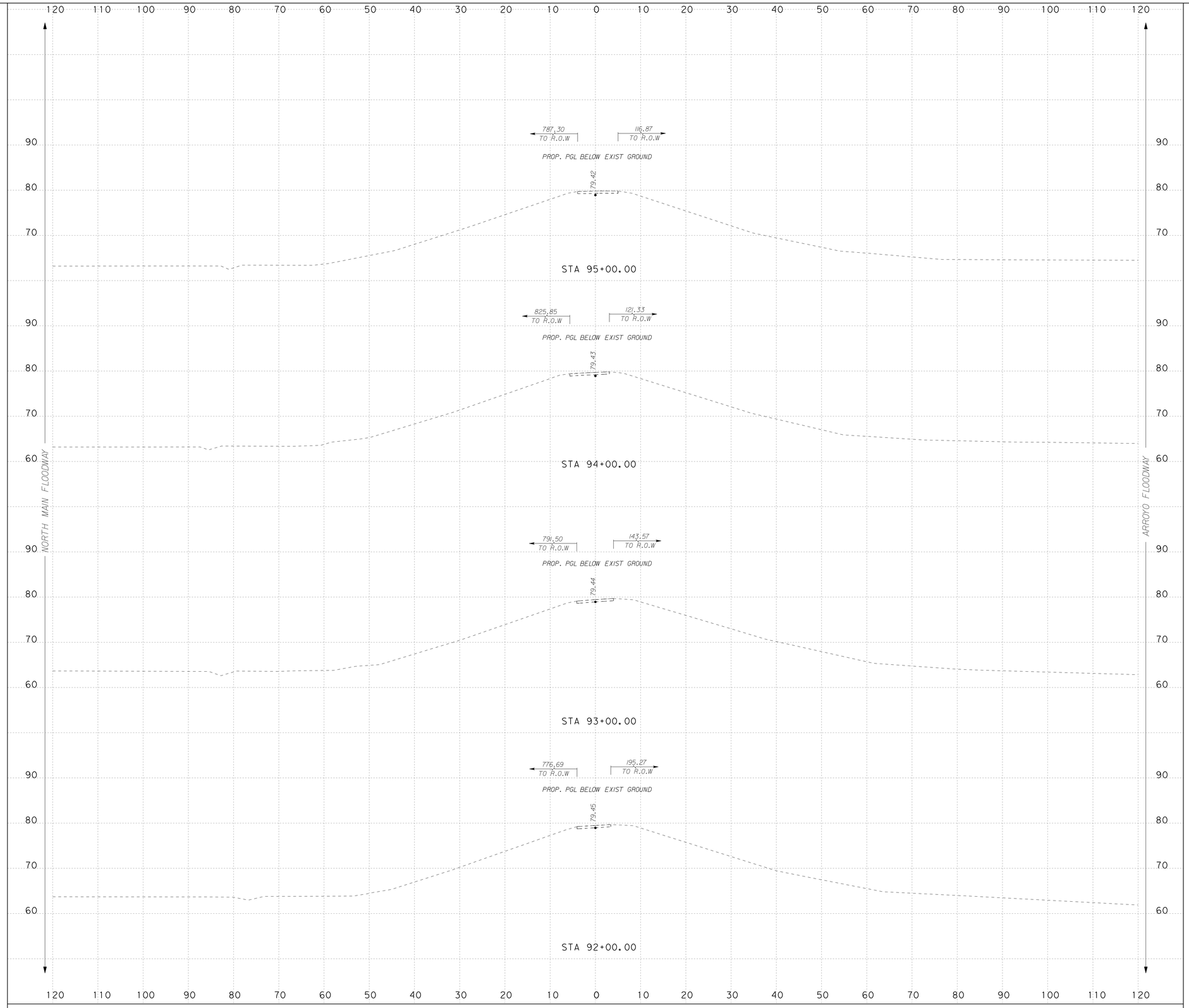

SCALE: H : 1"=10'
V : 1"=10'

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 24 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.24

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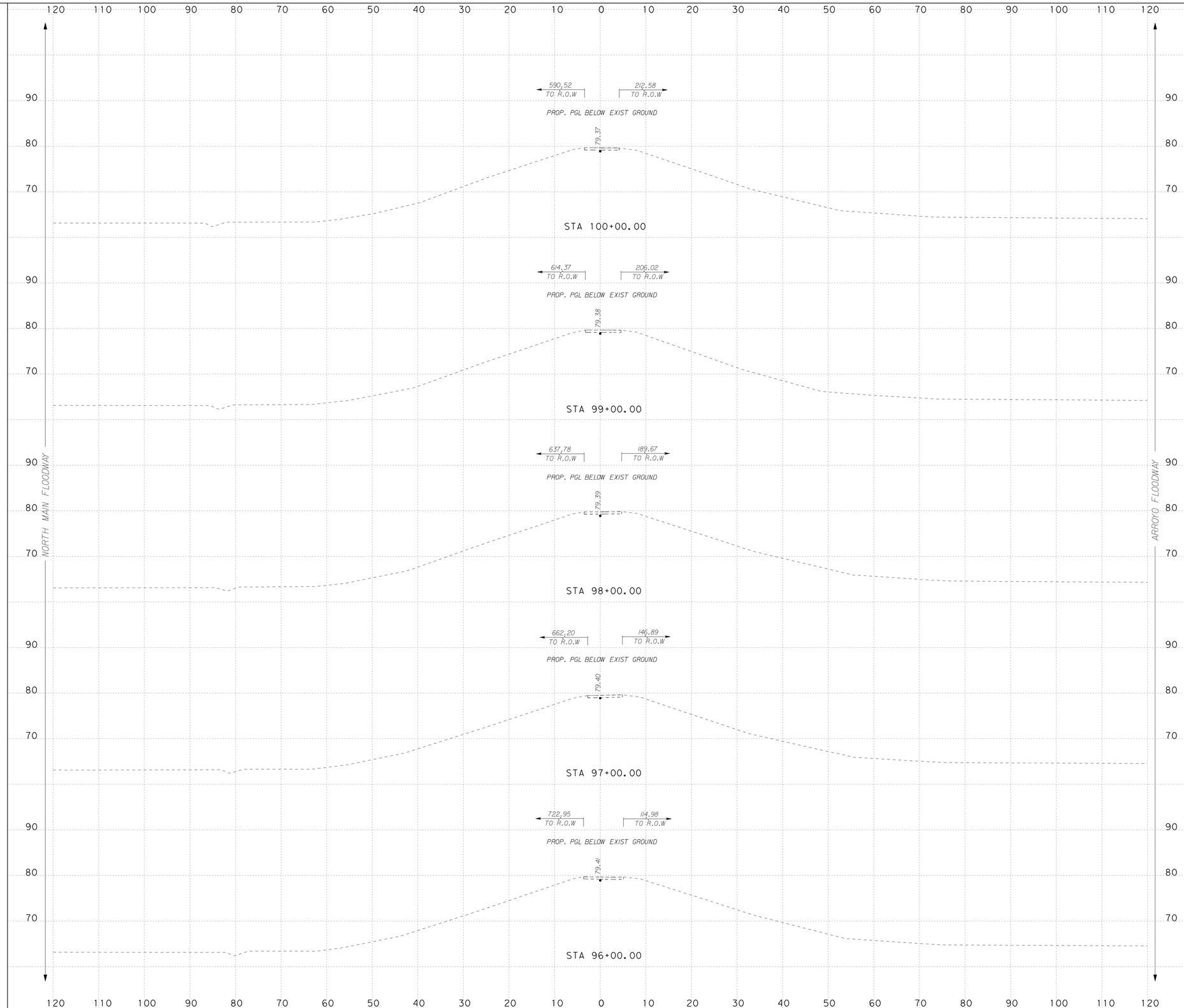

SCALE: H : 1"=10'
V : 1"=10'

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COMISION INTERNACIONAL DE LIMITES Y AGUAS

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Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

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DARIO V. GUERRA III
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1)
PROPOSED CROSS SECTIONS

SHEET 25 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.25

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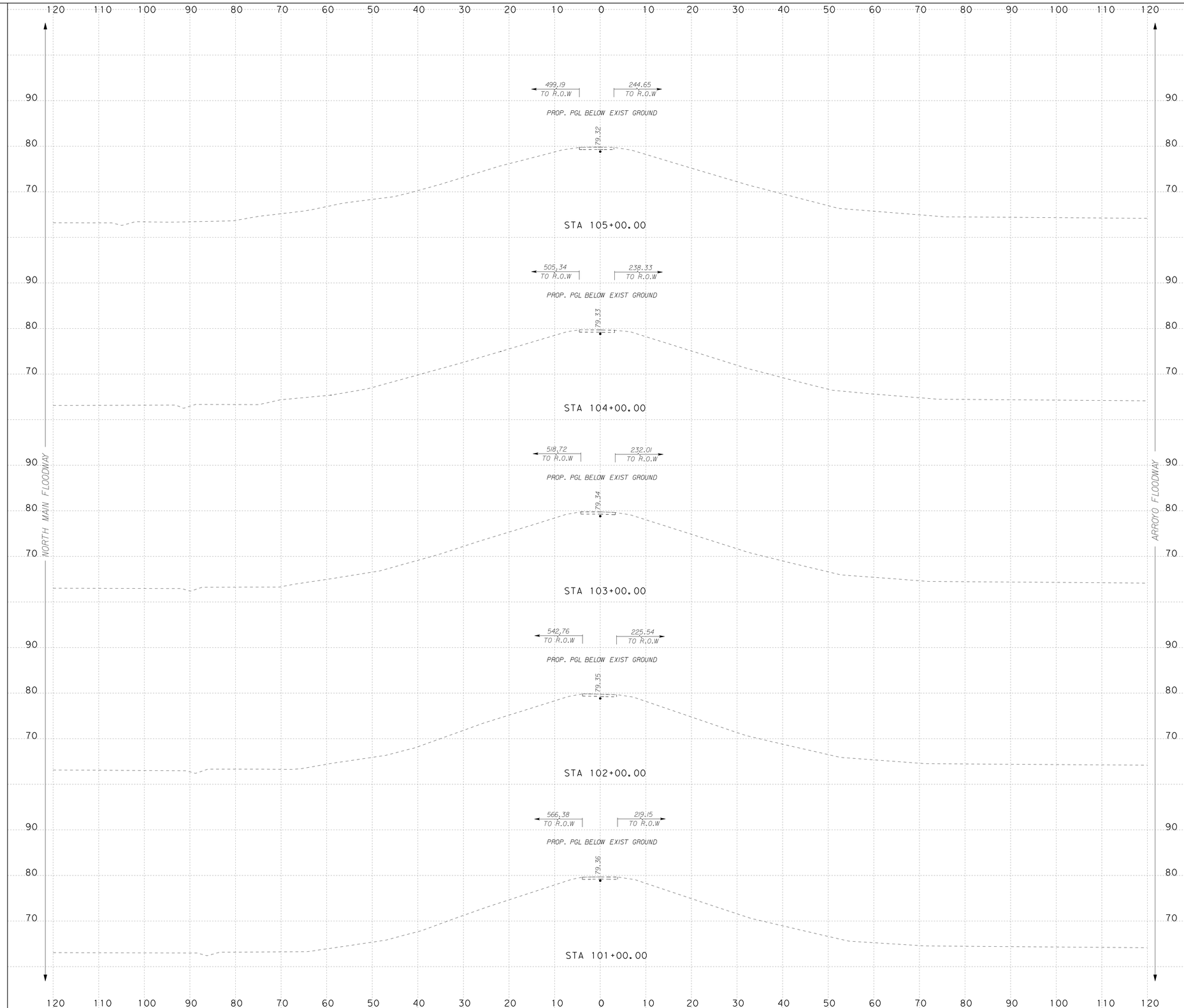

SCALE: H : 1"=10'
V : 1"=10'

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S&B Infrastructure, Ltd. Firm Registration Number: 1582

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1)
PROPOSED CROSS SECTIONS

SHEET 26 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.26

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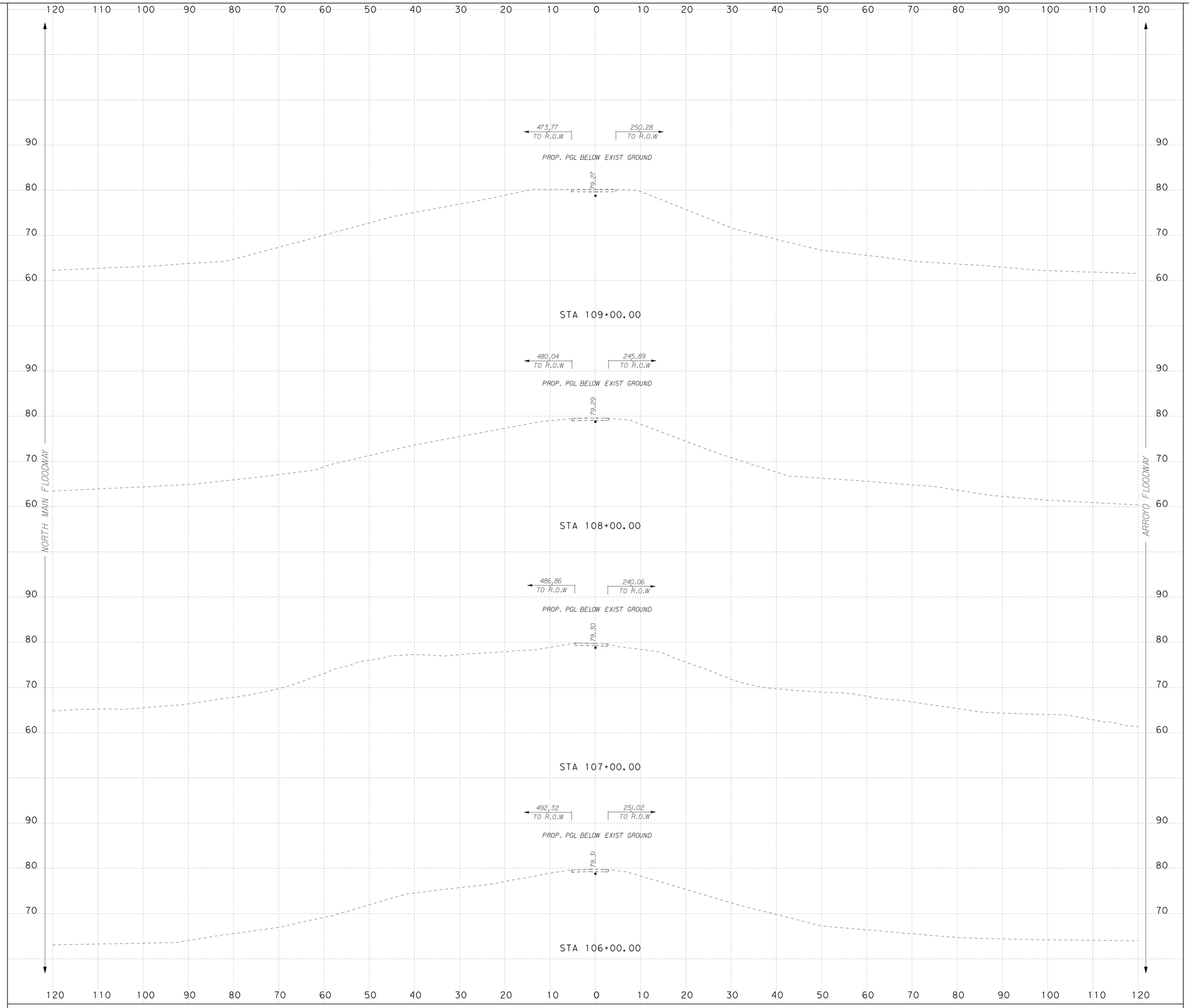

SCALE: H : 1"=10'
V : 1"=10'

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 27 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.27

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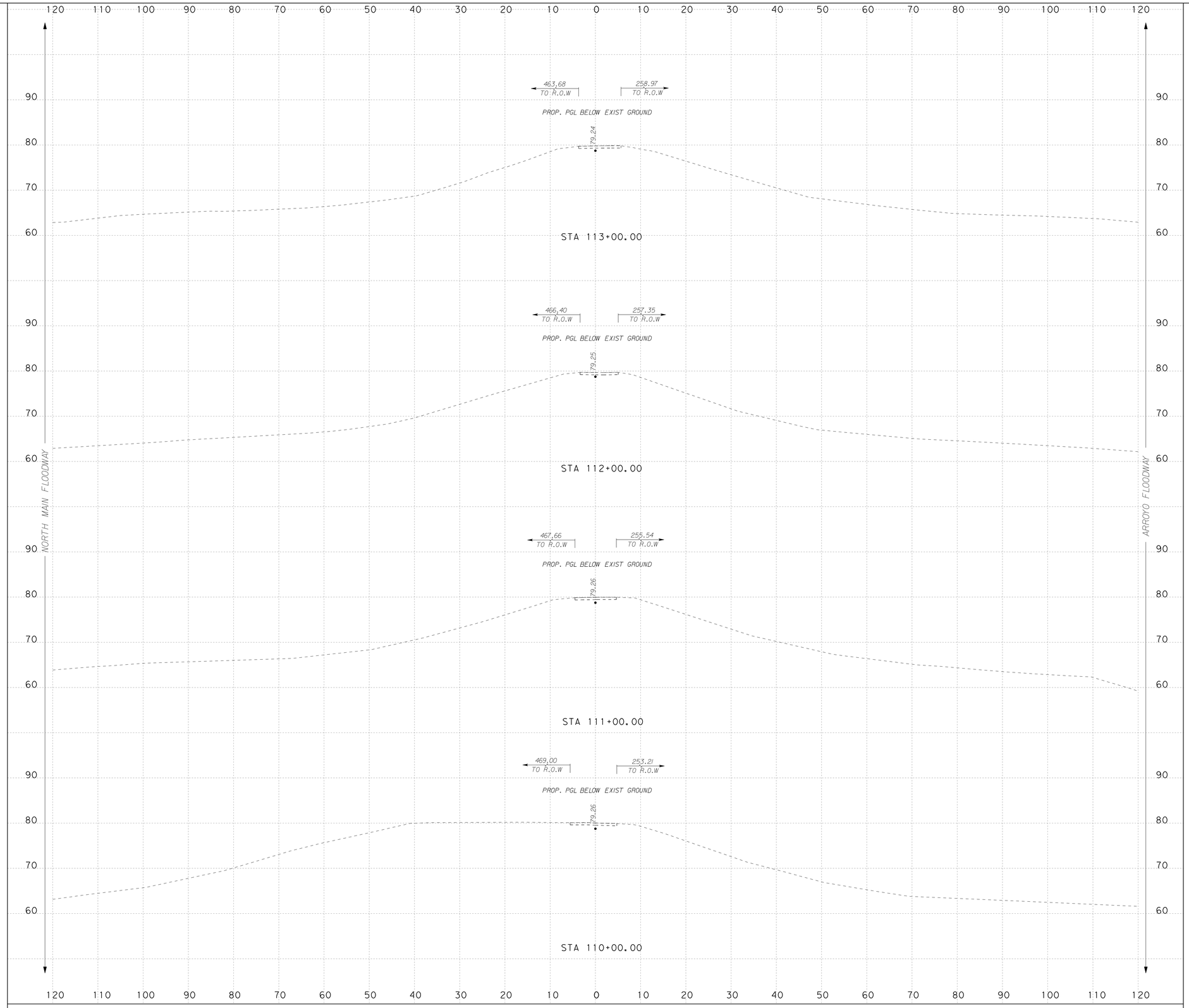

SCALE: H : 1"=10'
V : 1"=10'

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

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Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 28 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.28

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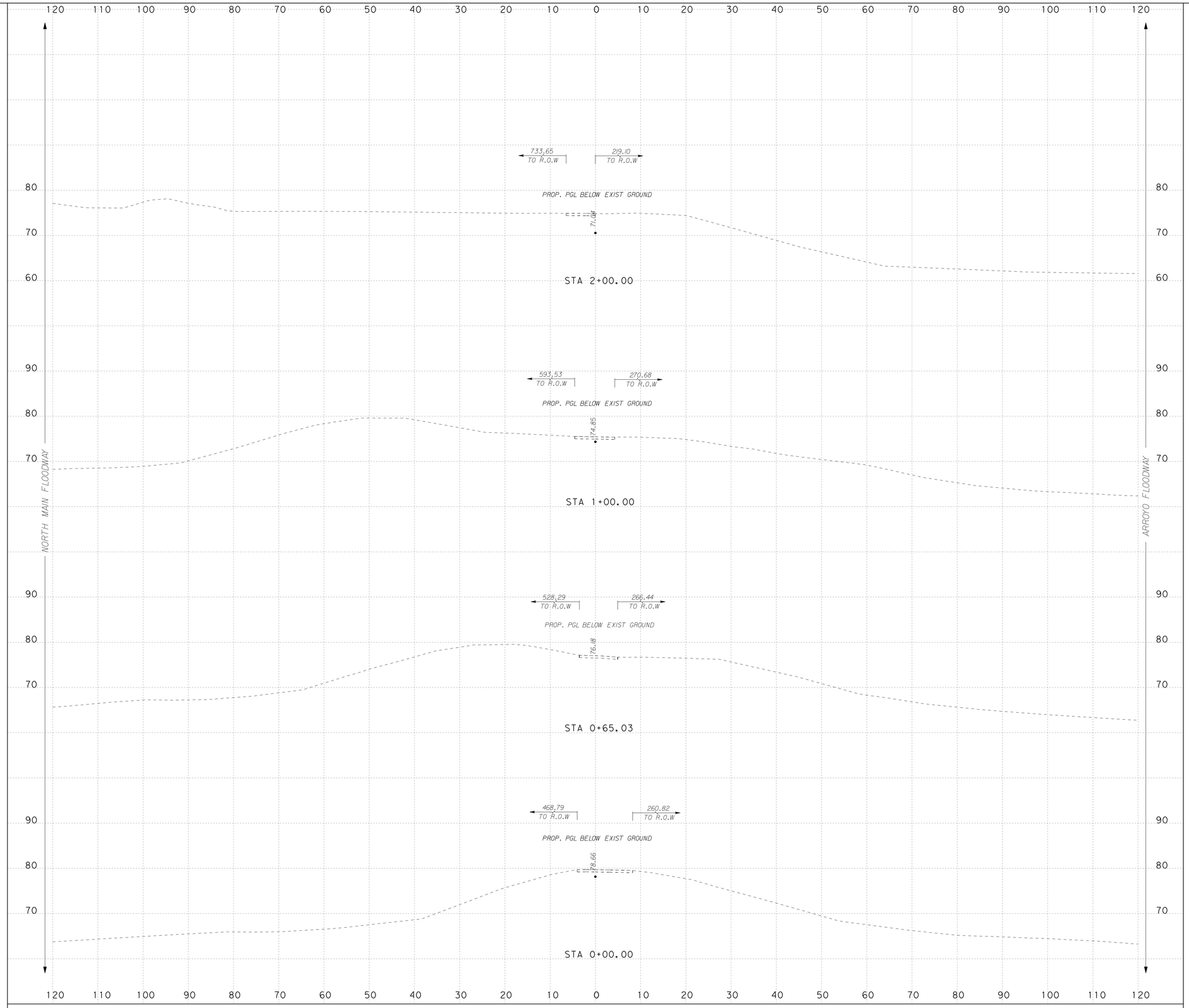

SCALE: H : 1"=10'
V : 1"=10'

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

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Engineering Management Technology

S&B Infrastructure, Ltd. Firm Registration Number: 1582

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 29 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.29

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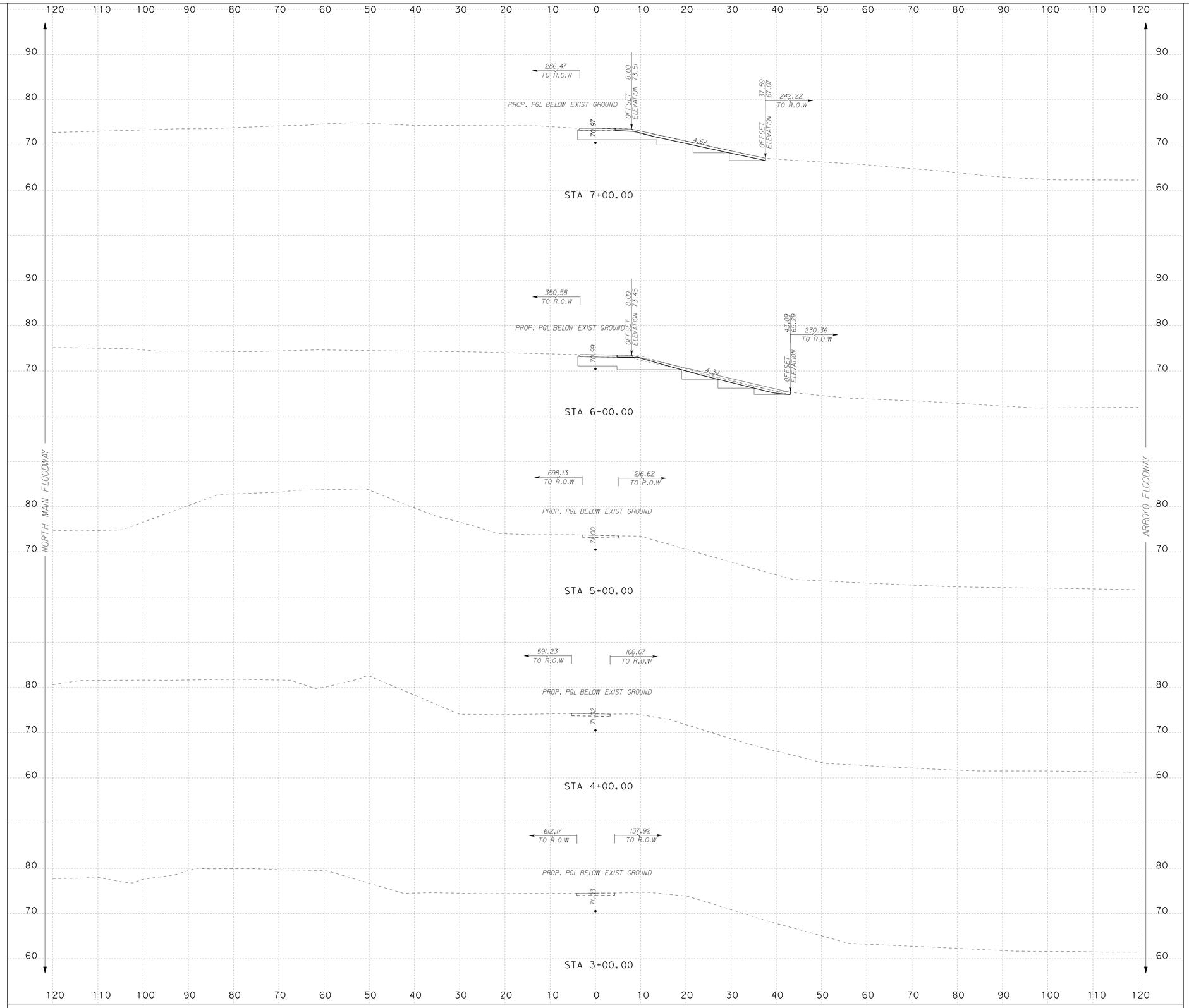

SCALE: H : 1"=10'
V : 1"=10'

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S&B Infrastructure, Ltd. Firm Registration Number: 1582

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DARIO V. GUERRA III
64669
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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN 1) PROPOSED CROSS SECTIONS

SHEET 30 OF 73 SHEET

STATE	COUNTY	DRAWN BY: HGJ	CHECKED BY: HGJ	
TEXAS	HIDALGO	PROJECT NO.	IBM09T0018	SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (ACN 1) (FM 1015 - WILLACY CANAL)				10.30

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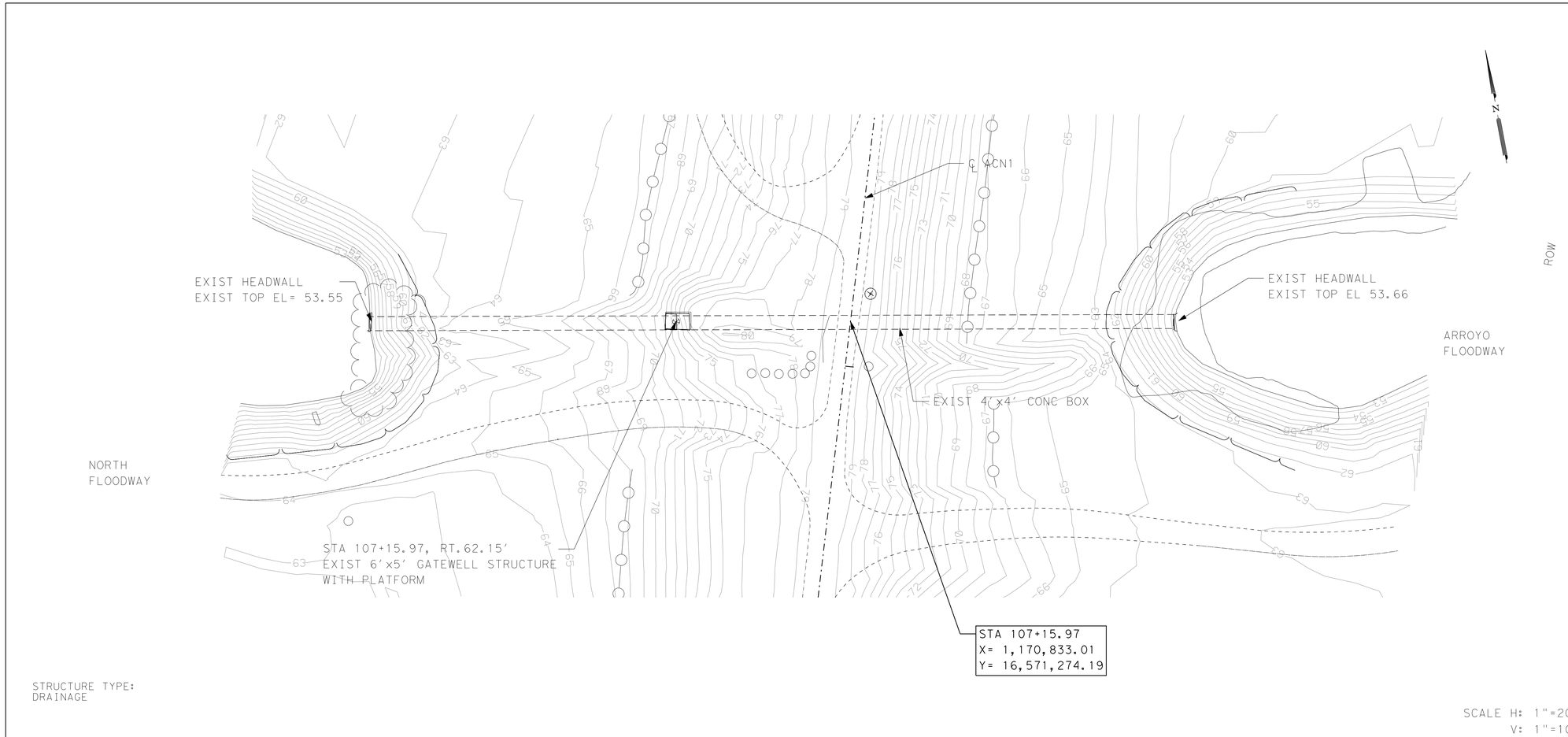
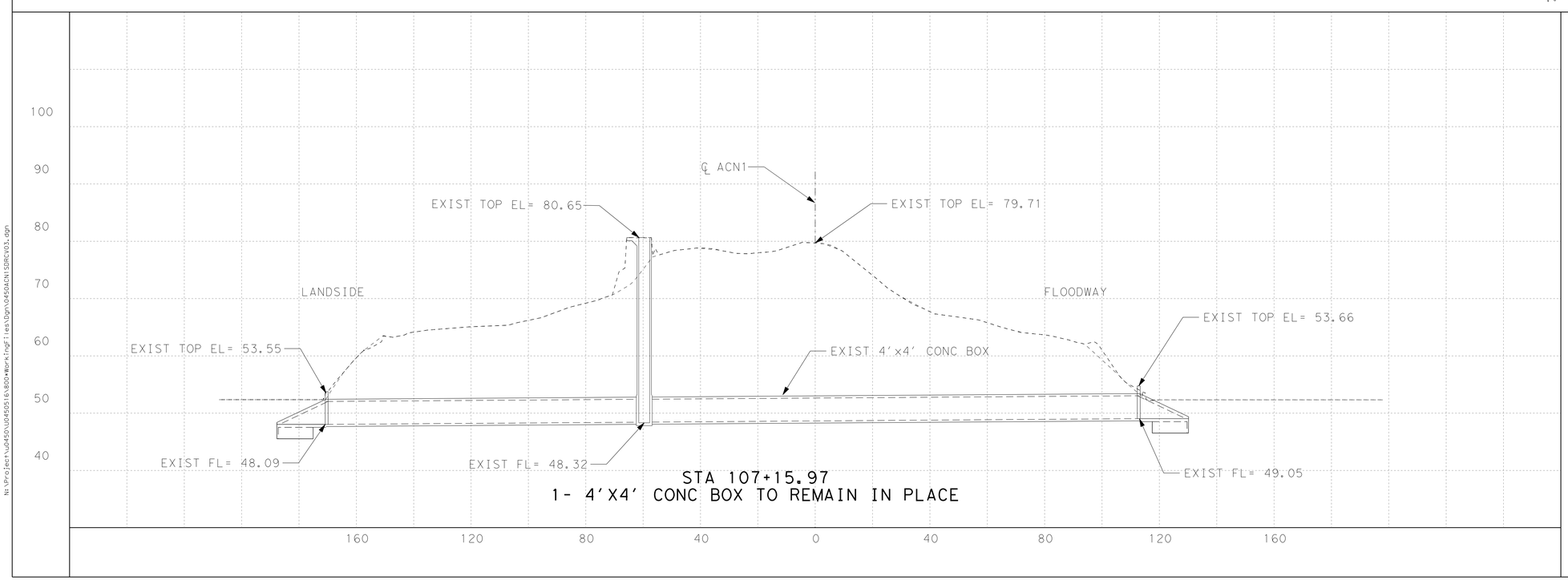


PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EXIST OVERHEAD UTILITY LINE
- EXIST SIGN
- EXIST CONTOURS
- EXIST LEVEE TOE
- EXIST FIBER OPTIC LINE
- EXIST GAS LINE
- EXIST WATER LINE
- EXIST TELEPHONE LINE
- EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

1. CULVERT INFORMATION TAKEN FROM AS BUILT PROVIDED BY IBWC IF AVAILABLE.
2. CULVERTS WERE NOT CHECKED FOR HYDRAULICS ADEQUACY UNDER THIS TASK ORDER.



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Engineering Management Technology
S&B Infrastructure, Ltd. Firm Registration Number: 1582

DL, INC.
DOS LOGISTICS, INC.
212 W. 3rd Sreet Phone: (956) 968-8800
Weslaco, Tx. 78596 Fax: (956) 447-8194
Dos Logistics, Inc. Firm Registration Number: F-9225

STATE OF TEXAS
JOSE G. REYES JR.
93827
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by GUILLERMO A. ARRATIA P.E. 94001, on Sep. 3, 2009.

ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1)
STRUCTURE NO. 163
STA 107+15.97

SHEET 3 OF 16

STATE	COUNTY	DRAWN BY:	CHECKED BY:	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				12.05

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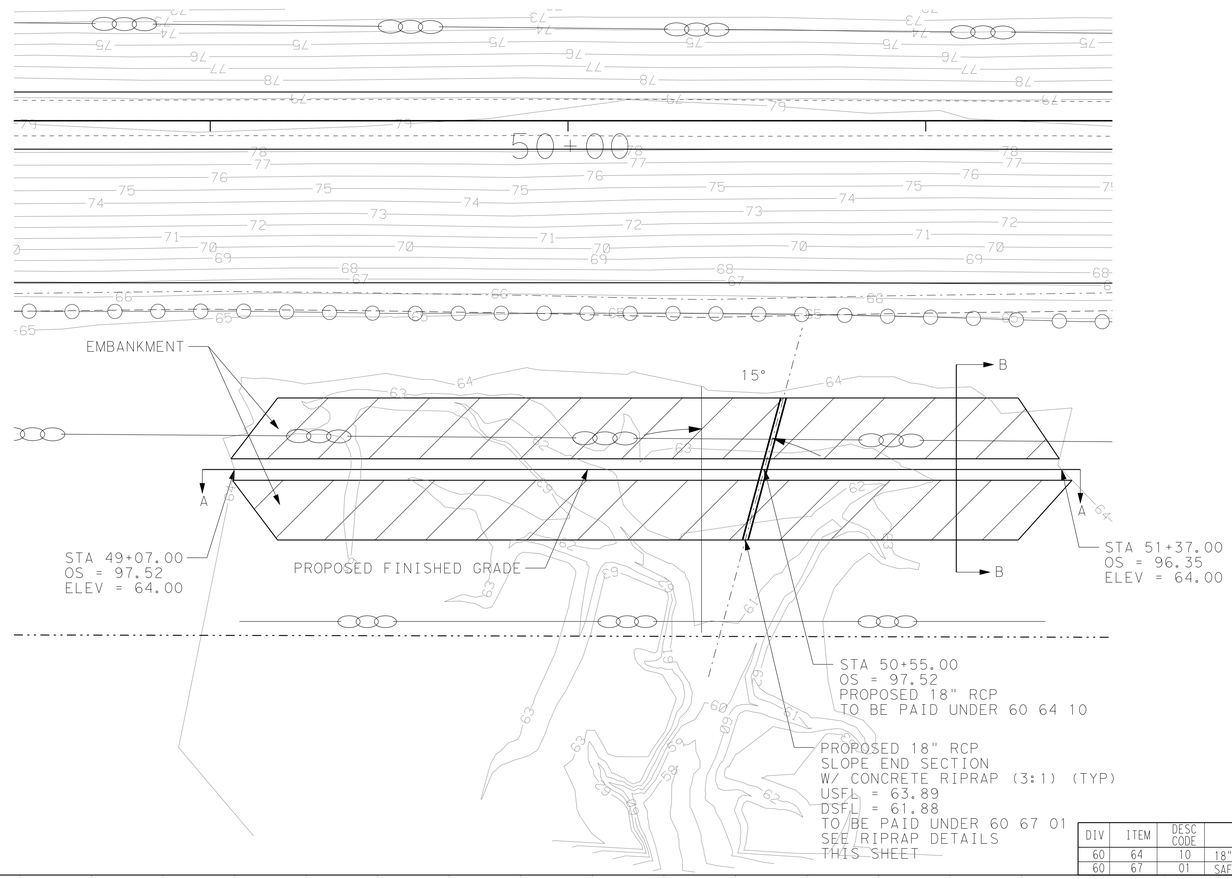
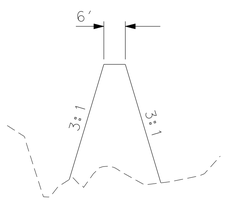




TYPICAL SECTION
B-B

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
60	64	10	18" RCP	LF	41	
60	67	01	SAFETY END TREATMENT (3:1)	EA	2	

PLAN VIEW LEGEND

- PROP CENTERLINE
- EXIST RIGHT-OF-WAY
- EXIST GEOTECHNICAL BORE
- EXIST FLOODWALL
- EL-OH — EXIST OVERHEAD UILITY
- EXIST SIGN
- 101 — EXIST CONTOURS
- EXISTING LEVEE TOE
- F/O — EXIST FIBER OPTIC LINE
- GAS — EXIST GAS LINE
- W — EXIST WATER LINE
- T — EXIST TELEPHONE LINE
- X — X — EXIST FENCE
- PROP SEDIMENT CONTROL FENCE
- WATER BOUNDARY
- PROP LEVEE MAINTENANCE ROAD

NOTES:

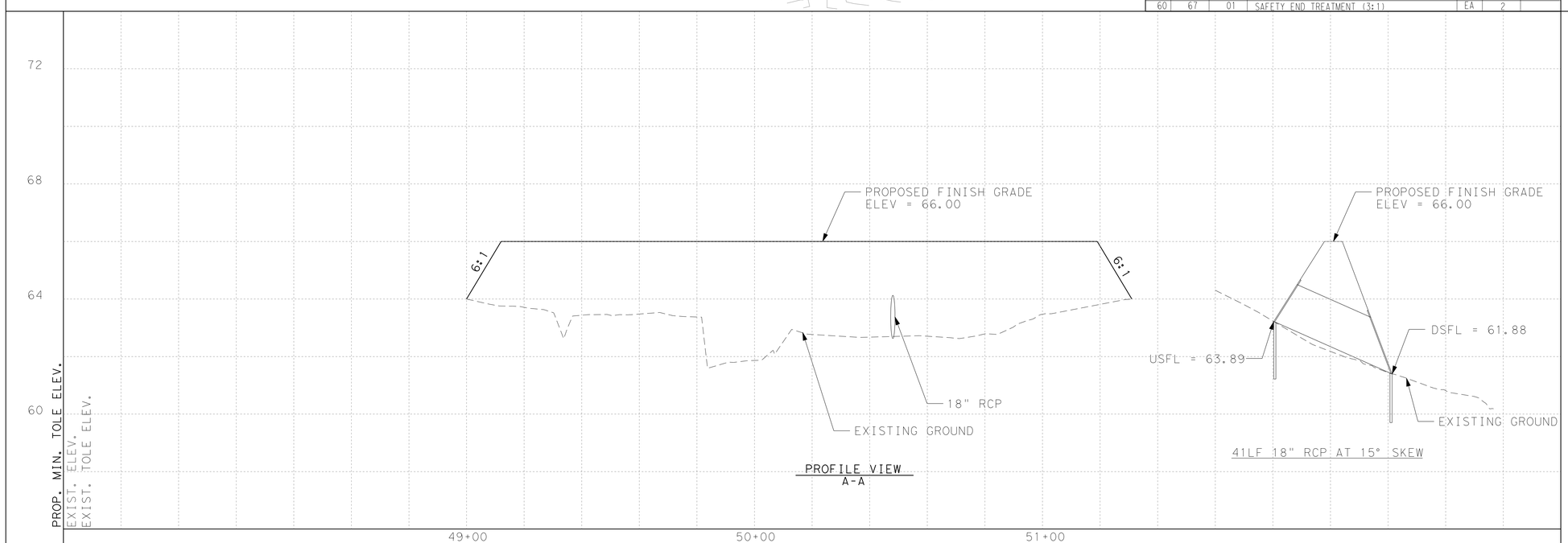
WHEN EXISTING TOP OF LEVEE ELEVATION (TOLE) IS > THE MINIMUM TOLE, THE LEVEE SHALL NOT BE MODIFIED UNLESS OTHERWISE SHOWN ON PLAN. THE TOLE SHOWN DOES NOT HAVE SETTLEMENT.

PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.

DIV	ITEM	DESC CODE	DESCRIPTION	UNIT	EST	FINAL
01	57	01	TEMP EROSION CONTROL (SILT FENCE)	LF		
01	57	02	TEMP EROSION CONTROL (CONST EXIT)	SY		
31	11	01	PREP ROW	STA		
31	11	11	CLEARING AND GRUBBING	AC		
31	92	01	SEEDING (PERM)	SY		
31	92	02	VEGETATIVE WATERING	MG		
31	14	01	REMOVE/STKPL (EXISTING GRAVEL)	CY		
31	14	02	REMOVE/STKPL (EXIST TOPSOIL 6")	CY		
35	41	01	RAISE LEVEE (BENCH EXCAVATION)	CY		
35	41	02	RAISE LEVEE (EMBANKMENT)	CY		
35	41	03	RAISE LEVEE (TOP SOIL)	CY		
35	42	02	RIPRAP (ROCK)	CY		
50	11	02	ROADWAY EMBANK (ACCESS ROAD)	CY		
50	20	01	ROADWAY FLEXBASE TY E GR 4	CY		
90	79	01	VEHICULAR GATE	EA		



PROFILE VIEW
A-A

41LF 18" RCP AT 15° SKEW

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ADDENDUM No. 2

ARROYO COLORADO NORTH LEVEE (ACN1) STRUCTURE DETAIL

SHEET 1 OF 1 SHEET

STATE	COUNTY	DRAWN BY:	CHECKED BY:	
	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				12.19

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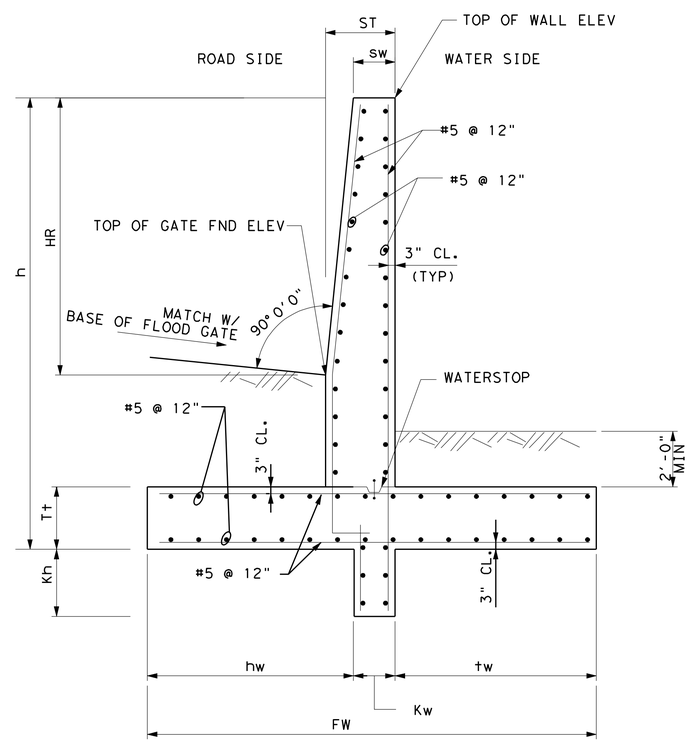
TABLE OF FLOOD WALL CONNECTING FLOOD GATE

NAME OF OPENING	STA /OFFSET BEGIN FLOOD GATE	STA /OFFSET END FLOOD GATE	Levee	HW (FT)	ST (FT)	SW (FT)	TW (FT)	FW (FT)	H (FT)	HR (FT)	TT (FT)	KH (FT)	KW (FT)	WALL AREA (SQFT)	TOP OF WALL ELEV (FT)	TOP OF GATE ELEV (FT)*
ARROYO COLORADO	7+16.41, 17.49 RT	7+34.25, 9.41 RT	SOUTH	2.50	1.24#	1.00	2.00	5.50	6.25	2.42*	5	1.00	1.00	100	80.00	77.58*



SECTION A-A

NOTES:

1. DESIGN ACCORDING TO ACI 318-08.
2. ALL CONCRETE SHALL BE CLASS "C", FC'=3600 PSI.
3. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.
4. CONTRACTOR PLEASE FIELD VERIFY ALL THE DIMENSIONS BEFORE CONSTRUCTION.

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Engineering Management Technology
S&B Infrastructure, Ltd. Firm Registration Number: 1582

STATE OF TEXAS
MANCHING WEI
84851
REGISTERED PROFESSIONAL ENGINEER

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ADDENDUM No. 2

ARROYO COLORADO 1
FLOODWALL AT
FLOOD GATE DETAIL

SHEET 1 OF 2 SHEETS

STATE	COUNTY	DRAWN BY: JZ	CHECKED BY: MW	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO 1 NORTH AND SOUTH LEVEES (FM 1015-WILLACY CANAL)				12.22

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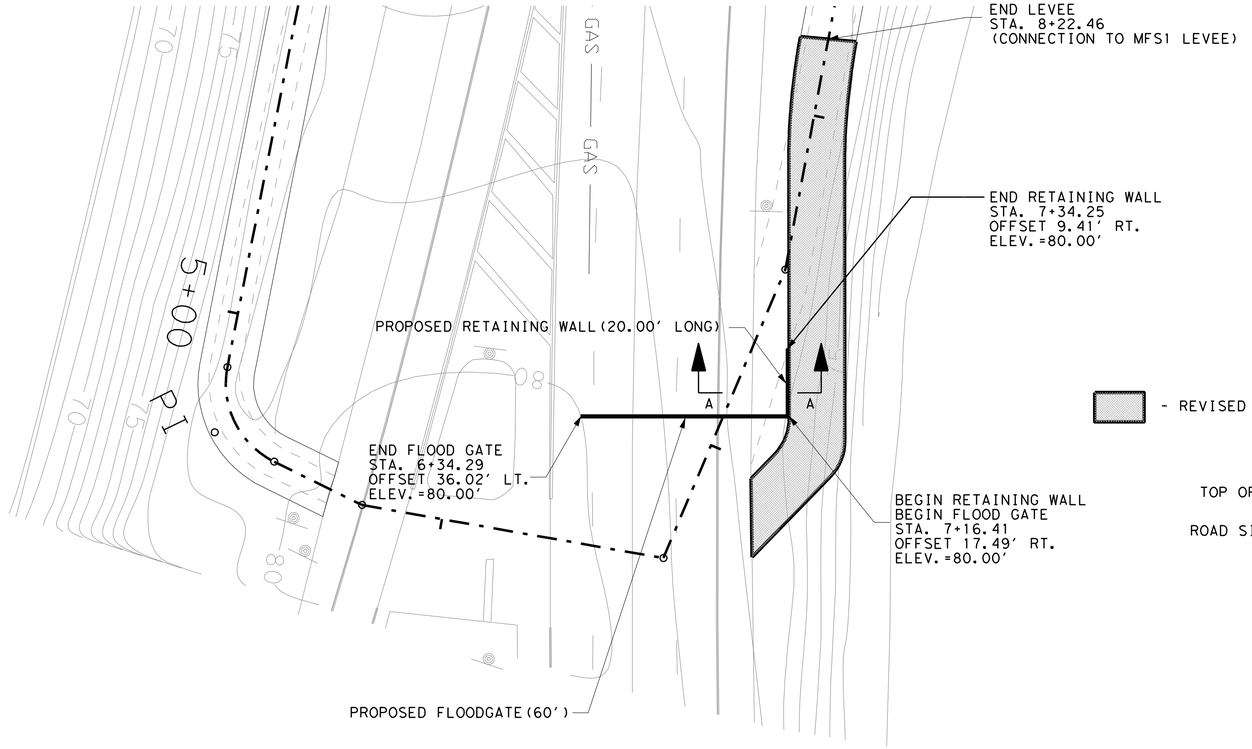
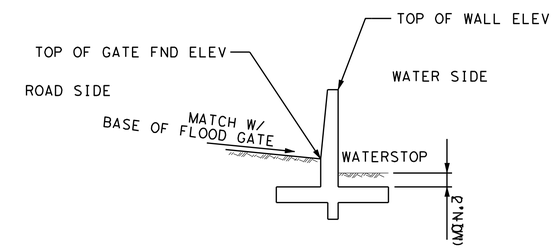


PLAN

NOTES:

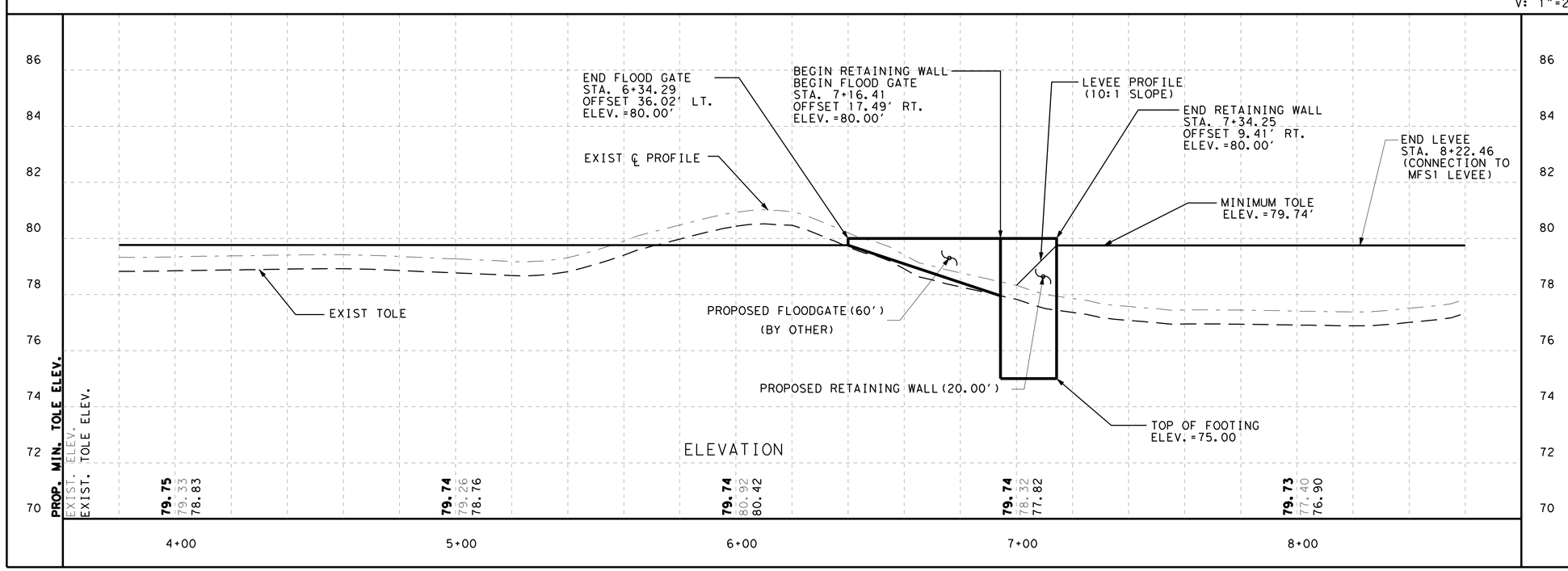
1. TOPOGRAPHIC DATA WAS DERIVED FROM U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER (ERDC) LIGHT DETECTION AND RANGING (LIDAR) BASED DIGITAL ELEVATION MODEL (DEM) OBTAINED FROM THE UNITED STATES SECTION OF THE INTERNATIONAL BOUNDARY AND WATER COMMISSION (USIBWC), DATED JUNE 2001. TOPOGRAPHIC DATA OUTSIDE THE EXTENTS OF THIS DATA WAS SUPPLEMENTED WITH HIDALGO COUNTY LIDAR BASED, BARE-EARTH DEMS DATED MAY 2004.
2. PLANIMETRIC AND RIGHT OF WAY INFORMATION WAS OBTAINED FROM FIELD SURVEYS CONDUCTED BY RODS SURVEYING, INC.
3. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION OF ALL EXISTING UTILITIES (SHOWN/NOT SHOWN) PRIOR TO CONSTRUCTION.
5. DESIGN ACCORDING TO ACI 318-08.
6. ALL CONCRETE SHALL BE CLASS "C", FC'=3600 PSI.
7. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.
8. SEE FLOOD WALL DETAILS FOR WALL TYPICAL SECTIONS.
9. SEE BORING SHEETS FOR SOIL INFORMATION.
10. PROVIDE WALL EXPANSION JOINT @ SPACE 32' (MAX)

- REVISED LEVEE ROADWAY



SECTION A-A

SCALE: H: 1"=20'
V: 1"=2'



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ADDENDUM No. 2

ARROYO COLORADO 1

FLOOD WALL & GATE

FM 1015 SOUTH

SHEET 2 OF 2 SHEETS

STATE	COUNTY	DRAWN BY: NN	CHECKED BY: MW	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO 1 NORTH AND SOUTH LEVEES (FM 1015-WILLACY CANAL)				12.23

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During the planning phase of project development the following environmental permits, issues and commitments have been developed during coordination with resource agencies, local governmental entities and the general public. Any change orders and/or deviations from the final design must be reported to the Engineer prior to the commencement of construction activities, as additional environmental clearances may be required.

All environmental statements in the signed Finding of NO Significant Impacts for all associated projects will be adhered to and are environmentally binding.

I. Clean Water Act, Section 402 National Pollutant Discharge Elimination System

(Addresses MS4 requirements for project)

☐ No Action Required ■ Required Action

1. A storm water pollution prevention plan (SW3P) would be developed during project design to minimize impacts to receiving water, as specified by USEPA regulations for construction projects. The storm water pollution prevention plan would include construction areas along the levee system, as well as equipment staging areas.

2. To prevent sedimentation, BMPs such as sediment fences and/or sediment barriers around wetlands would be installed while construction occurs in affected areas.

II. Clean Water Act, Section 401 and 404 Compliance

Filling, dredging or excavating in any water bodies, rivers, creeks, streams, wetlands or wet areas is prohibited unless specified in the USACE permit and approved by the Engineer.

☐ No Permit Required ■ Coordination with USACE required.

1. Limited wetlands are present near the levee, but no wetlands are close enough to the proposed expansion areas to be affected by levee raising and potential footprint expansion. No impacts to jurisdictional wetlands are anticipated from levee improvements.

III. Cultural Resources

☐ No Action Required ■ Required Action

1. Archeological Resources

Intact prehistoric archeological resources that may contain sufficient information to be NRHP eligible may occur in the APE in areas that are designated as high probability for archeological resources, a Phase I archeological survey is being conducted prior to ground disturbing or levee improvement activities.

"A cultural resources survey was completed on June 2009, and the THC concurred that the proposed undertaking will have adverse effects on Historic Resources. The concurrence was based on the following: The proposed action will increase the height of the levee by up to 2 feet on approximately 8.6% of the 11-mile segment, 4% of the segment will be increased in height by 2-4 feet, and approximately 2.4% to be increased in height by 4-6 feet. also, moderately higher increases are proposed for approximately 1.2% of the 11 mile segment. Based on this understanding and the condition that the only resource that will be physically impacted by the work is the levee itself THC concurred with the IBWC's findings. Consultation with THC on the archeological sites is currently underway.

2. Architectural Resources

A number of architectural resources that include gatewells and screwgates (top of levee) and culverts and drains (under the levee) may be adversely affected by the proposed improvements which may be considered eligible for the NRHP.

Section 106 Consultation with THC is currently in progress.

3. Native American Resources

Native American consultation has been initiated and is still on-going with the Texas SHPO.

Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

Refer to specification 01 57 00 in the event historical issues or archaeological artifacts are found during construction.

IV. Hazardous Materials or Contamination Issues

☐ No Action Required ■ Required Action

If potentially hazardous material and/or contaminated media (i.e. soil, groundwater, surface water, sediment, building materials) are unexpectedly encountered during construction, cease work in the immediate area and contact TCEQ & USIBWC EMD immediately.

V. Federal Listed, and Proposed Threatened and Endangered Species, Critical Habitat, State Listed Species, Candidate Species and Migratory Birds

☐ No Action Required ■ Required Action

1. Unforeseen adverse effects may be prevented by timing construction activities to avoid breeding and nesting seasons of T&E species. Consultation with TPWD and USFWS will be required to schedule construction activities to minimize potential impacts on species and species habitat.

2. When warranted for protection of biological resources the need for levee footprint expansion would be eliminated by levee slope adjustment.

3. Coordination is required with USFWS & TPWD; no biological assessment in this area due to finding environmental assessment.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediate area, and contact the USFWS & USIBWC EMD immediately.

If an active nest is found, immediately contact the USFWS & USIBWC EMD and cease work around nest at a 25 foot radius.

VI. Vegetation Resources

☐ No Action Required ■ Required Action

1. All expansion would take place along the centerline of the current levee, limiting vegetation removal(grasses and weedy species) on the levee slopes.

2. After construction is complete, the expanded levee, as well as any required construction corridor, would be re-vegetated with native herbaceous vegetation from approved USFWS lists.

VII. Soil

1. Earthwork would be planned and conducted in such a manner as to minimize the duration of exposure of unprotected soil. Protection would be provided by accelerated growth of permanent vegetation, temporary vegetation, mulching, or netting. Slopes too steep for stabilization by other means would be stabilized by hydroseeding, mulch anchored in place, covering by anchored netting, sodding, or such combination of these and other methods as may be necessary for effective erosion control.

2. Use of best management practices such as rock berms, silt fences, and single point construction entries would minimize erosion during construction.

VIII. Other Environmental Issues

☐ No Action Required ■ Required Action

Transportation

1. All construction activities would occur within the existing ROW.

2. Transportation of construction equipment and the use of personnel vehicles would mainly occur within the levee ROW and along the toe of the levee road adjacent to the levee.

3. Any new easements would have to be obtained by USIBWC if levee footprints are increased from existing conditions.

4. Coordination during construction activities would take place with U.S. Customs and Border Patrol concerning Levee Road usage.

Engineering Measures

1. During the project construction, existing access points to the levee road would remain in service; because no significant modifications would be made to the levee 3:1 slope ratio, lateral access to the levee road would continue as currently available.

2. During the project construction, methods such as wetting the soil would be employed to prevent erosion from unvegetated slopes and/or corridors.

3. An environmental monitor should be available during construction.

4. When warranted due to engineering conditions, or for protection of biological or cultural resources, the need for levee footprint expansions would be limited by levee slope adjustment.

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ADDENDUM No. 2

ENVIRONMENTAL PERMITS, ISSUES & COMMITMENTS (EPIC)
ARROYO COLORADO NORTH
LEVEE (ACN1)
SHEET 1 OF 1 SHEET

STATE	COUNTY	DRAWN BY: DI	CHECKED BY: HG	
TEXAS	HIDALGO	PROJECT NO. IBM09T0018		SHEET NO.
REHABILITATION OF ARROYO COLORADO NORTH LEVEE (FM 1015 TO WILLACY CANAL)				14.01

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