

**NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C**

PERMIT AMENDMENT APPLICATION

**PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT C3
DRAINAGE SYSTEM PLANS AND DETAILS**

Prepared for

WASTE MANAGEMENT OF TEXAS, INC.

July 2013



Prepared by

MTG ENGINEERS & SURVEYORS

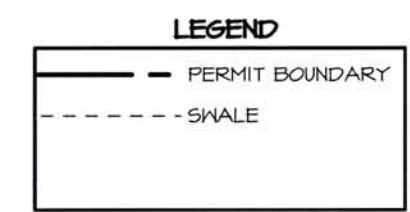
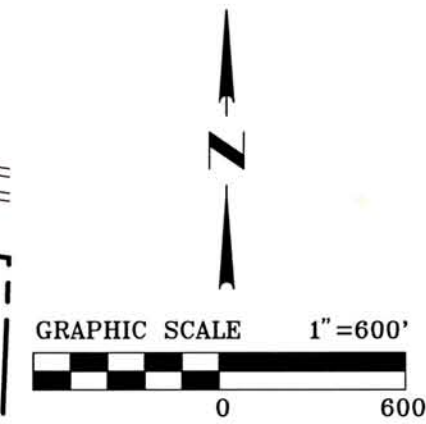
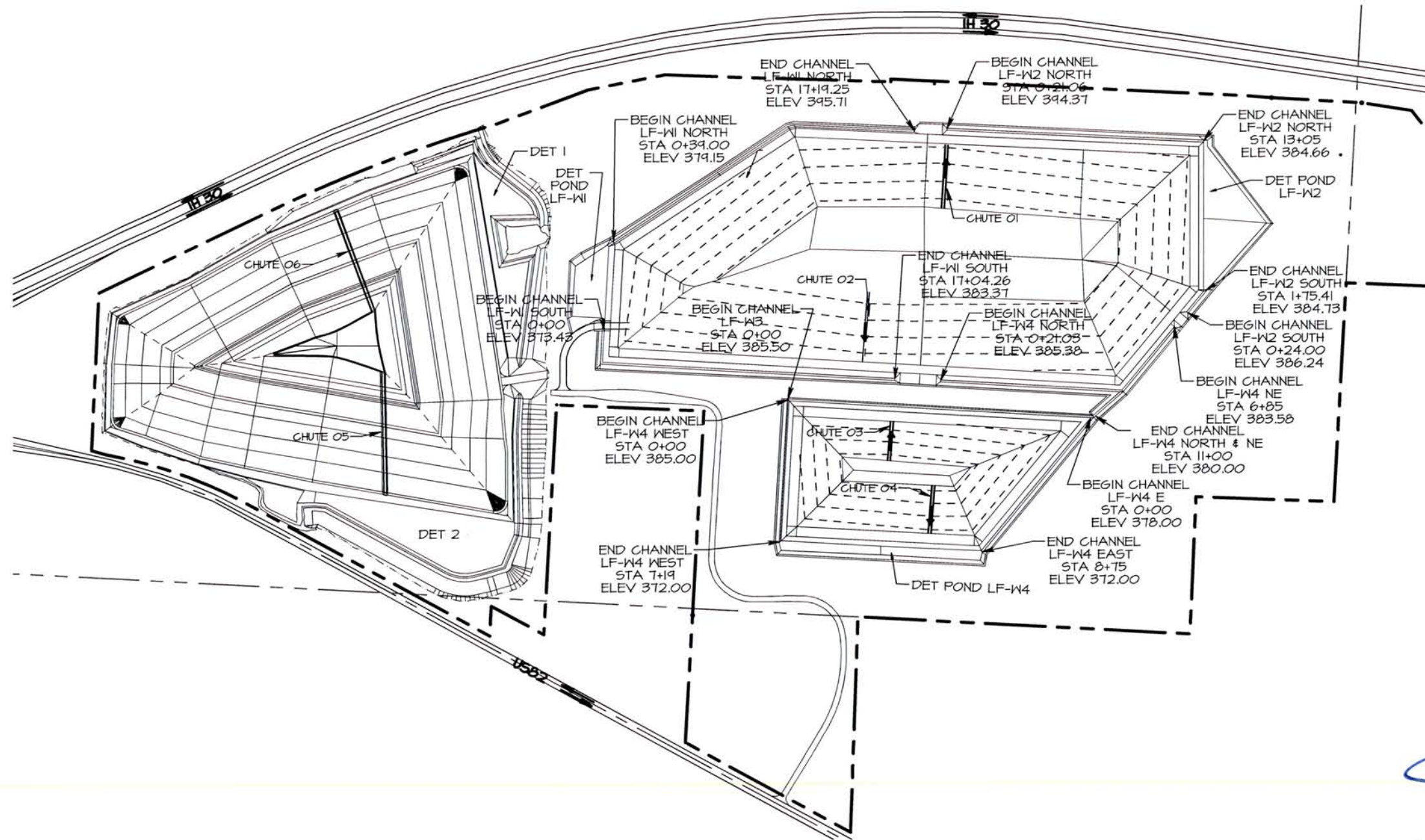
5930 Summerhill • Texarkana, Texas 75503 • 903-838-8533

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION No. F-354

TEXAS BOARD OF PROFESSIONAL LAND SURVEYORS
FIRM REGISTRATION No. 101011

CONTENTS

- C3-1 - Drainage Structure Plan
- C3-2 - Detention Pond Det 1 Hydraulics and Details
- C3-3 - Detention Pond Det 2 Hydraulics and Details
- C3-4 - Detention Pond LF-W1 Hydraulics and Details
- C3-5 - Detention Pond LF-W2 Hydraulics and Details
- C3-6 - Detention Pond LF-W4 Hydraulics and Details
- C3-7 - Channel LF-W1 Southern Channel Profile
- C3-8 - Channel LF-W1 Northern Channel Profile
- C3-9 - Channel LF-W2 Northern Channel Profile
- C3-10 - Channel LF-W2 Southern Channel Profile
- C3-11 - Channel LF-W4 Northern W-E Channel Profile
- C3-12 - Channel LF-W3 Channel Profile
- C3-13 - Channel LF-W4 Western Channel Profile
- C3-14 - Channel LF-W4 Southern LF E Channel Profile
- C3-15 - Typical Chute Profile
- C3-16 - Chutes 01 and 02 Profiles
- C3-17 - Chutes 03 and 04 Profiles
- C3-18 - Drainage Details
- C3-19 - Drainage Details
- C3-20 - Perimeter Road Low Water Crossing

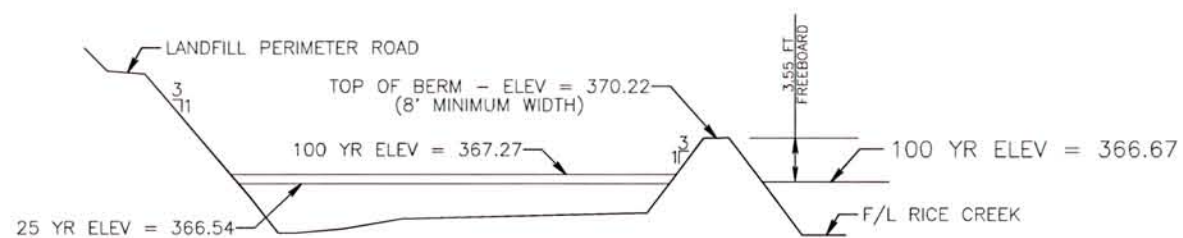


David A. Williams
 66437
 REGISTERED PROFESSIONAL ENGINEER
 7/8/2013

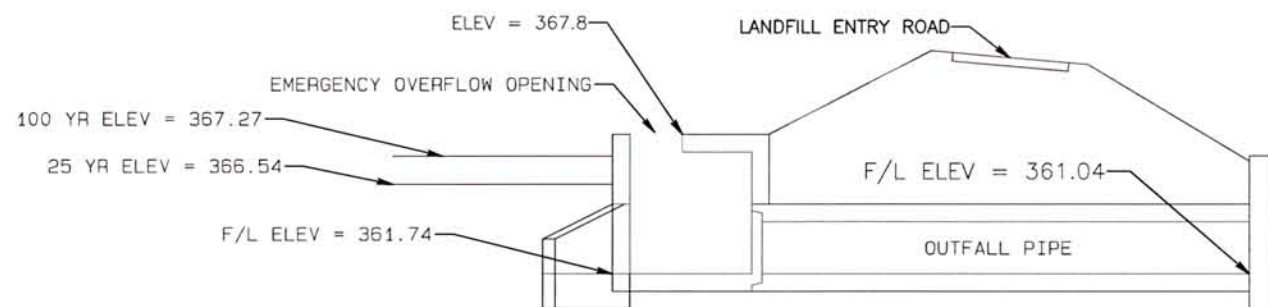
ISSUED FOR PERMITTING PURPOSES ONLY

DRAINAGE STRUCTURE PLAN		MTG <i>engineers & surveyors</i>	
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		5430 SUMMERHILL RD. P.O. BOX 3786 TEXARKANA TEXAS 75501 P 903.838.8533 F 903.832.4700 www.mtgengineers.com	
Date	Revision/Description	© MTG 2012	TBPE No. 354
Drawn By B.A.M.	Checked By D.A.W.	Project No. 107004	Dwg. Date 6/2013
		File No.	Sheet No. C3-1

K:\2010 Projects\107004 - New Boston Landfill\Feb 2013 TMDL\Proposed Drainage.dwg

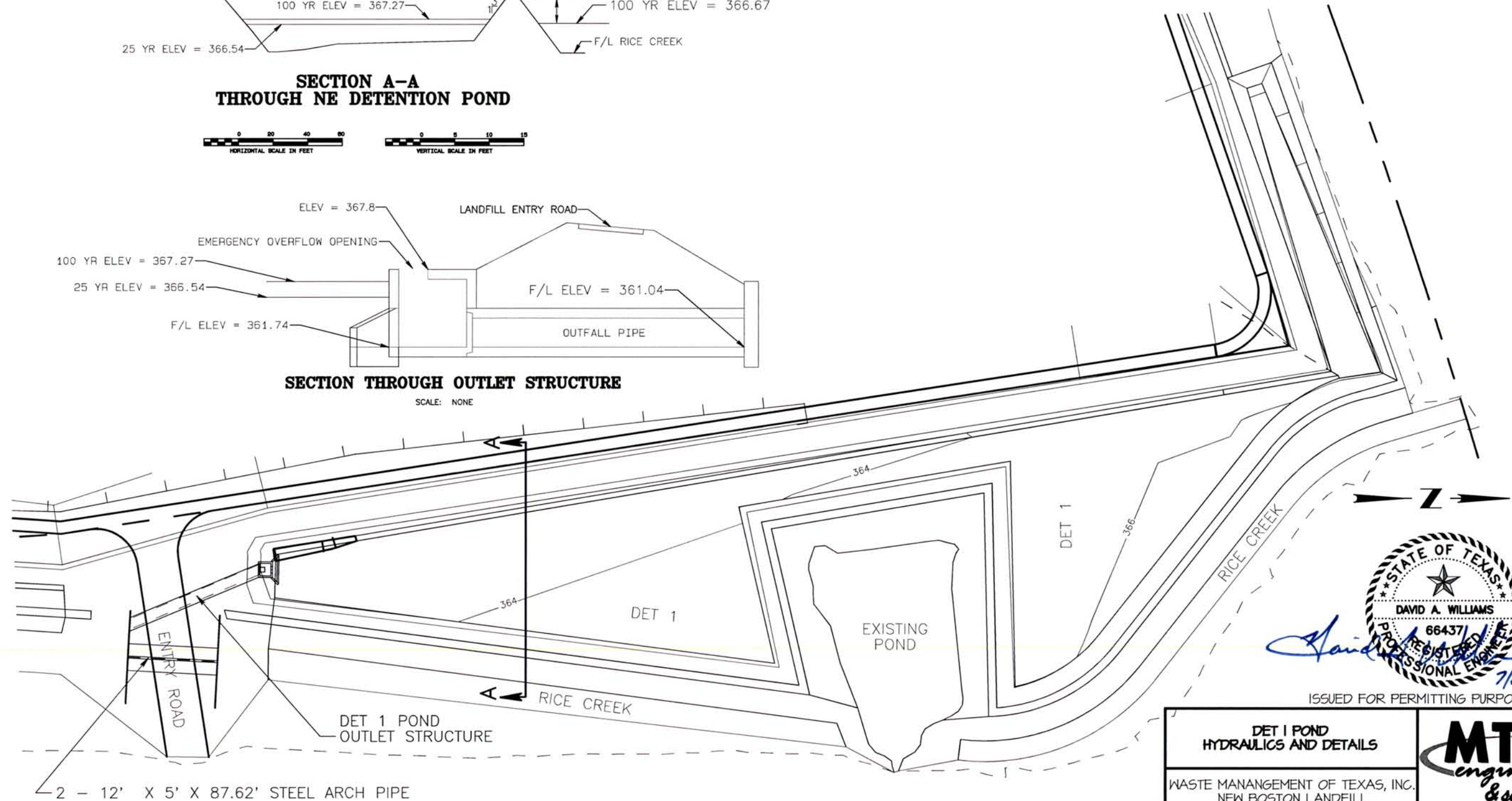


**SECTION A-A
THROUGH NE DETENTION POND**



SECTION THROUGH OUTLET STRUCTURE

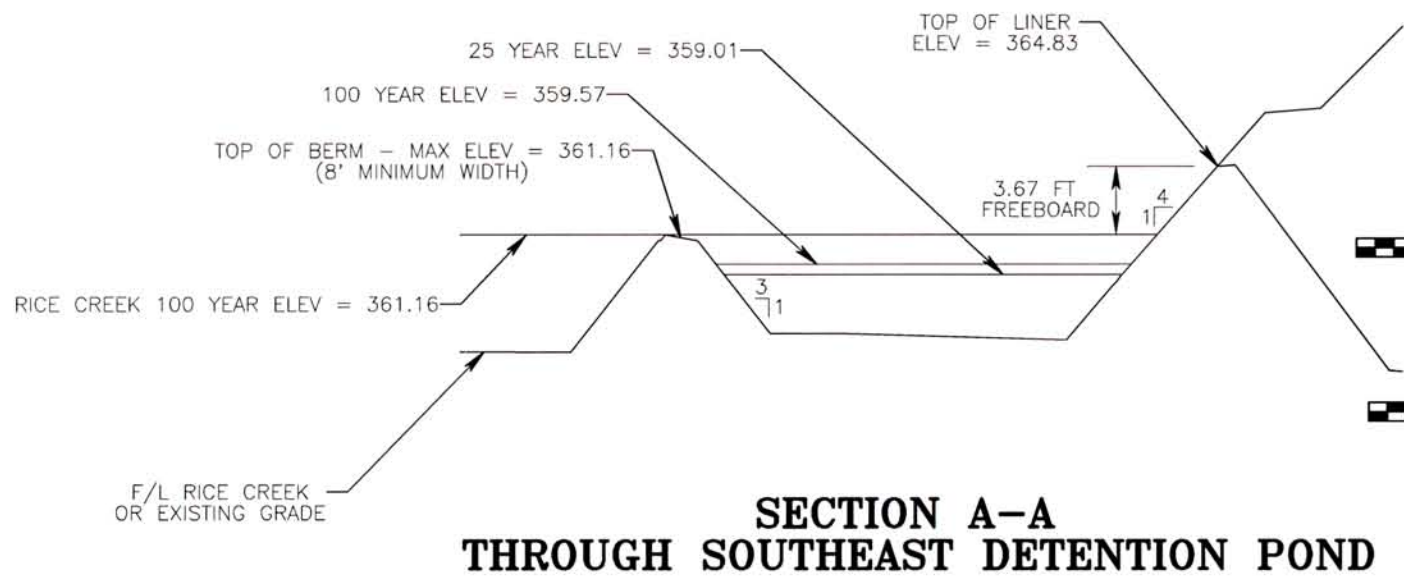
SCALE: NONE



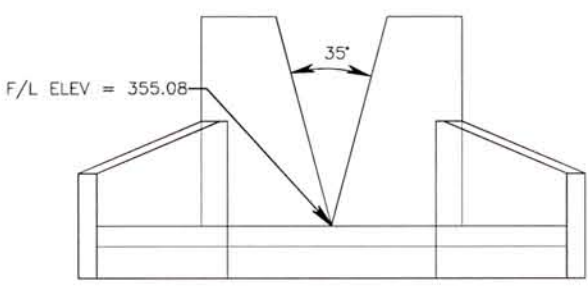
ISSUED FOR PERMITTING PURPOSES ONLY

DET 1 POND HYDRAULICS AND DETAILS		MTG engineers & surveyors	
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		5430 SUMMERHILL RD. P.O. BOX 3706 TEXARKANA TEXAS 75501 P 903.838.8533 F 903.832.4100 www.mtgengineers.com	
Date	Revision/Description	© MTG 2012	TBPE NO. 354
Drawn By BM	Checked By DM	Project No. 007021	Dwg. Date 6/2013
		File No.	Sheet No. 03-2

X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\DET POND 1 & 2.pro

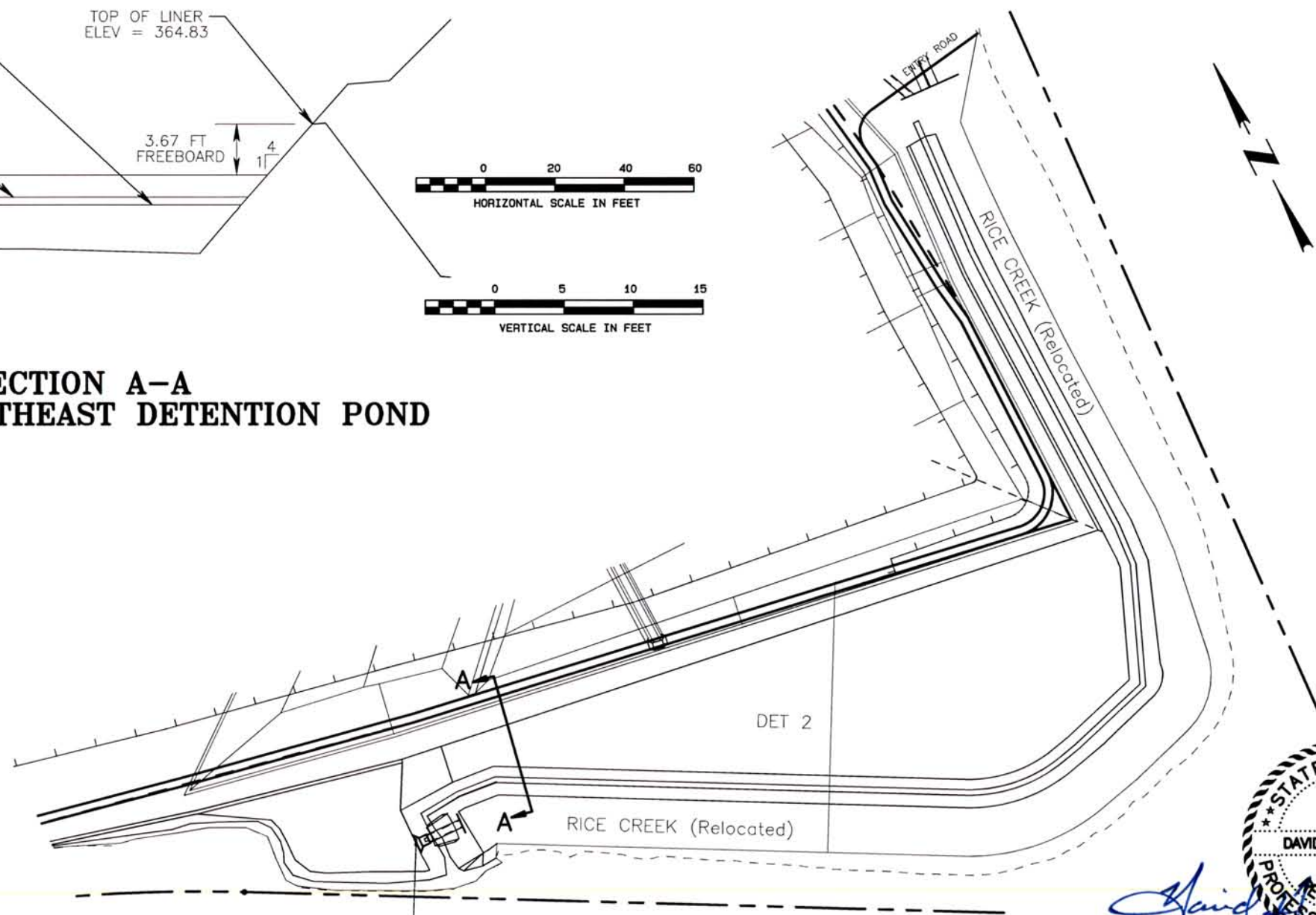


**SECTION A-A
THROUGH SOUTHEAST DETENTION POND**



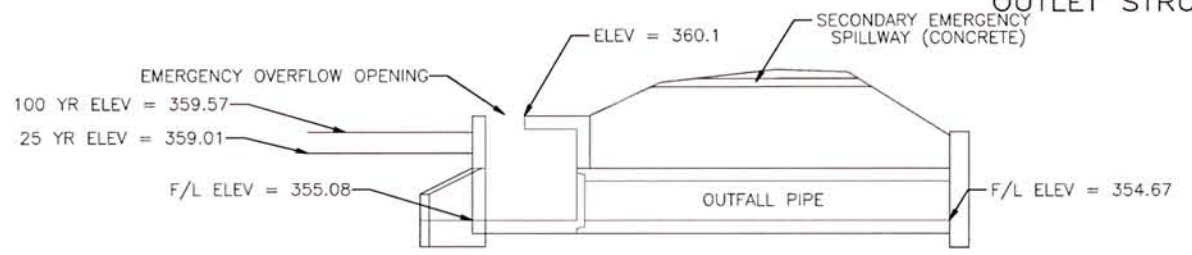
**FRONT ELEVATION
OUTLET STRUCTURE**

SCALE: NONE



**DET 2 POND
OUTLET STRUCTURE**

US HIGHWAY 82



SECTION THROUGH OUTLET STRUCTURE

SCALE: NONE



ISSUED FOR PERMITTING PURPOSES ONLY

**DET 2 POND
HYDRAULICS AND DETAILS**

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

Date	Revision/Description

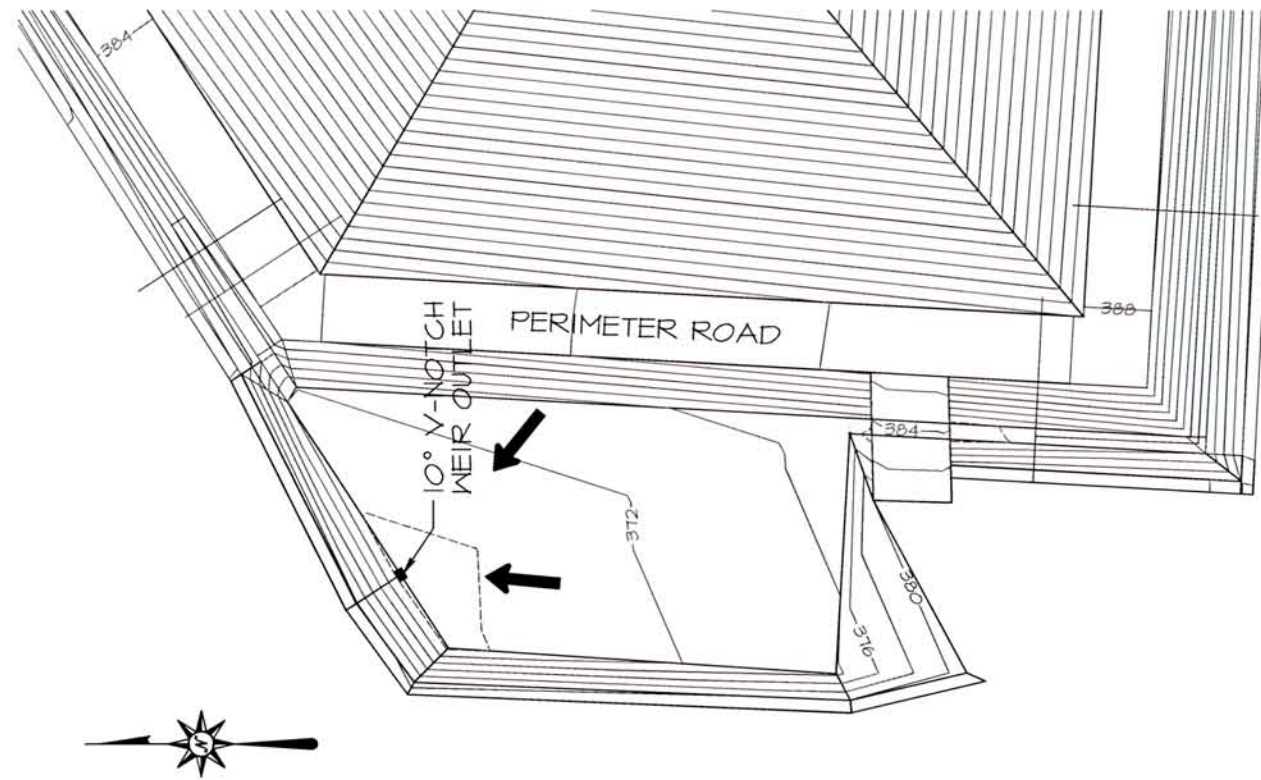
Drawn By BM	Checked By DW	Project No. 001021	Dwg. Date 6/2013
----------------	------------------	-----------------------	---------------------



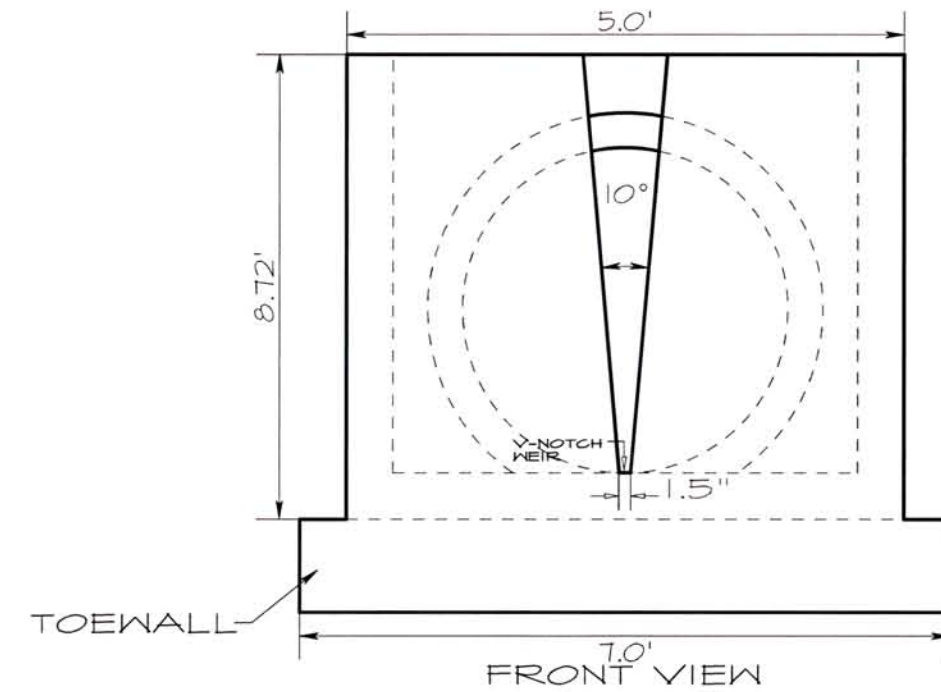
5430 SUMMERHILL RD. | P.O. BOX 3706
TEXARKANA TEXAS 75501
P 409.838.2533 | F 409.832.4100
www.mtgengineers.com

© MTG 2012 TBPE NO. 354
File No. Sheet No. **C3-3**

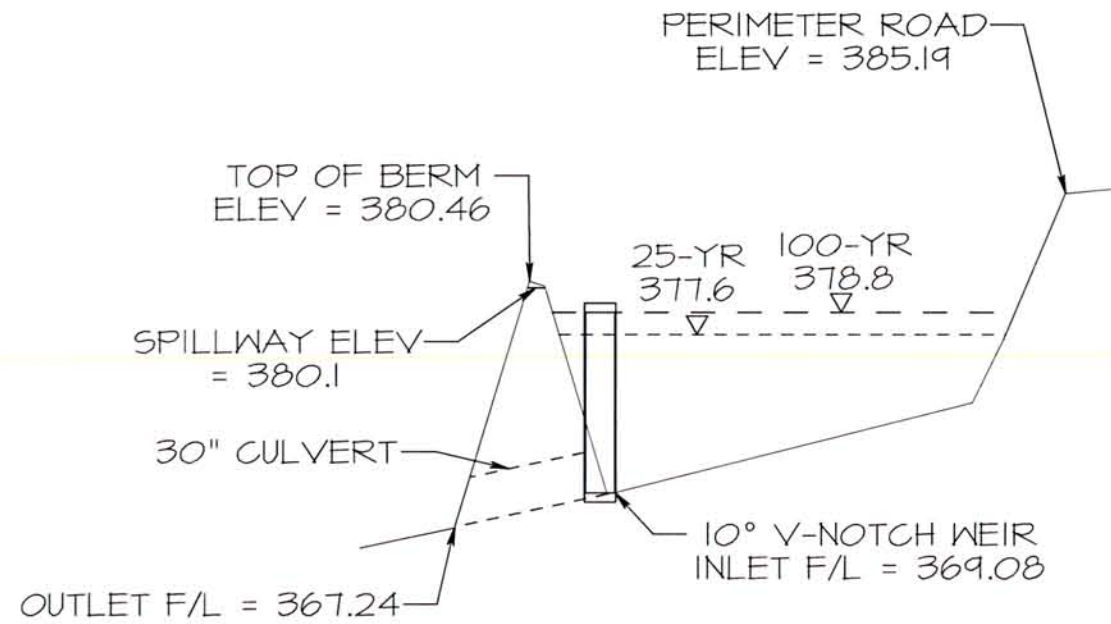
X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\c3\DET POND 1 & 2.pro



DETENTION POND LF-WI PLAN
SCALE: 1" = 120'



10° V-NOTCH WEIR
ELEVATION



DETENTION POND LF-WI SECTION

DETENTION POND LF-WI
ELEVATION - STORAGE - DISCHARGE
RELATIONSHIP

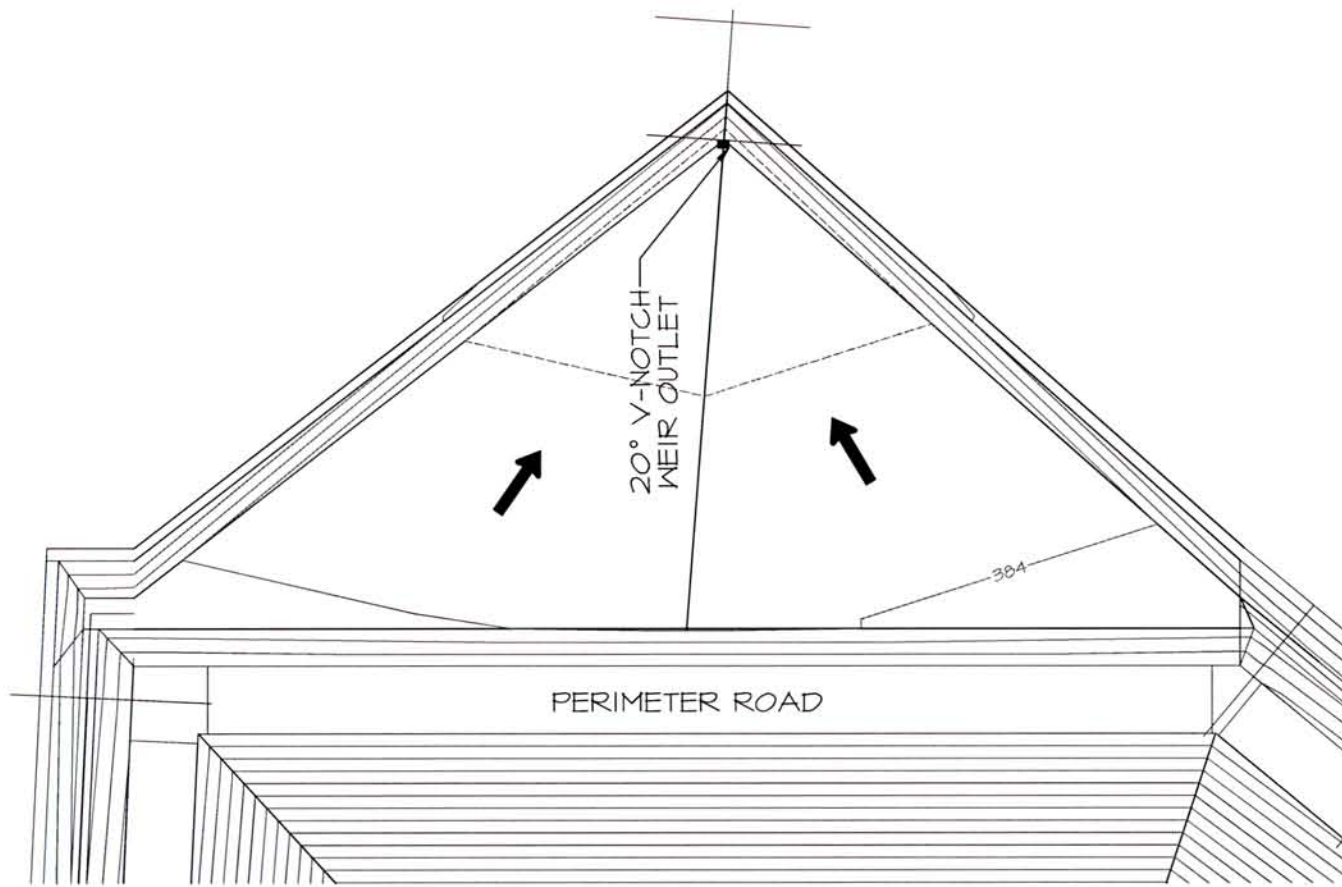
ELEVATION (FT)	VOLUME AT ELEV (AC-FT)
369	0.0
370	0.053
371	0.275
372	0.760
373	1.567
374	2.684
375	3.997
376	5.396
377	6.872
378	8.429
379	1.068
379.5	10.926



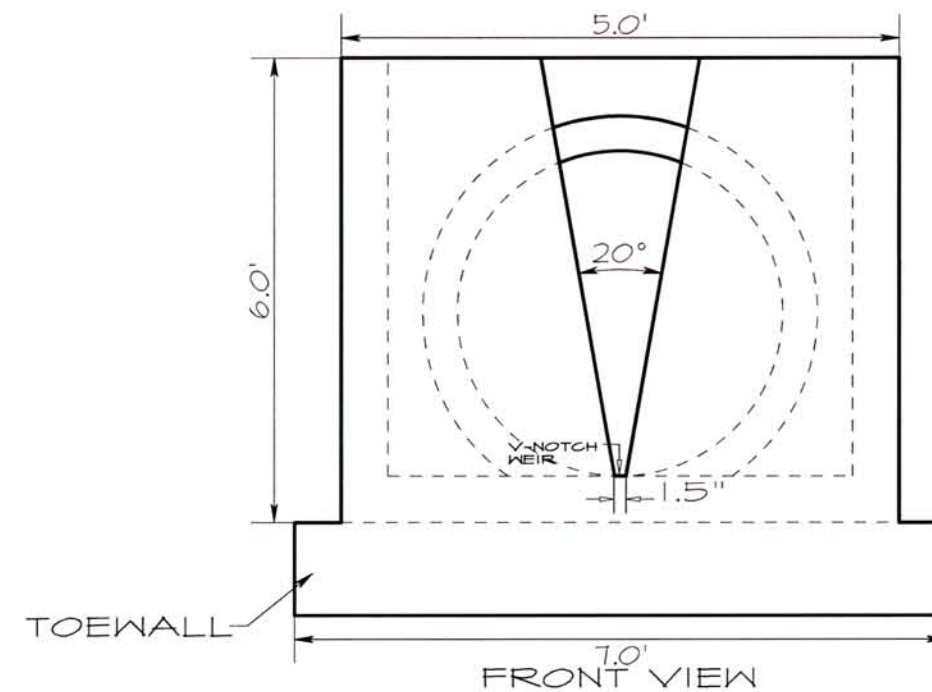
ISSUED FOR PERMITTING PURPOSES ONLY

DETENTION POND LF-WI HYDRAULICS AND DETAILS		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
Date	Revision/Description	
Drawn By BM	Checked By DK	Project No. 007021
		Dwg. Date 6/2013
© MTG 2012		Sheet No. C3-4

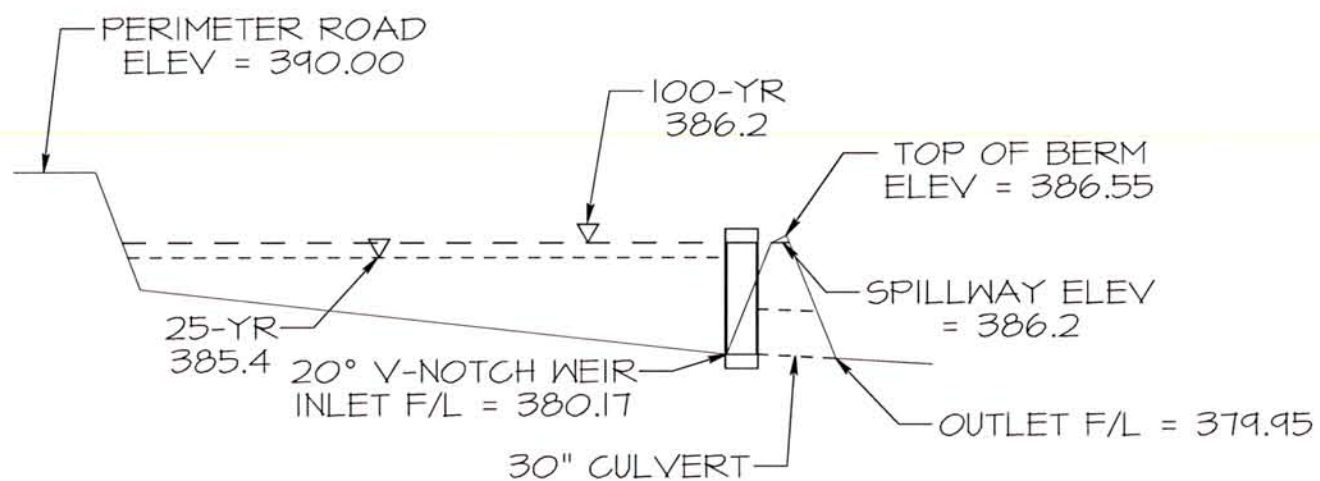
5430 SUMMERHILL RD. | P.O. BOX 3766
TEXARKANA TEXAS 75501
P 903.838.8533 | F 903.832.4700
www.mtgenr.com



DETENTION POND LF-W2 PLAN
SCALE: 1" = 120'



20° V-NOTCH WEIR
ELEVATION



DETENTION POND LF-W2 SECTION

DETENTION POND LF-W2
ELEVATION - STORAGE - DISCHARGE
RELATIONSHIP

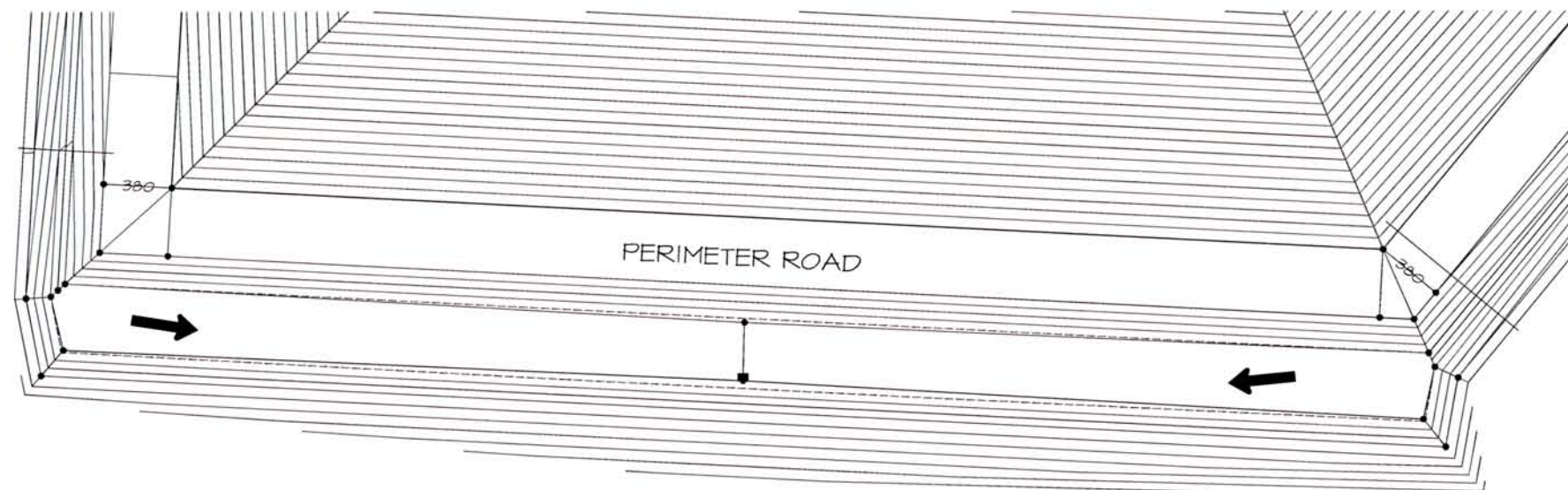
ELEVATION (FT)	VOLUME AT ELEV (AC-FT)
381	0.103
382	0.700
383	2.125
384	4.658
385	7.685
386	10.947



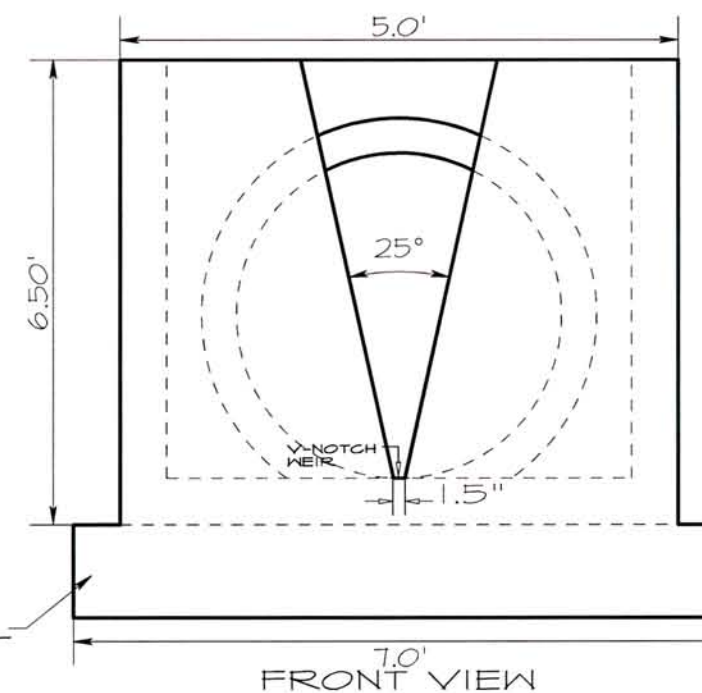
ISSUED FOR PERMITTING PURPOSES ONLY

DETENTION POND LF-W2 HYDRAULICS & DETAILS		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
Date	Revision/Description	
Drawn By BM	Checked By DH	Project No. 001021
Dwg. Date 6/2013	File No.	Sheet No. C3-5

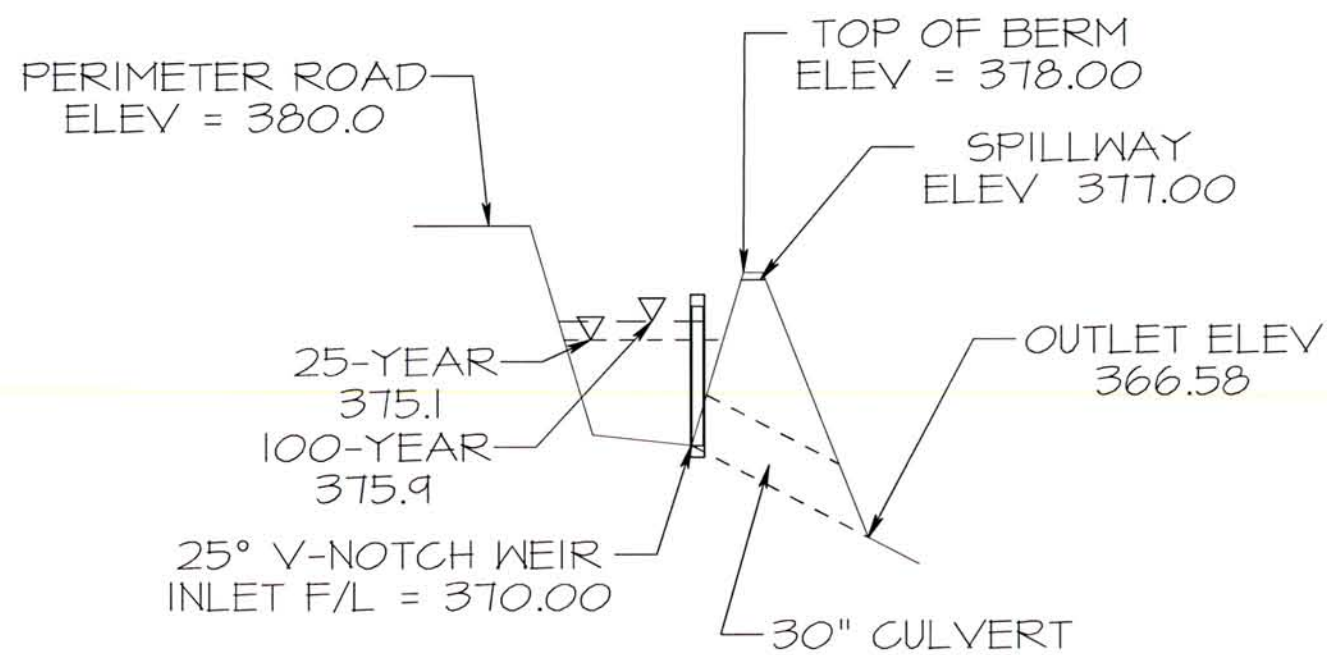
5430 SUMMERHILL RD. | P.O. BOX 3106
TEXARKANA TEXAS 75501
P 903.838.8533 | F 903.832.4700
www.mtgengineers.com
© MTG 2012 TBPE NO. 354



DETENTION POND LF-W4 PLAN
SCALE: 1" = 120'



25° V-NOTCH WEIR
ELEVATION



DETENTION POND LF-W4 SECTION

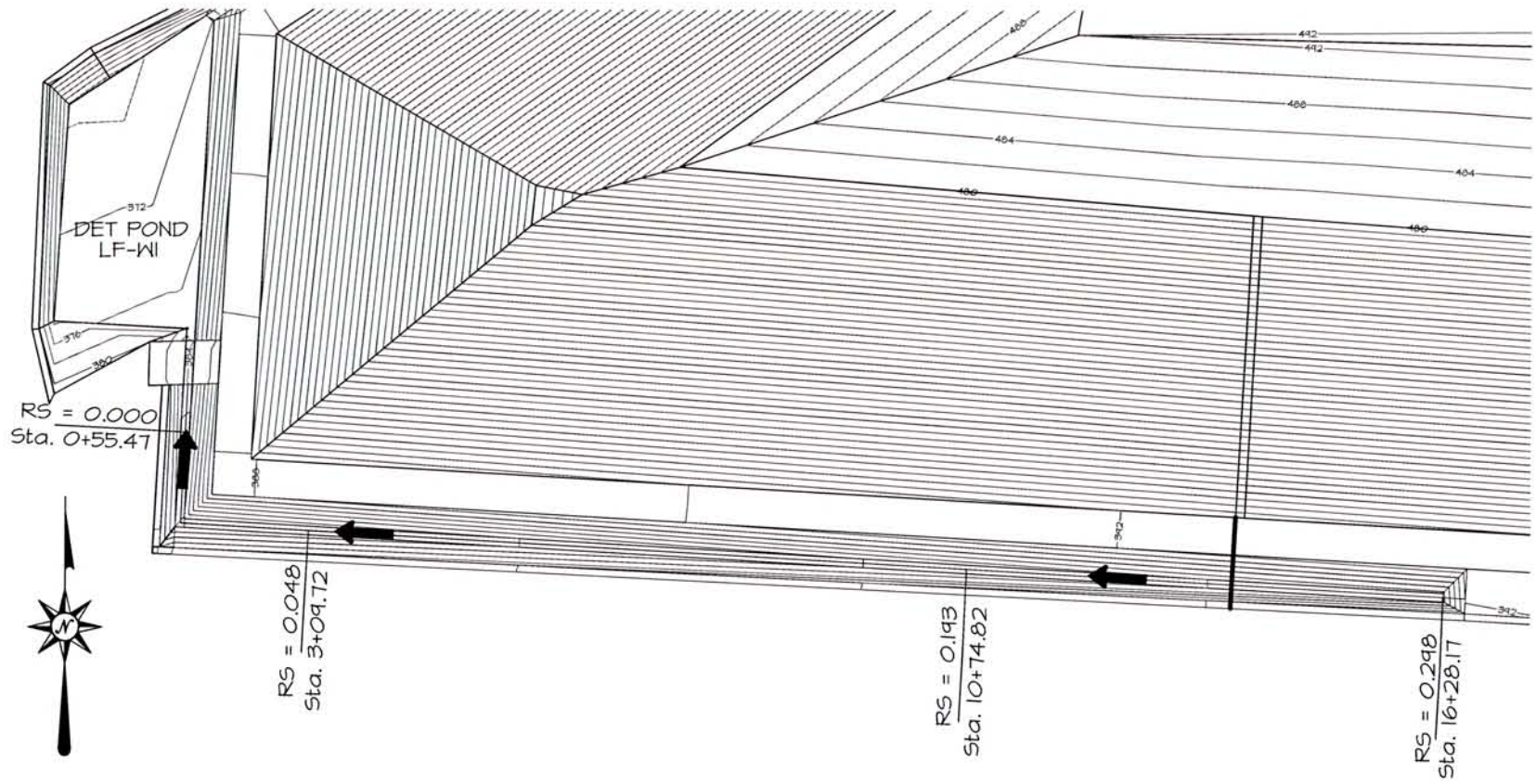
DETENTION POND LF-W4
ELEVATION - STORAGE - DISCHARGE
RELATIONSHIP

ELEVATION (FT)	VOLUME AT ELEV (AC-FT)
370	0.0
371	0.240
372	1.396
373	2.754
374	4.342
375	6.187
376	8.316
377	10.756
378	13.504

ISSUED FOR PERMITTING PURPOSES ONLY

DETENTION POND LF-W4 HYDRAULICS AND DETAILS		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
Date	Revision/Description	
Drawn By	Checked By	Project No.
BM	DW	001021
Dwg. Date	8/2013	
File No.	Sheet No.	
	C3-6	

5430 SUMMERHILL RD. | P.O. BOX 3766
TEXARKANA TEXAS 75501
P 903.838.8533 | F 903.832.4100
www.mtgengineers.com
© MTG 2012 TBPE NO. 354

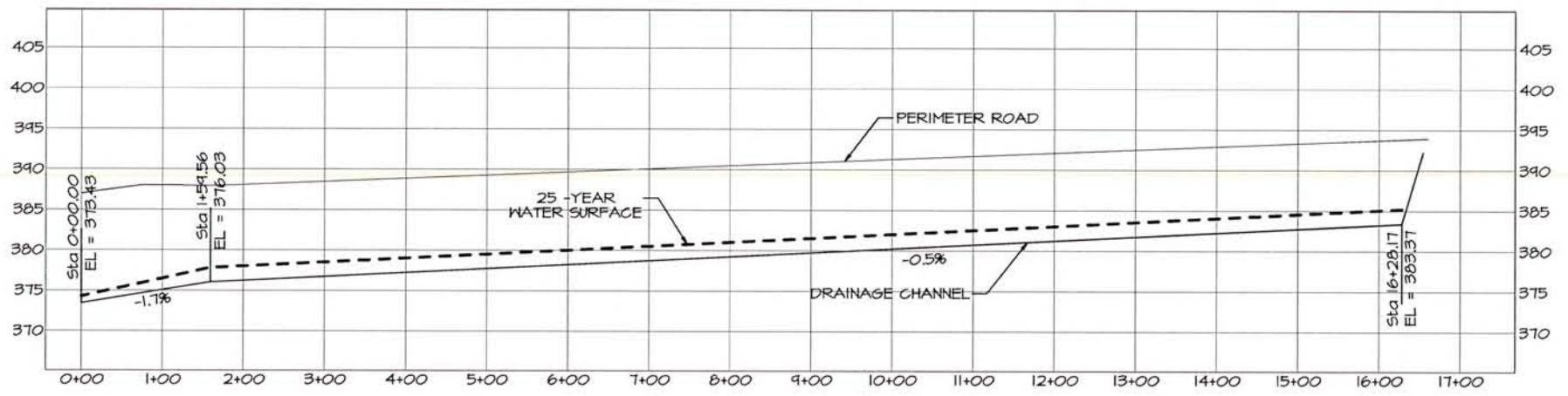
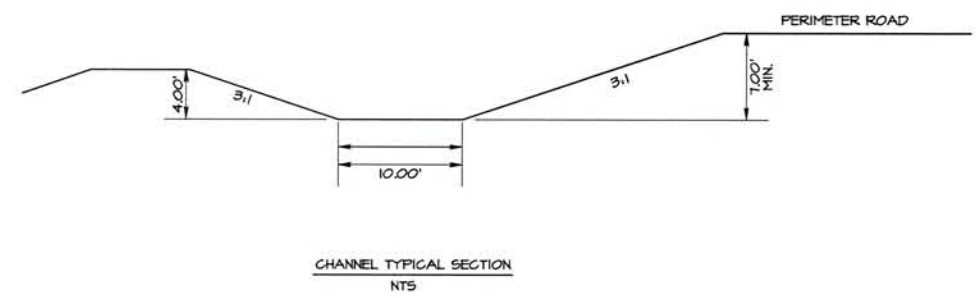


25-YEAR HYDRAULIC ANALYSIS

STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)
0+00 0+55	83.27	-1.7	1.83	5.60	10.0
0+55 3+10	83.27	-1.7	2.01	3.13	10.0
3+10 10+75	83.27	-0.5	1.78	3.11	10.0
10+75 16+28	83.27	-0.5	0.95	3.28	10.0

100-YEAR HYDRAULIC ANALYSIS

STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)
0+00 0+55	105.10	-1.7	1.42	5.98	10.0
0+55 3+10	105.10	-1.7	2.01	3.36	10.0
3+10 10+75	105.10	-0.5	2.02	3.32	10.0
10+75 16+28	105.10	-0.5	2.07	3.52	10.0



HORIZONTAL SCALE: 1" = 200'
 VERTICAL SCALE: 1" = 20'

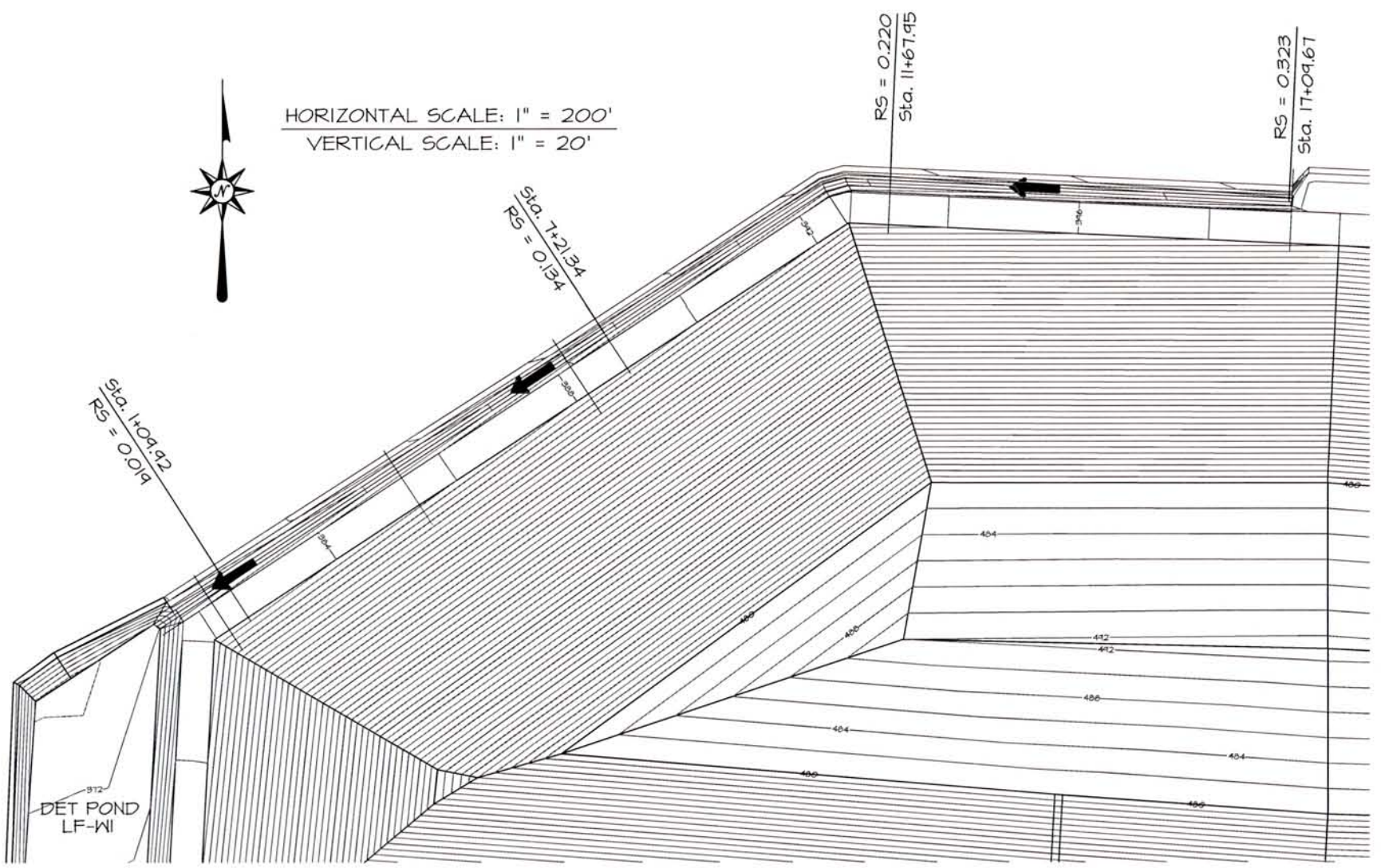
David Williams
 7/8/2013

ISSUED FOR PERMITTING PURPOSES ONLY

DRAINAGE CHANNEL LF-WII SOUTHERN CHANNEL PROFILE		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
Date	Revision/Description	5430 SUMMERHILL RD. P.O. BOX 3786 TEXARKANA TEXAS 75501 P 903.838.8533 F 903.832.4700 www.mtgengineers.com ©MTG 2012 TBPE NO. 354
Drawn By BM	Checked By DH	Project No. 001021
		Dwg. Date 6/2013
		File No.
		Sheet No. C3-7



HORIZONTAL SCALE: 1" = 200'
VERTICAL SCALE: 1" = 20'

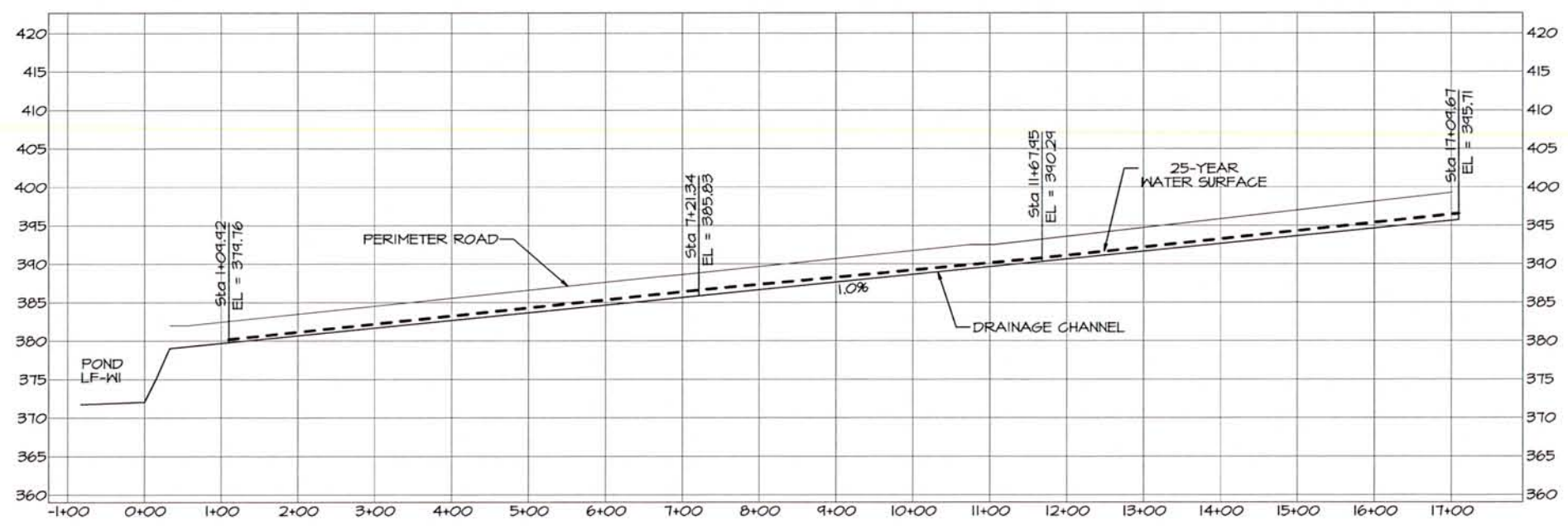
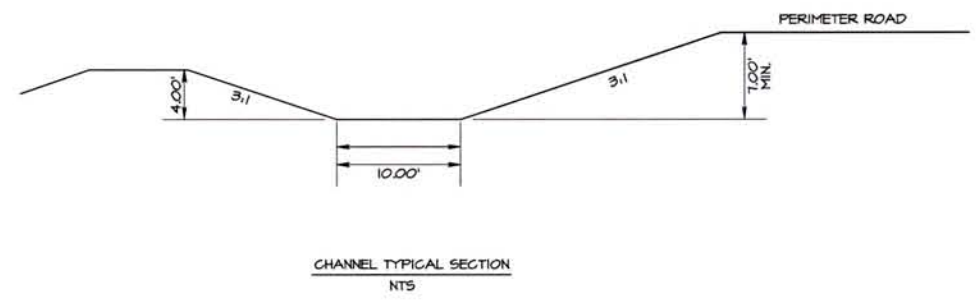


25-YEAR HYDRAULIC ANALYSIS

STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)
0+00 1+10	17.2	1.0	0.42	3.46	10.0
1+10 7+21	17.2	1.0	0.75	1.89	10.0
7+21 11+68	17.2	1.0	0.49	3.56	10.0
11+68 17+10	17.2	1.0	0.78	1.94	10.0

100-YEAR HYDRAULIC ANALYSIS

STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)
0+00 1+10	21.7	1.0	0.49	3.65	10.0
1+10 7+21	21.7	1.0	0.84	2.06	10.0
7+21 11+68	21.7	1.0	0.58	3.74	10.0
11+68 17+10	21.7	1.0	0.88	2.13	10.0



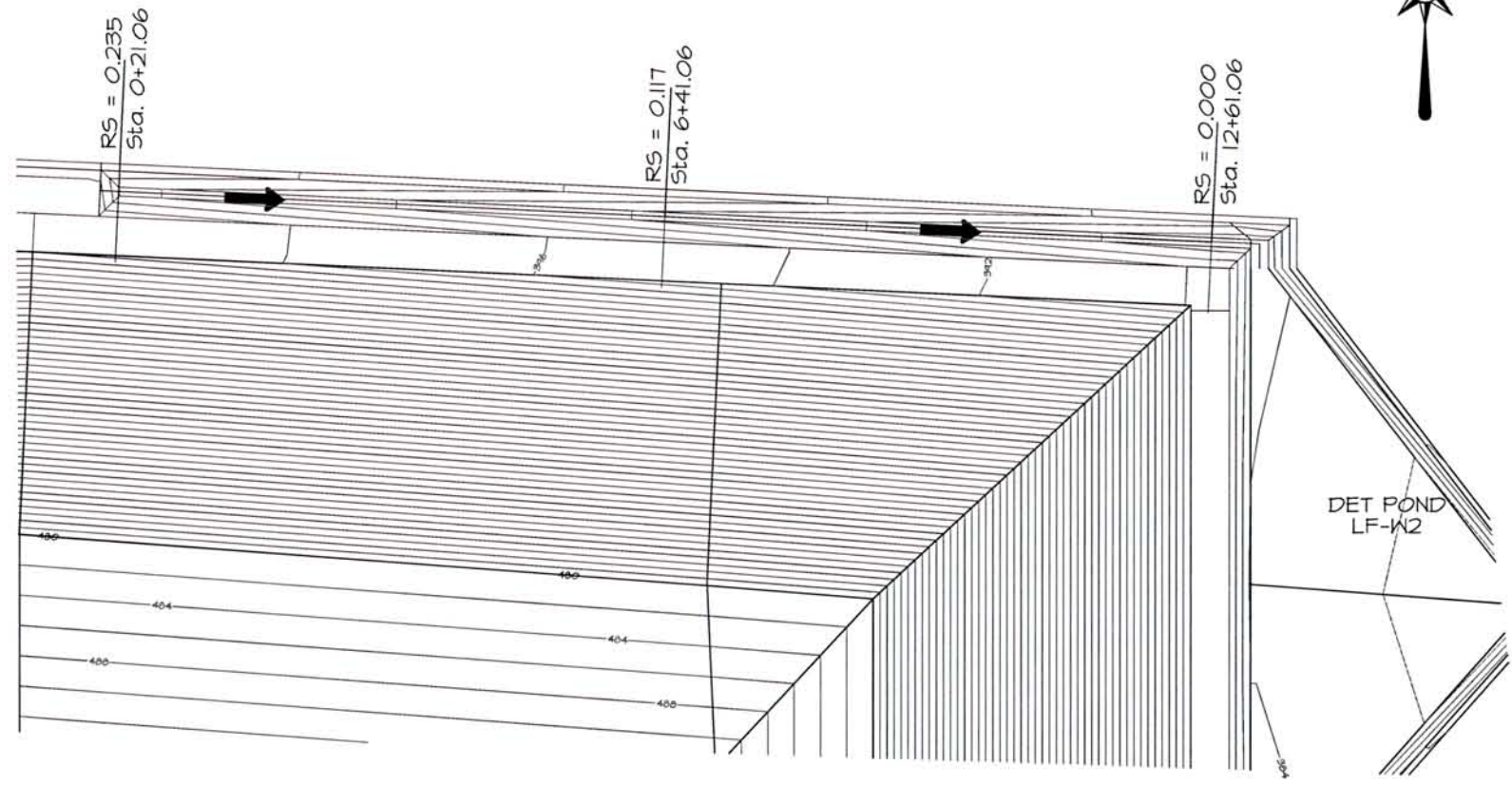
DAVID A. WILLIAMS
 66437
 REGISTERED PROFESSIONAL ENGINEER
David Williams
 7/8/2013
 ISSUED FOR PERMITTING PURPOSES ONLY

DRAINAGE CHANNEL LF-WI NORTHERN CHANNEL PROFILE		 MTG <i>engineers & surveyors</i>
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
Date	Revision/Description	
Drawn By BM	Checked By DW	Project No. 007021
	Dwg. Date 6/2013	File No. TBPE NO. 354
		Sheet No. C3-8

5430 SUMMERHILL RD. | P.O. BOX 3786
 TEXARKANA TEXAS 75501
 P 903.838.8533 | F 903.832.4700
 www.mtgengineers.com
 © MTG 2012

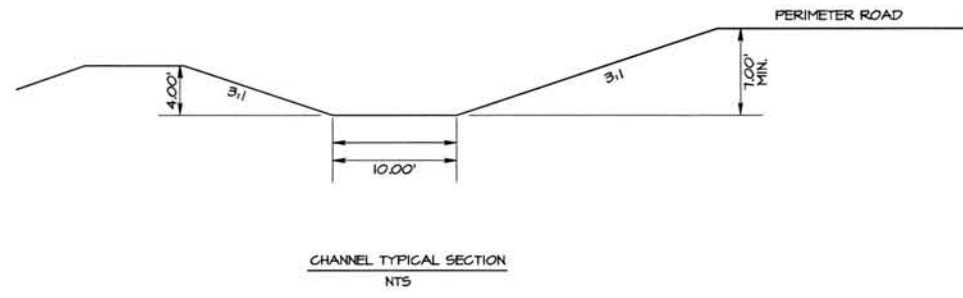
X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\Attachment_C3_Final.pro

X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\Attachment C3_Final.dwg

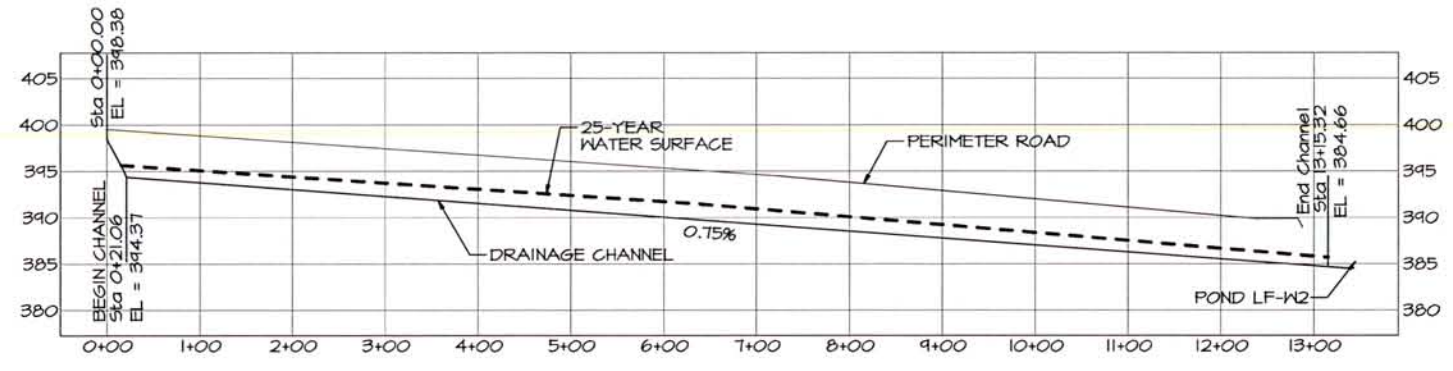


25-YEAR HYDRAULIC ANALYSIS						
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	
0+00 0+21	84.13	0.75	1.25	4.13	10.0	
0+21 6+41	84.13	0.75	1.77	2.61	10.0	
6+41 12+61	84.13	0.75	1.08	5.12	10.0	

100-YEAR HYDRAULIC ANALYSIS						
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	
0+00 0+21	106.20	0.75	1.42	4.33	10.0	
0+21 6+41	106.20	0.75	1.97	2.80	10.0	
6+41 12+61	106.20	0.75	1.23	5.42	10.0	



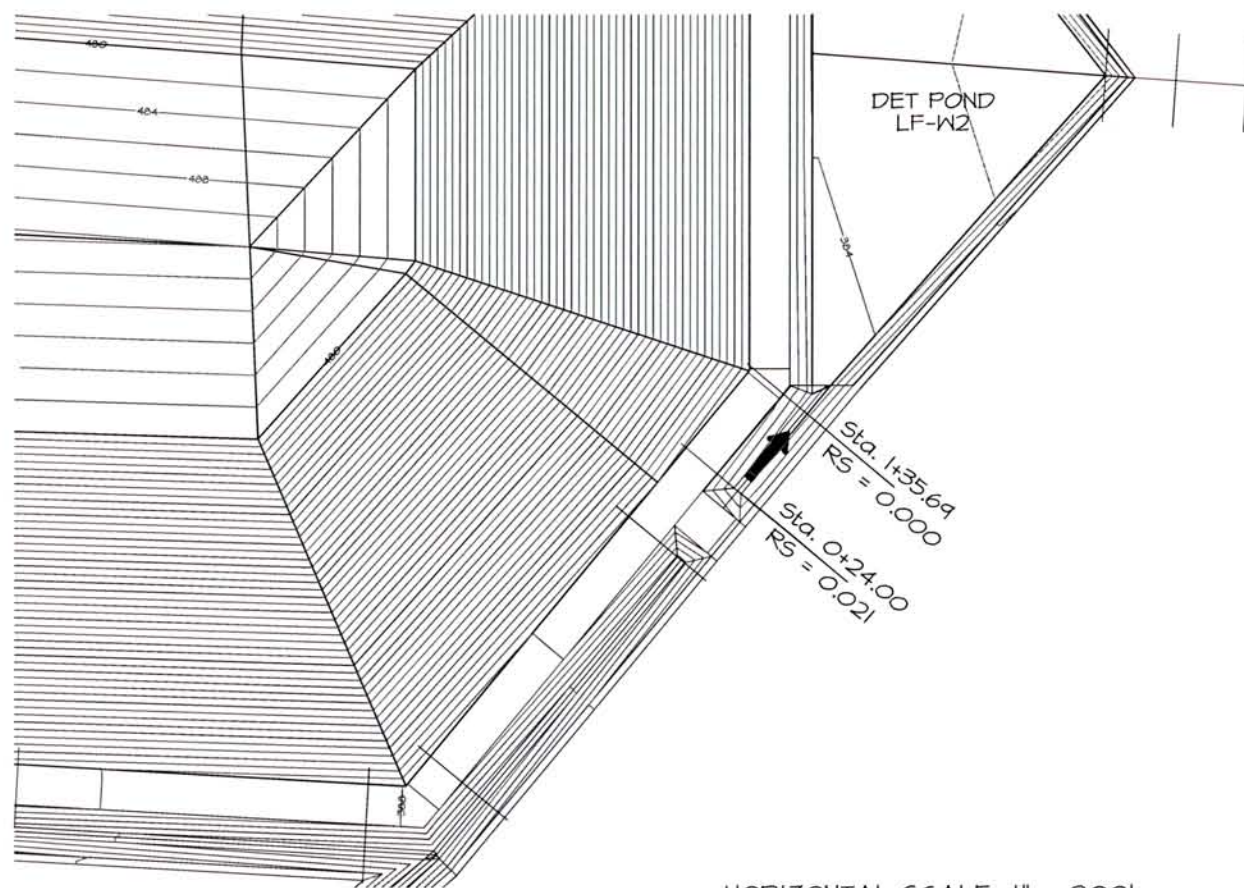
HORIZONTAL SCALE: 1" = 200'
VERTICAL SCALE: 1" = 20'



ISSUED FOR PERMITTING PURPOSES ONLY

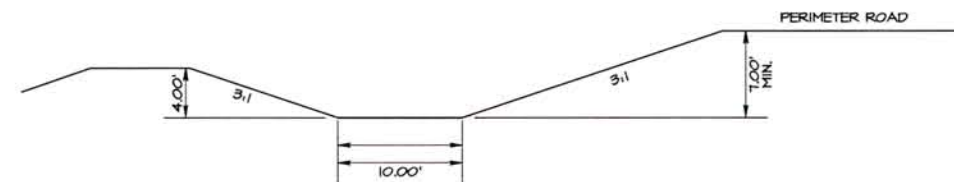
DRAINAGE CHANNEL LF-W2 NORTHERN CHANNEL PROFILE		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
Date	Revision/Description	
Drawn By BM	Checked By DK	Project No. 007021
	Dwg. Date 6/2013	
File No.		Sheet No. C3-9

5930 SUMMERHILL RD. | P.O. BOX 3786
TEXARKANA TEXAS 75501
P 903.838.8533 | F 903.832.4700
www.mtgengineers.com
© MTG 2012 TBPE No. 354

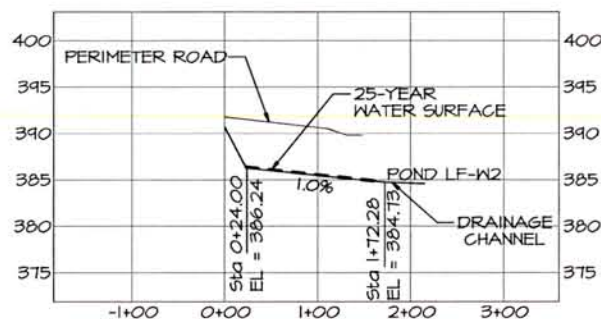


HORIZONTAL SCALE: 1" = 200'
 VERTICAL SCALE: 1" = 20'

25-YEAR HYDRAULIC ANALYSIS						
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	
0+00 1+34	1.24	1.0	0.17	0.69	10.0	
1+34 1+68	1.24	1.0	0.11	1.71	10.0	
100-YEAR HYDRAULIC ANALYSIS						
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	
0+00 1+34	1.56	1.0	0.18	0.79	10.0	
1+34 1+68	1.56	1.0	0.14	1.52	10.0	

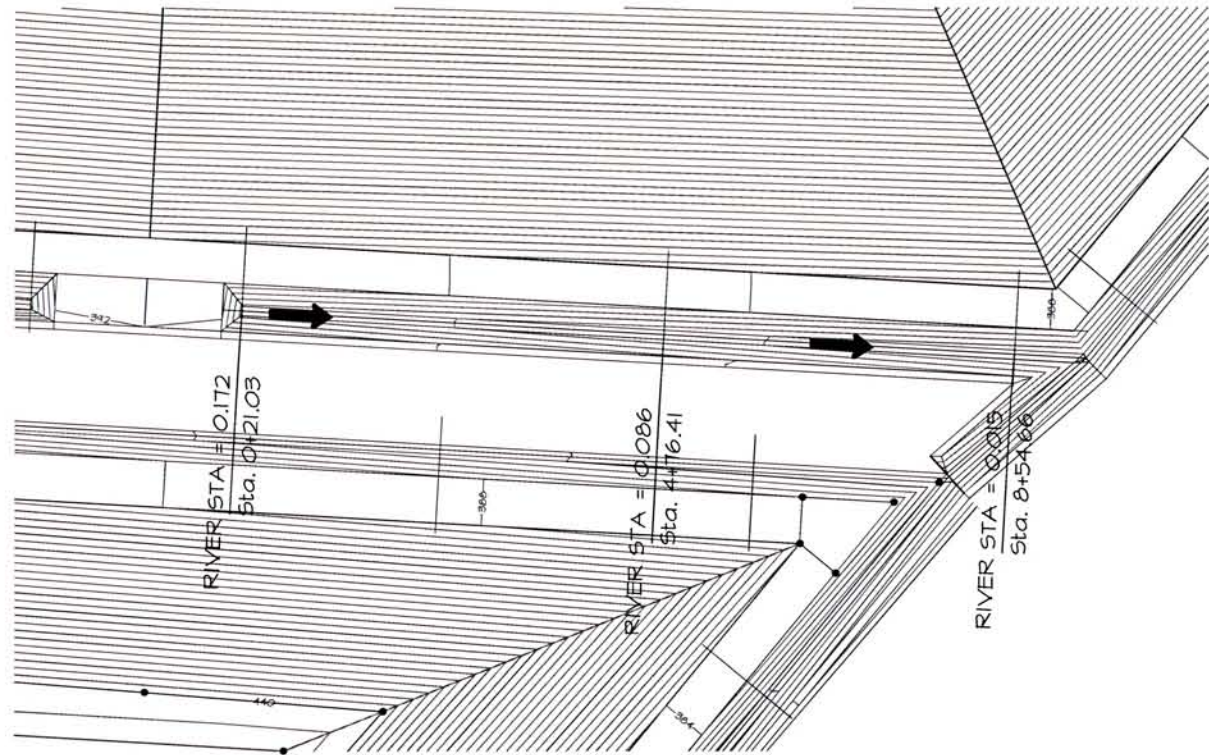


CHANNEL TYPICAL SECTION
 NTS

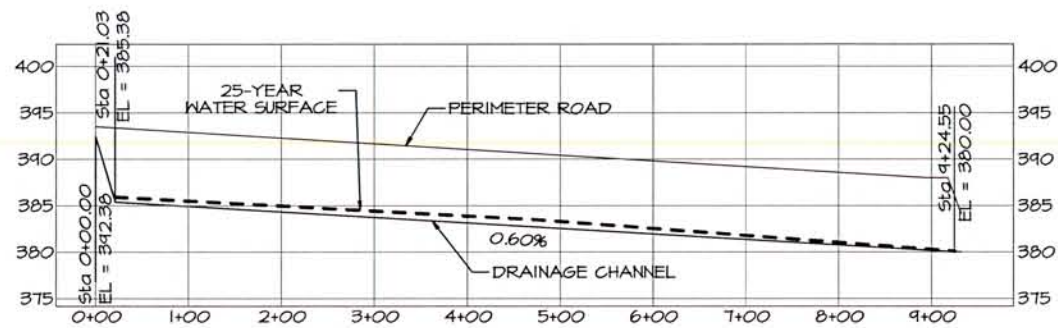


ISSUED FOR PERMITTING PURPOSES ONLY

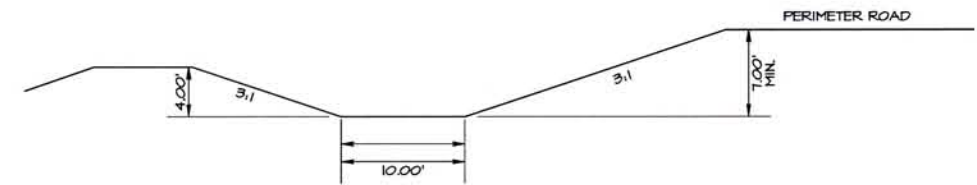
DRAINAGE CHANNEL LF-W2 SOUTHERN CHANNEL PROFILE		 5430 SUMMERHILL RD. P.O. BOX 3166 TEXARKANA TEXAS 75501 P 903.836.8533 F 903.832.4100 www.mtgengineers.com	
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION			
Date	Revision/Description		
Drawn By BM	Checked By DK	Project No. 001021	Dwg. Date 6/2013
File No.	Sheet No. C3-10		© MTG 2012 TBPE NO. 354



HORIZONTAL SCALE: 1" = 200'
 VERTICAL SCALE: 1" = 20'



25-YEAR HYDRAULIC ANALYSIS						
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	
0+00 0+21	14.23	0.6	0.52	2.61	10.0	
0+21 4+76	14.23	0.6	0.80	1.45	10.0	
4+76 8+55	14.23	0.6	0.41	3.33	10.0	
100-YEAR HYDRAULIC ANALYSIS						
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	
0+00 0+21	17.89	0.6	0.59	2.76	10.0	
0+21 4+76	17.89	0.6	0.90	1.58	10.0	
4+76 8+55	17.89	0.6	0.47	3.55	10.0	



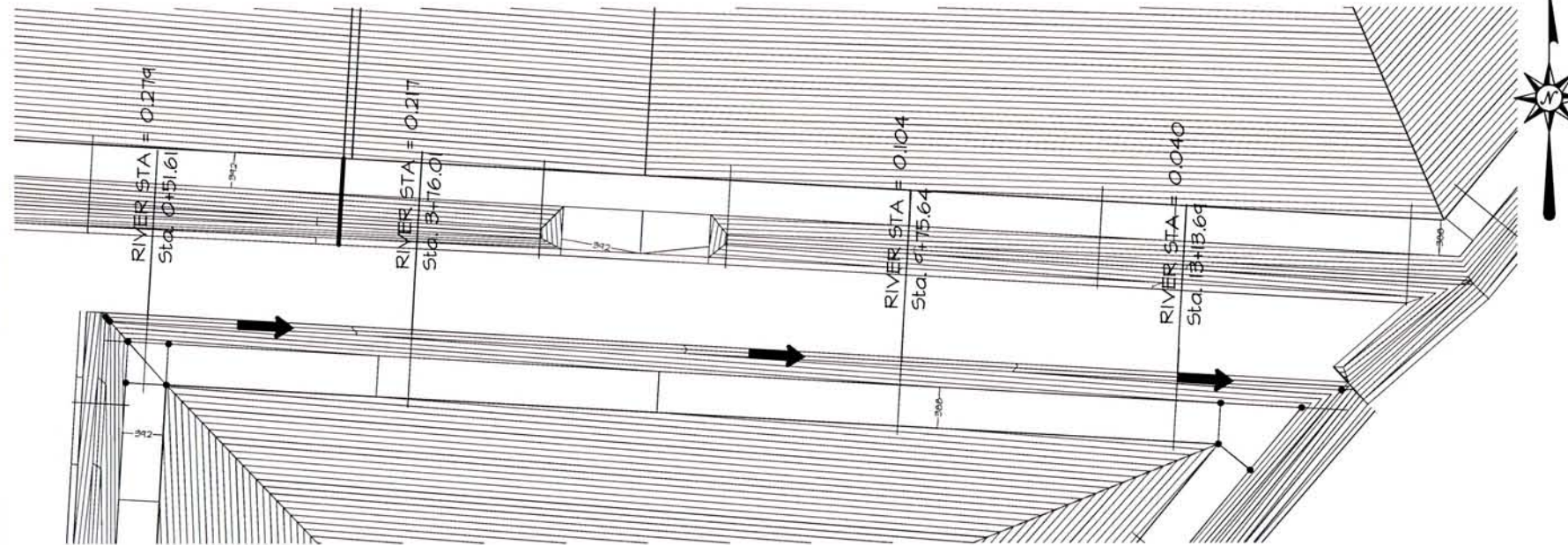
CHANNEL TYPICAL SECTION
 NTS



ISSUED FOR PERMITTING PURPOSES ONLY

DRAINAGE CHANNEL LF-W4 NORTHERN W-E CHANNEL PROFILE		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
Date	Revision/Description	
Drain By BM	Checked By DH	Project No. 007021
		Dwg. Date 6/2013
		File No.
		Sheet No. C3-11

5930 SUMMERHILL RD. | P.O. BOX 3706
 TEXARKANA TEXAS 75501
 P 903.838.8583 | F 903.832.4700
 www.mtgenr.com
 © MTG 2012 TBPE No. 354



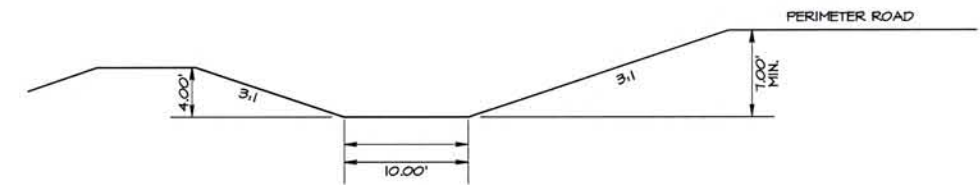
25-YEAR HYDRAULIC ANALYSIS

STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)
0+00 0+52	26.28	0.5	1.06	1.93	10.0
0+52 3+76	26.28	0.5	0.79	2.74	10.0
3+76 9+76	26.28	0.5	1.15	1.70	10.0
9+76 13+14	26.28	0.5	0.58	3.98	10.0

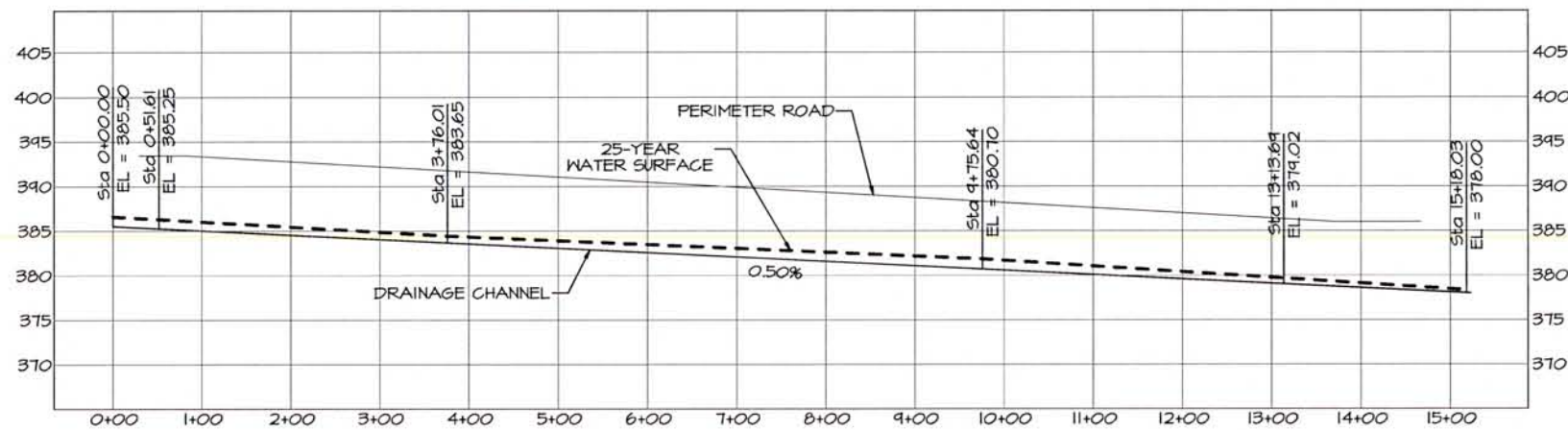
100-YEAR HYDRAULIC ANALYSIS

STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)
0+00 0+52	33.05	0.5	1.19	2.10	10.0
0+52 3+76	33.05	0.5	0.91	2.89	10.0
3+76 9+76	33.05	0.5	1.29	1.84	10.0
9+76 13+14	33.05	0.5	0.66	4.25	10.0

HORIZONTAL SCALE: 1" = 200'
VERTICAL SCALE: 1" = 20'

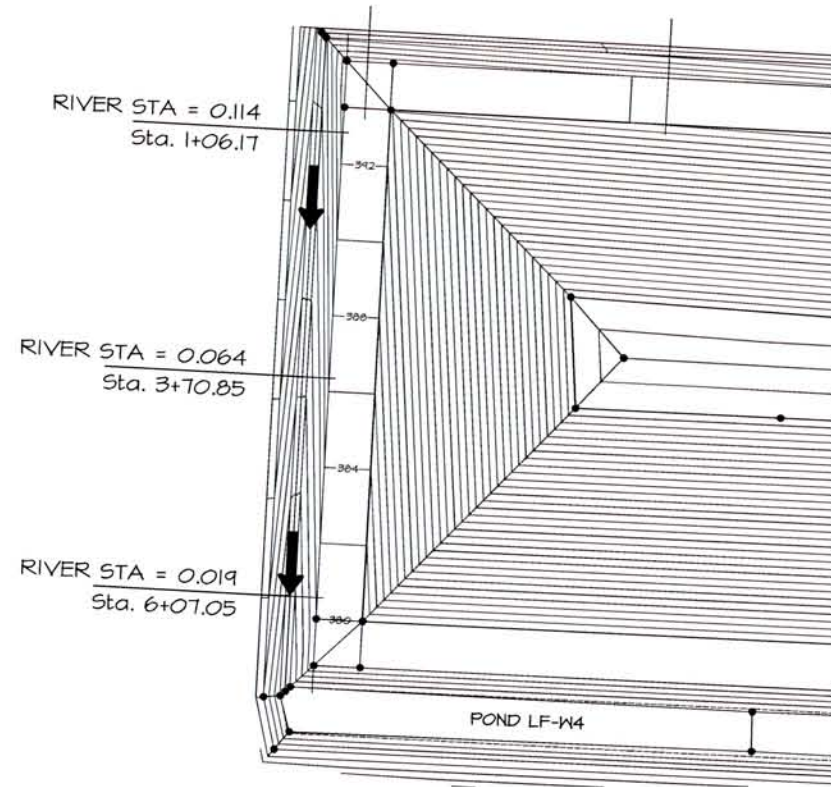


CHANNEL TYPICAL SECTION
NTS

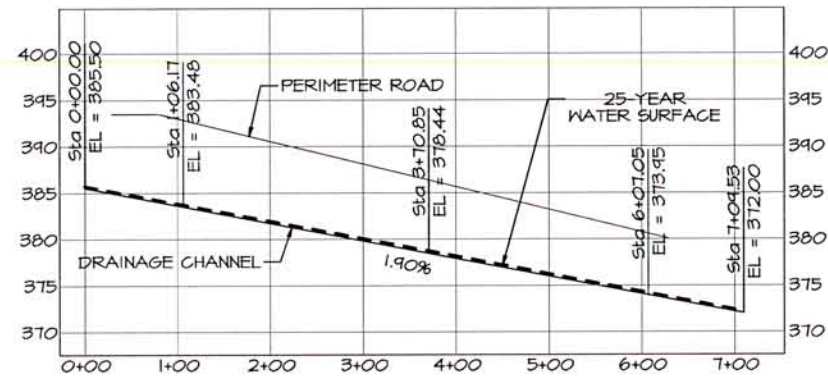


7/8/2013
ISSUED FOR PERMITTING PURPOSES ONLY

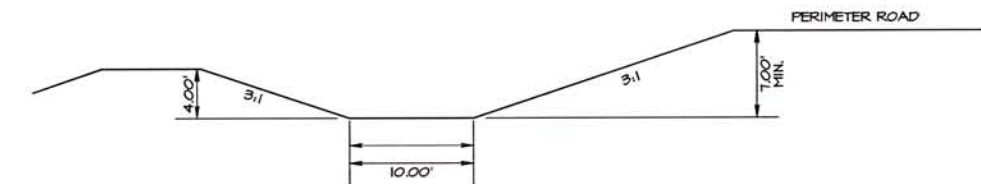
DRAINAGE CHANNEL W-3 CHANNEL PROFILE		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
<small>5430 SUMMERHILL RD. P.O. BOX 3706 TEXARKANA TEXAS 75501 P 903.838.8533 F 903.832.4700 www.mtgengineers.com</small>		
<small>© MTG 2012 TBPE NO. 354</small>		<small>Sheet No.</small> C3-12



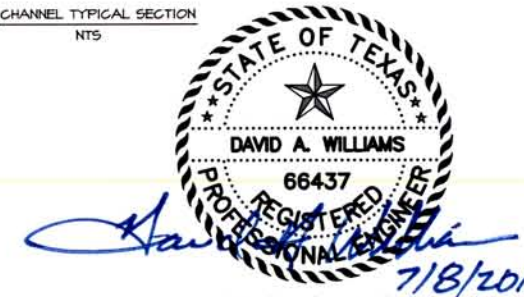
HORIZONTAL SCALE: 1" = 200'
 VERTICAL SCALE: 1" = 20'



25-YEAR HYDRAULIC ANALYSIS						
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	
0+00 1+06	5.55	1.9	0.29	2.31	10.0	
1+06 3+71	5.55	1.9	0.42	3.18	10.0	
3+71 6+07	5.55	1.9	0.29	1.70	10.0	
100-YEAR HYDRAULIC ANALYSIS						
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	
0+00 1+06	6.97	1.9	0.31	2.68	10.0	
1+06 3+71	6.97	1.9	0.38	1.82	10.0	
3+71 6+07	6.97	1.9	2.70	2.70	10.0	



CHANNEL TYPICAL SECTION
 NTS

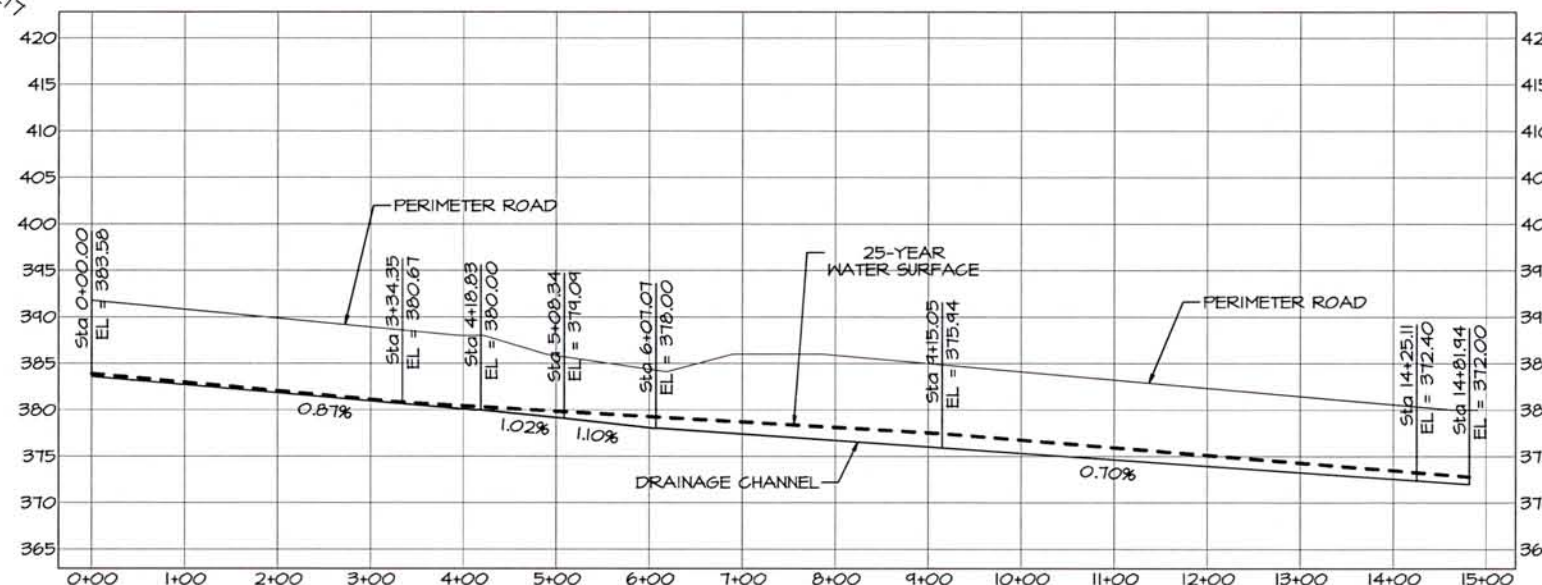
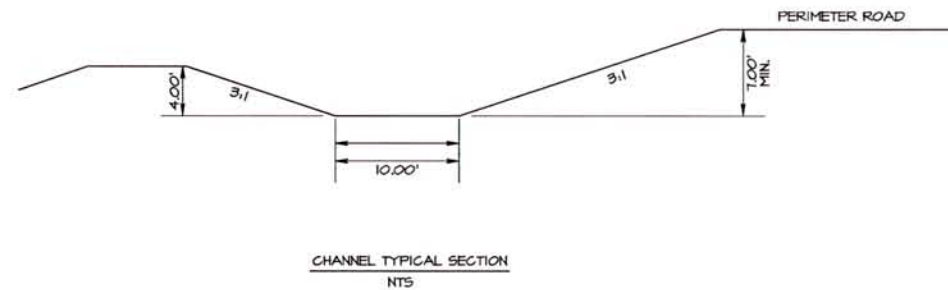
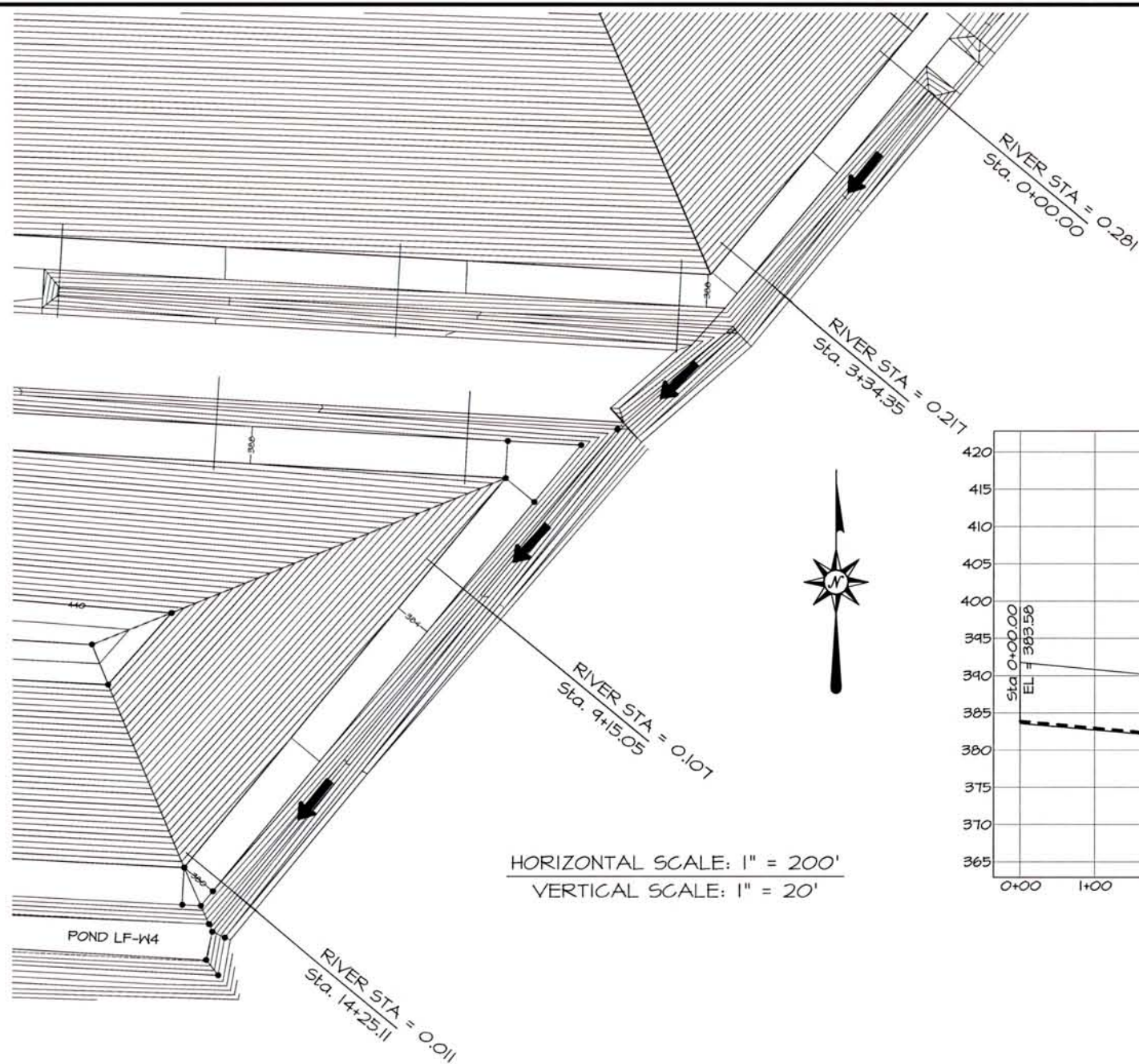


ISSUED FOR PERMITTING PURPOSES ONLY

DRAINAGE CHANNEL LF-W4 WESTERN CHANNEL PROFILE		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
Date	Revision/Description	
Drawn By BM	Checked By DM	Project No. 007021
		Dwg. Date 6/2013
		File No.
		Sheet No. C3-13

5430 SUMMERHILL RD. | P.O. BOX 3786
 TEXARKANA TEXAS 75501
 P 903.838.8533 | F 903.832.4700
 www.mtgengineers.com
 © MTG 2012 TBPE NO. 354

X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\Attachment C3_Final.pro



25-YEAR HYDRAULIC ANALYSIS						100-YEAR HYDRAULIC ANALYSIS					
STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)	STATION	FLOW RATE (CFS)	BOTTOM SLOPE (%)	NORMAL DEPTH (FT)	FLOW VEL (FPS)	BOTTOM WIDTH (FEET)
0+00 3+34	3.48	0.87	0.32	1.00	10.0	0+00 3+34	3.48	0.87	0.36	1.08	10.0
3+34 9+15	53.31	0.7	1.56	2.41	10.0	3+34 9+15	53.31	0.7	1.75	2.61	10.0
9+15 14+25	53.31	0.7	0.99	4.86	10.0	9+15 14+25	53.31	0.7	1.03	5.14	10.0



ISSUED FOR PERMITTING PURPOSES ONLY
7/8/2013

DRAINAGE CHANNEL LF-W4
SOUTHERN LF E CHANNEL PROFILE

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

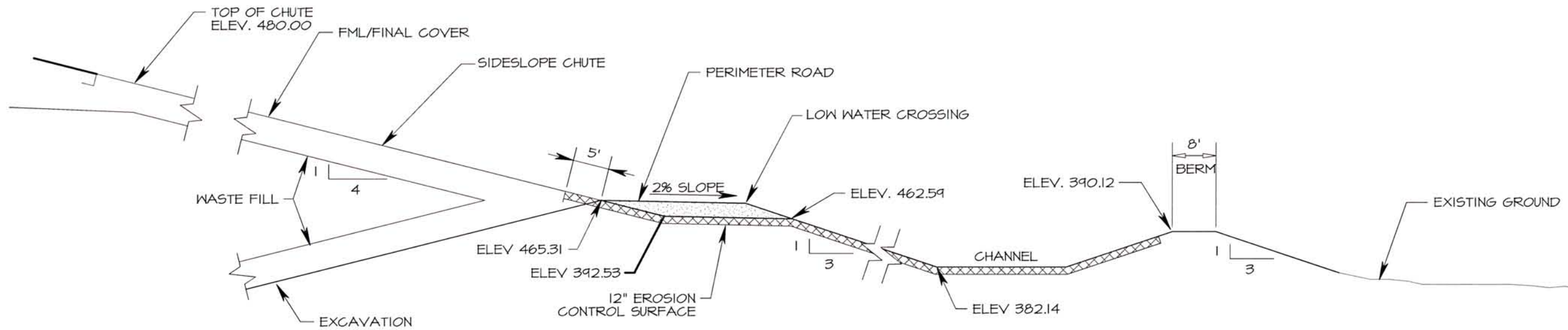
5430 SUMMERHILL RD. | P.O. BOX 3786
TEXARKANA TEXAS 75501
P 903.836.8533 | F 903.832.4700
www.mtgengineers.com

© MTG 2012 TBPE NO. 354

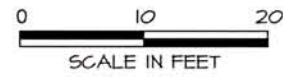
Drawn By: BM, Checked By: DM, Project No: 007021, Dwg. Date: 6/2013

File No. Sheet No. **C3-14**

X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\Attachment C3_Final.pro

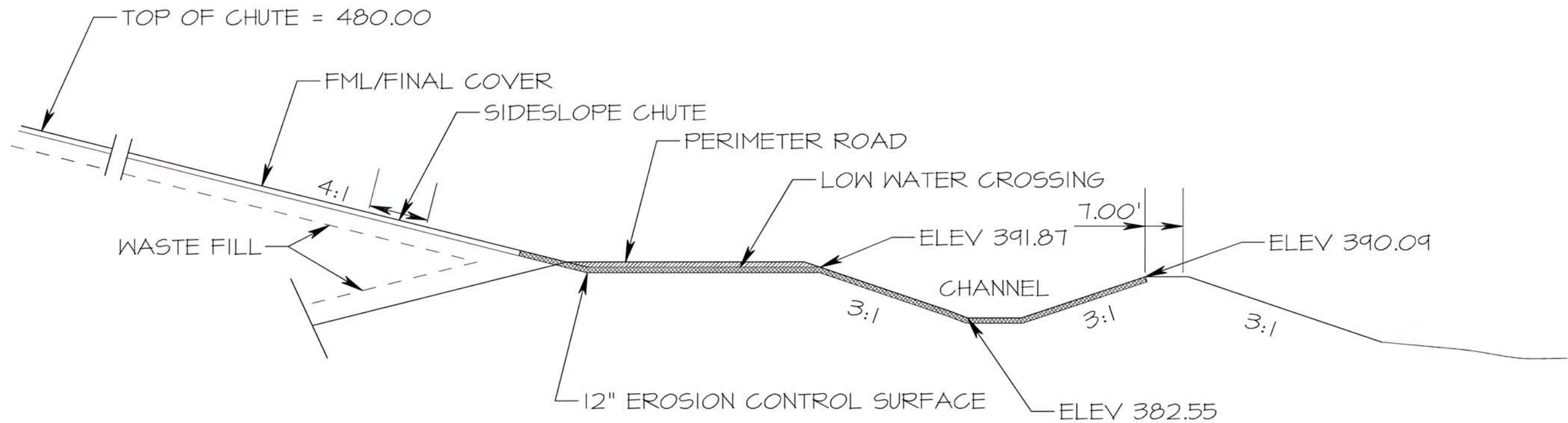


TYPICAL CHUTE PROFILES



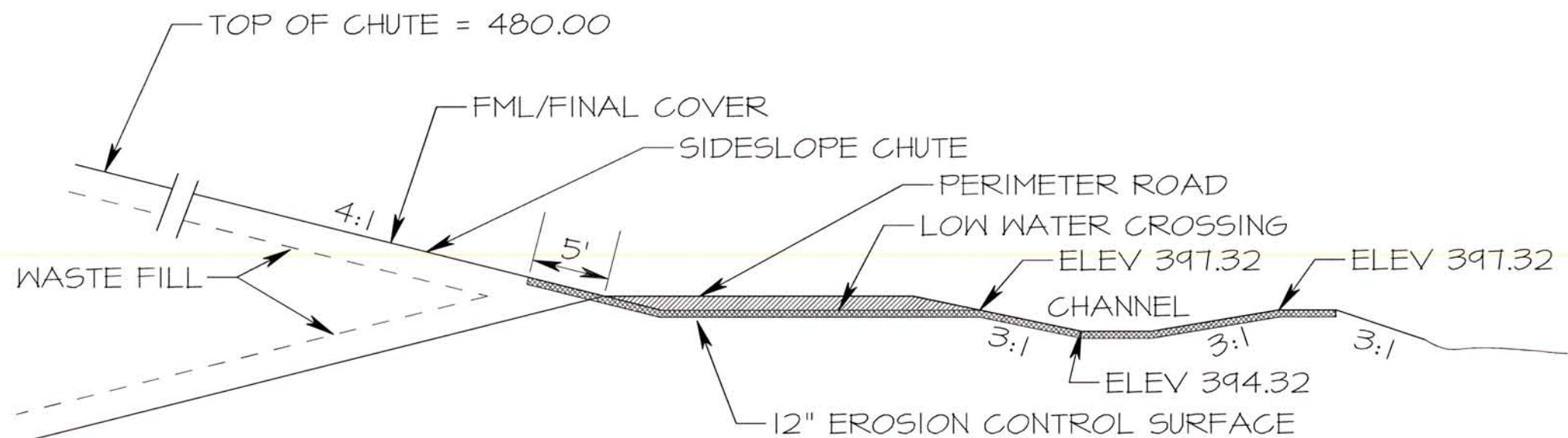
ISSUED FOR PERMITTING PURPOSES ONLY

TYPICAL CHUTE PROFILES				
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION				
Date	Revision/Description			5430 SUMMERHILL RD. P.O. BOX 3786 TEXARKANA TEXAS 75501 P 903.838.8533 F 903.832.4100 www.mtgengineers.com
Drawn By BM	Checked By DW	Project No. 007021	Dwg. Date 6/2013	© MTG 2012 TBPE NO. 354 File No. Sheet No. C3-15



CHUTE 02 PROFILE

SCALE: 1" = 20'



CHUTE 01 PROFILE

SCALE: 1" = 20'

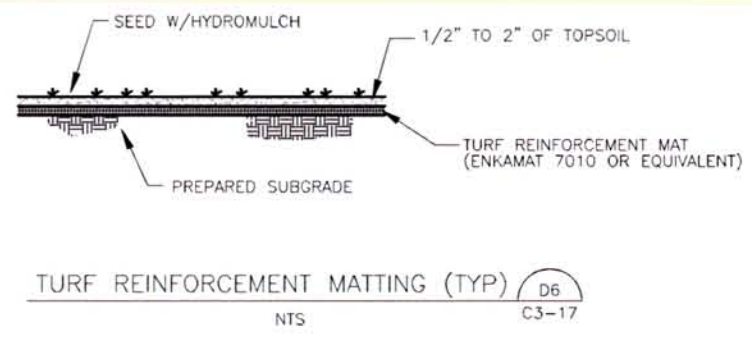
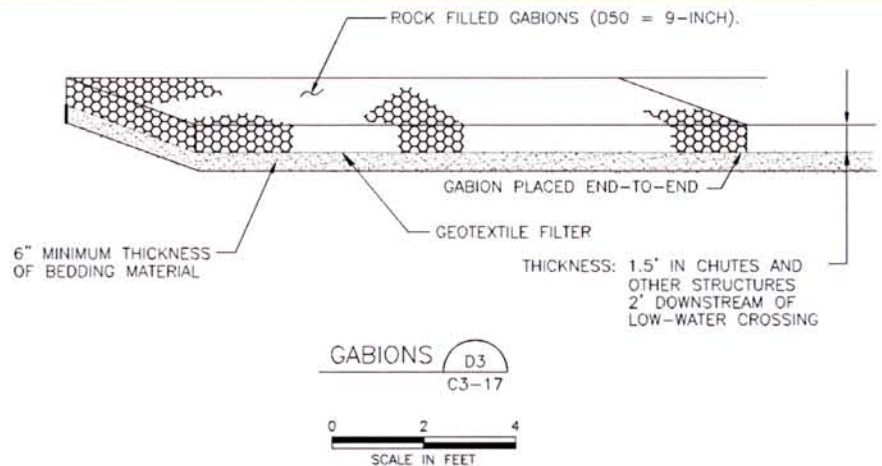
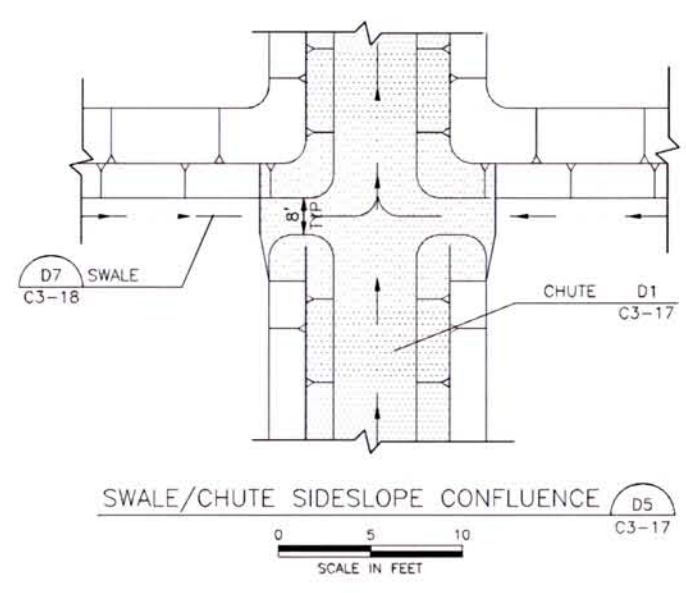
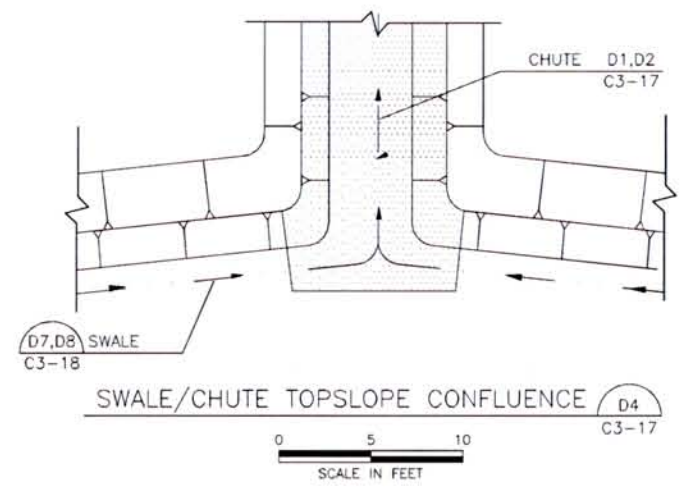
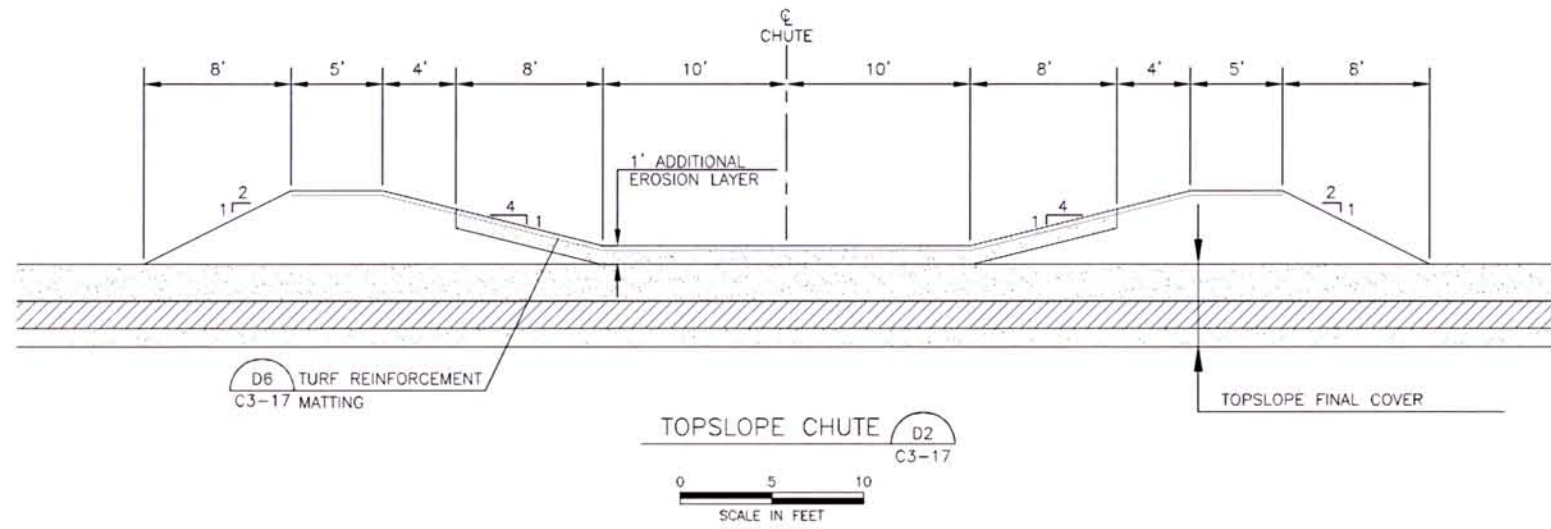
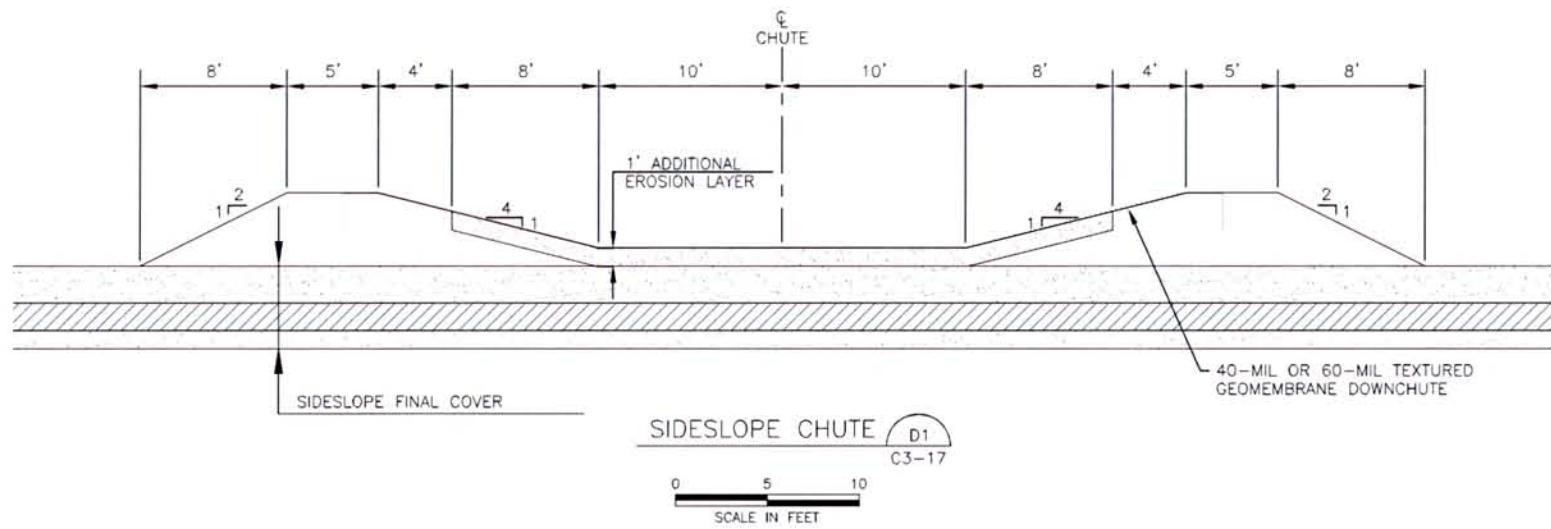


David A. Williams
7/18/2013

ISSUED FOR PERMITTING PURPOSES ONLY

CHUTE 01 AND 02 PROFILES			
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION			
Date	Revision/Description		
Drawn By BM	Checked By DW	Project No. 001021	Dwg. Date 6/2013
© MTG 2012		TBPE NO. 354	
File No.		Sheet No. C3-16	

X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\C3-17_to_C3-19.dwg Layout: C3-17 User: dwilliams



ISSUED FOR INFORMATION ONLY

REVISIONS						
REV	DATE	DESCRIPTION	OWN BY	DES BY	CHK BY	APP BY
1	10/22/09	TECHNICALLY COMPLETE	GLW	KJW	KJW	KJW

DRAINAGE DETAILS

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS
CONSULTING ENGINEERS
MANSFIELD
DALLAS • WICHITA FALLS
817-563-1144

TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

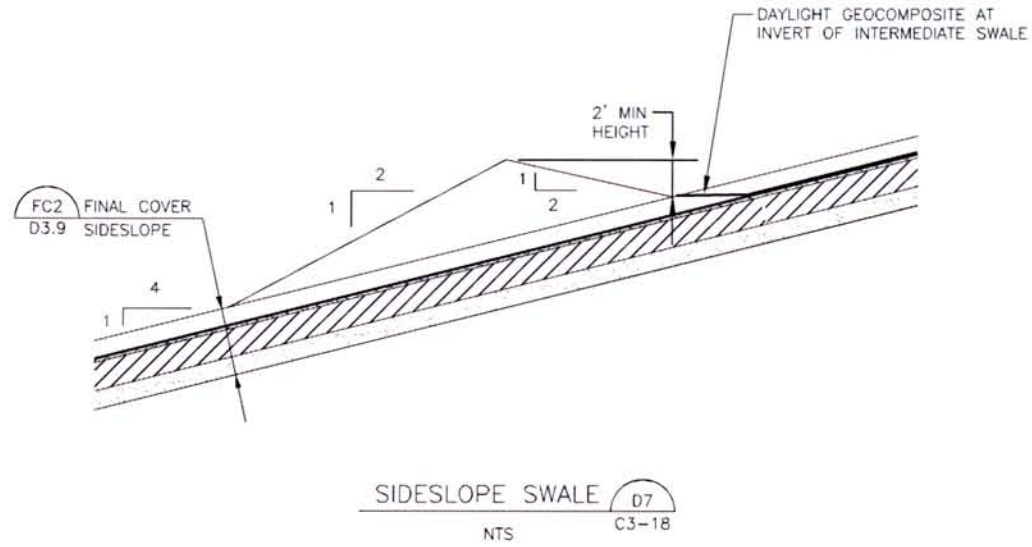
MTG
engineers & surveyors

5930 SUMMERHILL TEXARKANA, TEXAS 75501
CIVIL *** ENVIRONMENTAL *** SURVEYING
Phone (903) 838-8533 FAX (903) 832-4700

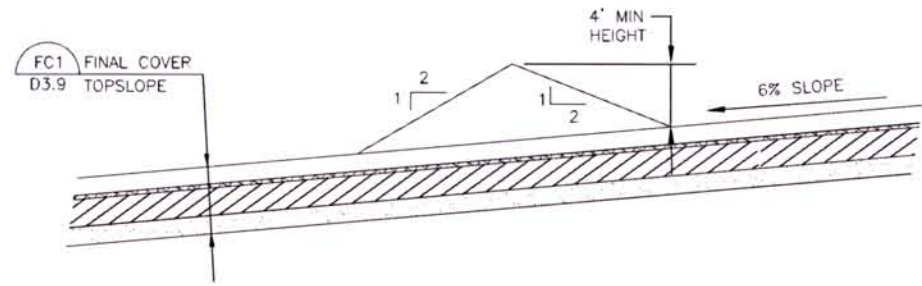
TBPE FIRM NO. F-354

DSN. FAW	DATE : 05/11	DRAWING
DWN. FAW	SCALE : GRAPHIC	
CHK. KJW	DWG : C3-17_to_C3-19.dwg	C3-17

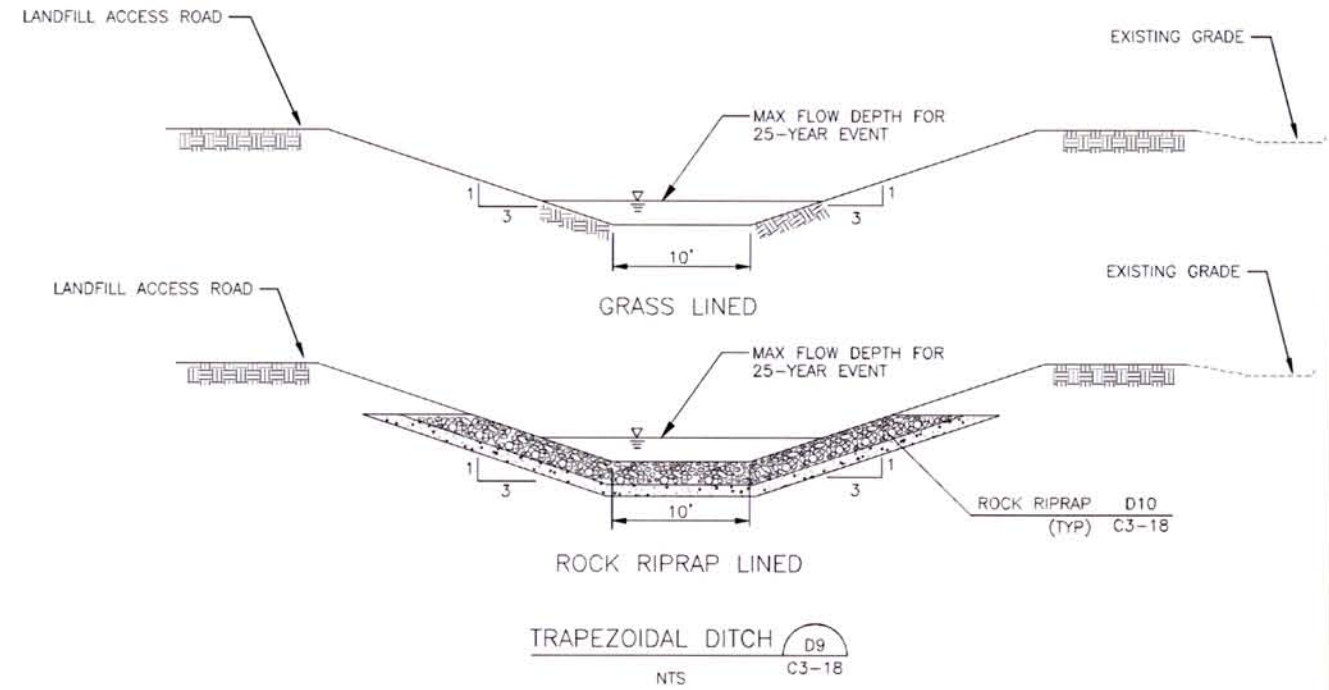
X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\C3-17_to_C3-19.dwg Layout: C3-18 User: dwilliams



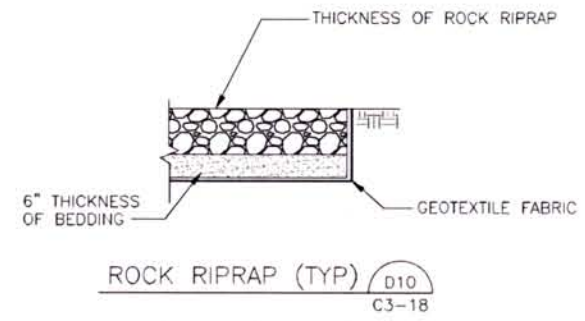
SIDESLOPE SWALE (D7) NTS C3-18



TOPSLOPE SWALE (D8) NTS C3-18



TRAPEZOIDAL DITCH (D9) NTS C3-18



ROCK RIPRAP (TYP) (D10) C3-18

SCALE IN FEET

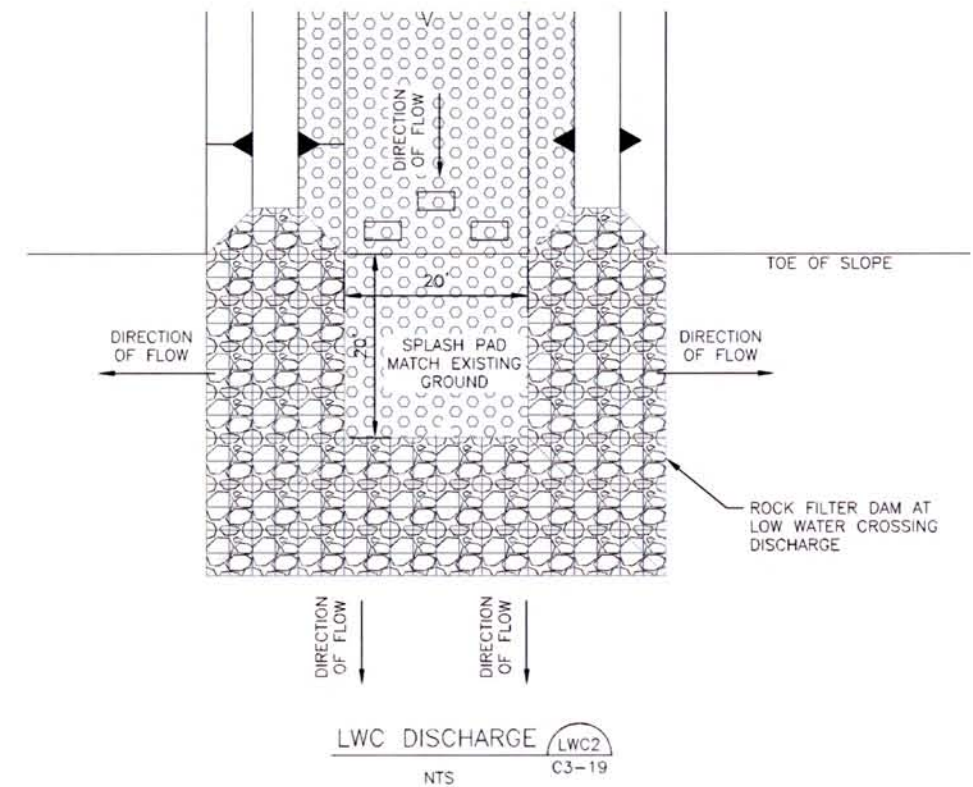
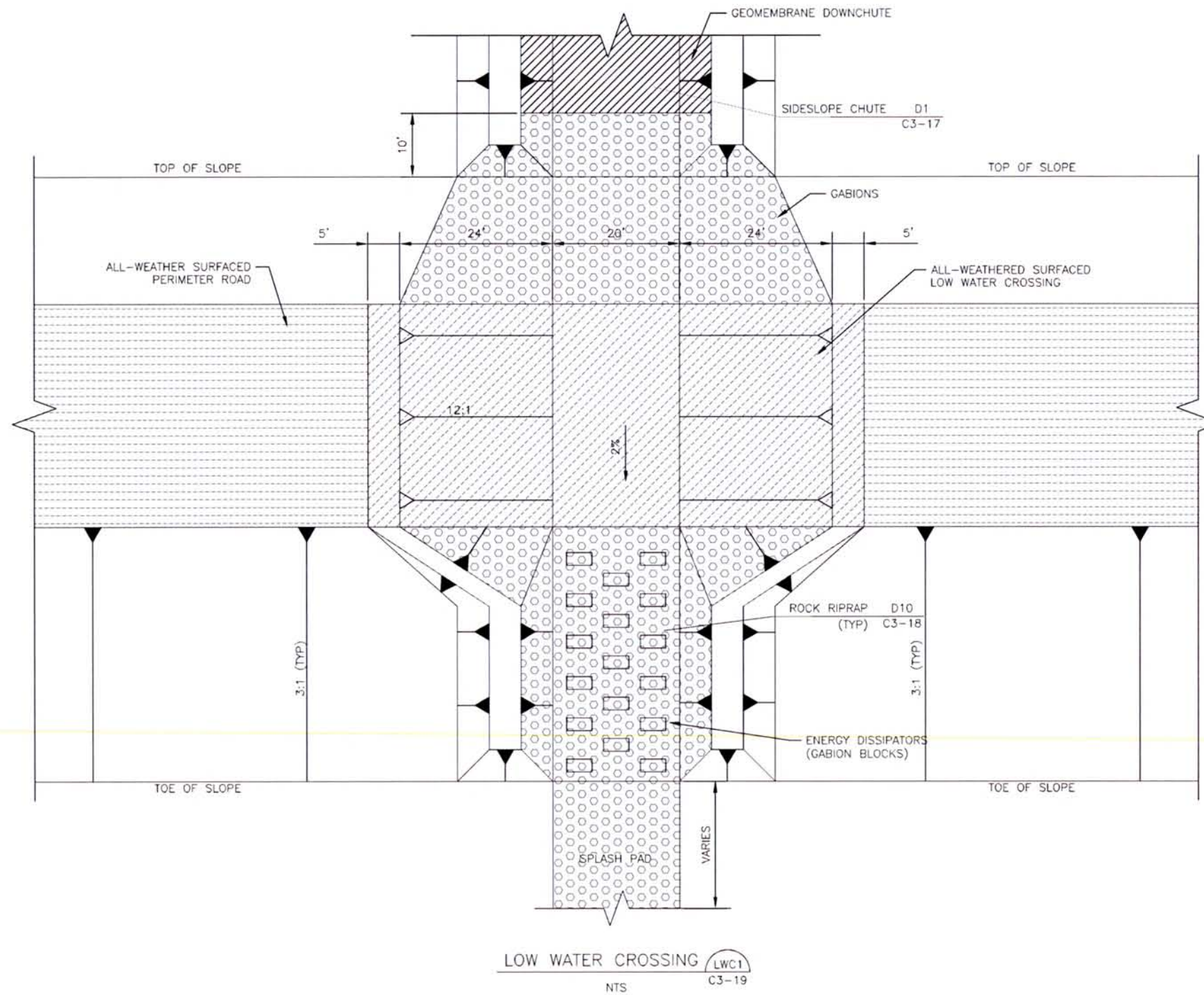


ISSUED FOR INFORMATION ONLY

REVISIONS						
REV	DATE	DESCRIPTION	OWN BY	DES BY	CHK BY	APP BY
1	10/22/09	TECHNICALLY COMPLETE	CLW	KJW	KJW	KJW

DRAINAGE DETAILS	
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION	
	BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD DALLAS • WICHITA FALLS 817-563-1144
TBPE FIRM NO. F-256	TBPG FIRM NO. 50222
	
5930 SUMMERHILL TEXARKANA, TEXAS 75501 CIVIL *** ENVIRONMENTAL *** SURVEYING Phone (903) 838-8533 FAX (903) 832-4700	
TBPE FIRM NO. F-354	
DSN: FAW	DATE: 05/11
DWN: FAW	SCALE: GRAPHIC
CHK: KJW	DWG: C3-17_to_C3-19.dwg
DRAWING C3-18	

X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\C3-17_to_C3-19.dwg Layout: C3-19 User: dwilliams



NOTE: CHUTES 1 AND 5 WILL INCLUDE A LOW WATER CROSSING DISCHARGE.

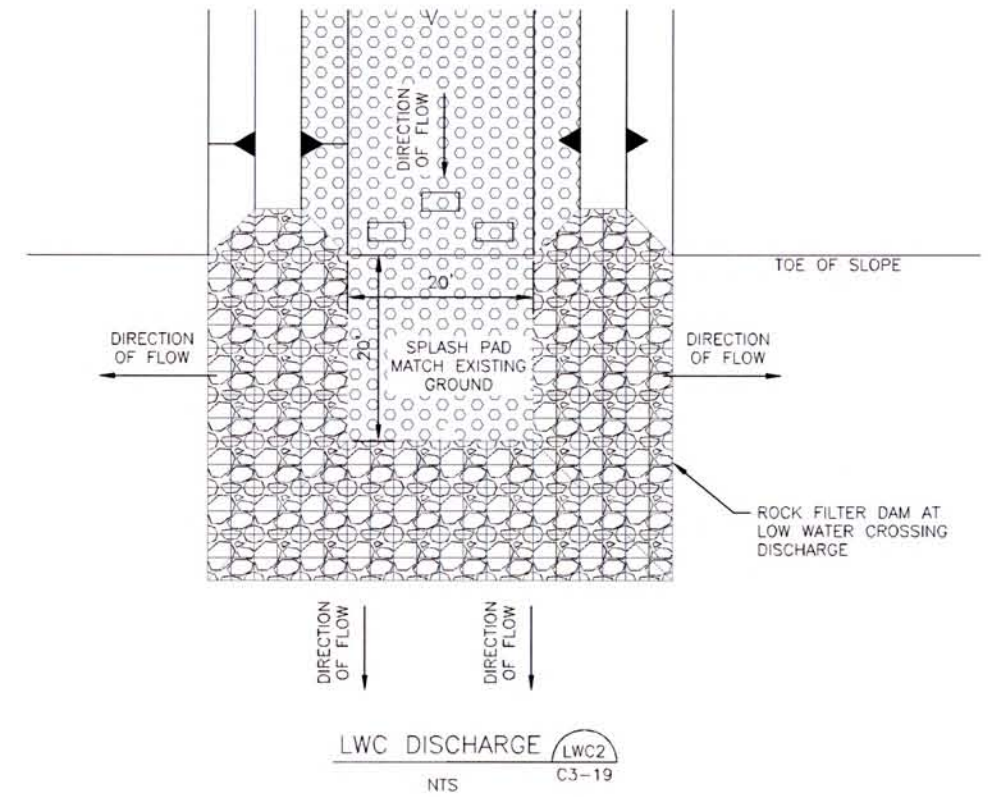
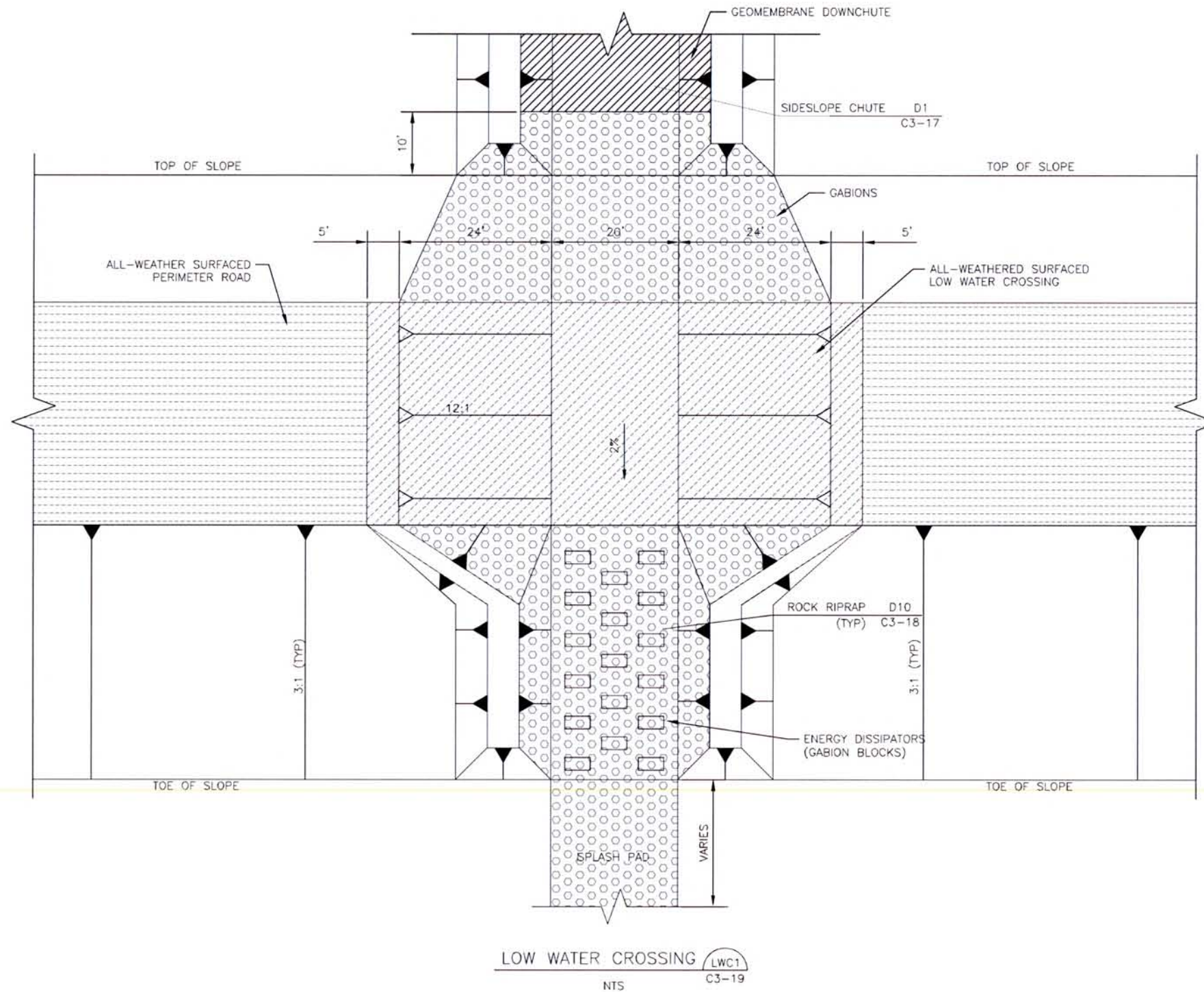


ISSUED FOR INFORMATION ONLY

REVISIONS						
REV	DATE	DESCRIPTION	OWN BY	DES BY	CHK BY	APP BY
1	10/22/09	TECHNICALLY COMPLETE	GLW	KJW	KJW	KJW

PERIMETER ROAD LOW WATER CROSSING	
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION	
	BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD DALLAS • WICHITA FALLS 817-563-1144
TBPE FIRM NO. F-256	TBPG FIRM NO. 50222
5930 SUMMERHILL TEXARKANA, TEXAS 75501 CIVIL *** ENVIRONMENTAL *** SURVEYING Phone (903) 838-8533 FAX (903) 832-4700	
TBPE FIRM NO. F-354	
DSN: FAW DWN: FAW CHK: KJW	DATE: 05/11 SCALE: GRAPHIC DWG: C3-17_to_C3-19.dwg
DRAWING C3-19	

X:\2010 Projects\107004 New Boston Landfill\May, 2013 Documents\C3\C3-17_to_C3-19.dwg Layout: C3-19 User: dwilliams



ISSUED FOR INFORMATION ONLY

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	10/22/09	TECHNICALLY COMPLETE	GLW	K/JW	K/JW	K/JW

PERIMETER ROAD LOW WATER CROSSING		
WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION		
	BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD DALLAS • WICHITA FALLS 817-563-1144	
TBPE FIRM NO. F-256	TBPG FIRM NO. 50222	
5930 SUMMERHILL TEXARKANA, TEXAS 75501 CIVIL *** ENVIRONMENTAL *** SURVEYING Phone (903) 838-8533 FAX (903) 832-4700		
DSN. FAW	DATE : 05/11	DRAWING C3-20
DWN. FAW	SCALE : GRAPHIC	
CHK. K/JW	DWG : C3-17_to_C3-19.dwg	