

May 16, 2013

United States International Boundary and Water Commission
7171 North Mesa Street, Suite C-100
El Paso, Texas 79902-1441

Attention: Valentin Arzola, P.E., Project Manager, USIBWC

Reference: Loop 375 - Border Highway West Extension Project

Dear Valentin:

The Texas Department of Transportation is requesting licenses for several storm sewer structures which outfall to the Rio Grande River. These outfalls are located along the Rio Grande River with limits from Racetrack Drive to the proposed Loop 375/Coles Street interchange.

The following table lists the structure, type, improvement, and brief description of the work to be constructed. This table along with the attached preliminary engineering detailed drawings complete the require license checklist.

OUTFALL STRUCTURE ID	STRUCTURE TYPE	IMPROVEMENT	BRIEF DESCRIPTION OF THE WORK
O-1A	24" RCP	New reinforced concrete pipe outfall	Grading, concrete headwall, grate inlets, and storm sewer system outfalling to the Rio Grande River
*O-2	2-10'X5' MCBC	New multiple concrete box culvert	Grading, concrete wing walls, junction boxes with storm sewer system connections, and concrete boxes outfalling to the Rio Grande River
*O-5	2-6'X4' MCBC	New multiple concrete box culvert	Grading, concrete wing walls, junction boxes with storm sewer system connections, and concrete boxes outfalling to the Rio Grande River

OUTFALL STRUCTURE ID	STRUCTURE TYPE	IMPROVEMENT	BRIEF DESCRIPTION OF THE WORK
*O-14	10'X4' CBC	New concrete box culvert	Grading, concrete wing walls, junction boxes with storm sewer system connections, and concrete box outfalling to the Rio Grande River
O-26	2-10'X4' MCBC	Existing multiple concrete box culvert	junction boxes and storm sewer system connections to existing concrete boxes
O-27	36" RCP	New reinforced concrete pipe outfall	Grading, concrete headwall, junction box, grate inlets, and storm sewer system connection to the reinforced concrete pipe outfalling to the Rio Grande River
O-38	36" RCP	New reinforced concrete pipe outfall (upgrade existing 24" RCP outfall)	Grading, levee penetration, concrete headwall, junction box, grate inlets, and storm sewer system connection to reinforced concrete pipe outfalling to the Rio Grande River

* These structures have been identified in the proposed levee improvement plans prepared by IBWC and these structures will be upgraded (increase capacity) based on the 90% Plans of the Courchesne Reach and Nemexas Reach Canalization Project Phase 2 (Courchesne East Levee Station 1982+00 to Station 1987+80).

CALCULATIONS AND COMPARISON TABLE FOR IBWC OUTFALLS ALONG THE BORDER HIGHWAY WEST EXTENSION PROJECT									
FIGURE No.		DRAINAGE AREA ID	OUTFALL ID	ROADWAY	DRAINAGE AREA ACRE	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (MIN)	RAINFALL INTENSITY (100-YR)	DISCHARGE (CFS)
6	EXISTING	EDA2-1A	O-1A	NM 273	1.70	0.95	10	5.61	9.09
6	EXISTING	EDA4-1A	O-1A	NM 273	1.12	0.95	10	5.61	5.96
10	PROPOSED	PDA1-1A	O-1A	US 85	0.56	0.95	10	5.61	3.01
								TOTAL EXISTING	15.05
								TOTAL PROPOSED	3.01
6	EXISTING	EDA5-2	O-2	US 85	0.84	0.95	10	5.61	4.49
10	PROPOSED	PDA4-2	O-2	BHW	3.31	0.95	10	5.61	17.64
								TOTAL EXISTING	4.49
								TOTAL PROPOSED	17.64
6	EXISTING	EDA3-3	O-3	US 85	1.85	0.95	10	5.61	9.84
6	EXISTING	EDA6-4	O-4	US 85	0.72	0.95	10	5.61	3.86
10	PROPOSED	PDA2-5	O-5	NM 273	1.35	0.95	10	5.61	7.22
10	PROPOSED	PDA3-5	O-5	NM 273	1.17	0.95	10	5.61	6.22
								TOTAL EXISTING	13.70
								TOTAL PROPOSED	13.44
6	EXISTING	EDA7-6	O-6	US 85	0.94	0.95	10	5.61	5.01
6	EXISTING	EDA8-7	O-7	US 85	1.59	0.95	10	5.61	8.49
7	EXISTING	EDA9-8	O-8	US 85	0.80	0.95	10	5.61	4.27
7	EXISTING	EDA10-9	O-9	US 85	0.50	0.95	10	5.61	2.65
7	EXISTING	EDA11-10	O-10	US 85	0.45	0.95	10	5.61	2.40
7	EXISTING	EDA12-11	O-11	US 85	0.30	0.95	10	5.61	1.58
7	EXISTING	EDA13-12	O-12	US 85	0.74	0.95	10	5.61	3.94
7	EXISTING	EDA14-13	O-13	US 85	0.50	0.95	10	5.61	2.67
7	EXISTING	EDA15-14	O-14	US 85	4.34	0.95	10	5.61	23.11
11	PROPOSED	PDA5-14	O-14		2.77	0.95	10	5.61	14.76
								TOTAL EXISTING	54.13
								TOTAL PROPOSED	14.76
								TOTAL EXISTING	87.37
								TOTAL EXISTING BEING IMPACTED BY THE PROJECT	42.64
								* TOTAL PROPOSED	48.85

* ADDITIONAL RUNOFF IS BEING MITIGATED, CAPTURED AND DETAINED BY PONDING AREAS B2, B3, B-4A, B-4B, AND B5 (PA-B2, PA-B3, PA-B-4A, PA-B-4B, AND PA-B5)

DRAINAGE AREAS CALCULATION TABLE									
		1.00	OUTFALL ID	ROADWAY	DRAINAGE AREA ACRE	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (MIN)	RAINFALL INTENSITY (100-YR)	DISCHARGE (CFS)
8	EXISTING	EDA17-26	O-26	N/A	2.46	0.20	10	5.61	2.76
8	EXISTING	EDA19-27	O-27	N/A	3.58	0.20	10	5.61	4.02
8	EXISTING	EDA18	O-27	N/A	7.66	0.95	10	5.61	40.82
12	PROPOSED	PDA6-26	O-26	US 85	2.46	0.95	10	5.61	13.12
12	PROPOSED	PDA7-27	O-27	US 85	3.64	0.95	10	5.61	19.42
								TOTAL EXISTING	47.60
								TOTAL PROPOSED (WITHOUT PONDING AREA)	73.36
8	EXISTING	** EDA18	N/A	LOOP 375	7.66	0.95	10	5.61	40.83
		** DRAINAGE AREA EDA18 IS BEING MITIGATED, CAPTURED, AND RETAINED BY PONDING AREA A1 (PA-A1)							
								TOTAL EXISTING	47.60
								TOTAL PROPOSED (WITH PONDING AREA)	32.53

DRAINAGE AREAS CALCULATION TABLE									
		DRAINAGE AREA ID	OUTFALL ID	ROADWAY	DRAINAGE AREA ACRE	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (MIN)	RAINFALL INTENSITY (100-YR)	DISCHARGE (CFS)
9	EXISTING	EDA21-38	O-38	DELTA DR	1.71	0.95	10	5.61	9.11
13	EXISTING	EDA18	N/A	DELTA DR	4.21	0.95	10	5.61	22.44
13	PROPOSED	PDA8-38	O-38	LOOP 375	0.83	0.95	10	5.61	4.43
13	PROPOSED	PDA9-38	O-38	LOOP 375	0.69	0.95	10	5.61	3.65
								TOTAL EXISTING	31.54
								TOTAL PROPOSED (WITHOUT PONDING AREA)	39.62
13	EXISTING	*** EDA18	N/A	DELTA DR	4.21	0.95	10	5.61	22.44
		*** DRAINAGE AREA EDA18 IS BEING MITIGATED, CAPTURED, AND RETAINED BY PONDING AREA A4 (PA-A4)							
								TOTAL EXISTING	31.54
								TOTAL PROPOSED (WITH PONDING AREA)	17.19

THIS TABLE CORRESPONDS TO THE 21 FIGURES PREPARED FOR THE DRAINAGE OUTFALLS ALONG THE RIO GRANDE RIVER UTILIZED BY THE BHW EXT. PROJECT AND THE IBWC LETTER REQUESTING THE LICENSES FOR THESE OUTFALL STRUCTURES.

PREPARED ON: MAY 16, 2013



Texas
Department
of Transportation

BORDER HIGHWAY WEST EXTENSION PROJECT

MEETINGS WIBWC IN SHAWNEE FALLS

Location: IBWC

Date: 5/16/12 Time: 2:30

Sign-in Sheet

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