Discussion and City Council Direction Huebner Creek Channel Improvements Project Segment 1

Melinda Moritz Public Works Director City Council Meeting January 16, 2024



Summary

- Question
 - City Council is being asked whether they want to continue with design and engineering of the Huebner Creek Channel Improvements Project or abandon project and perform bank stabilization only
- Options
 - Continue as directed
 - Abandon project and perform bank stabilization only
- Declaration
 - At Council discretion



Purpose

- To determine project scope going forward
- Current scope of project is from the Bandera Road bridge to Poss Rd at Cherryleaf St with revised creek alignment



Background

- City Council approved a budget adjustment in the amount of \$633,167 to engineer and design channel improvements to widen Huebner Creek to reduce the threat of flooding and erosion
- City Engineer has completed the hydrologic analysis, preliminary design, all surveying and utility locates, and is now at the stage of finalizing the drainage design
- The tree survey that was performed indicates that a large number of trees must be removed should the project move forward



Aerial View of Project

Project Limits





Tree Mitigation Plan





Tree Mitigation Plan

SUMMARY OF TREE REMOVAL (INCHES)

TREE STATUS	TREES (IN INCHES)						
REMAIN	1272						
REMOVE	5429						
TOTAL	6701						

SUMMARY OF TREE REMOVAL (NUMBER)

TREE STATUS	TREES (NUMBER)
REMAIN	83
REMOVE	403
TOTAL	486

TREE SUMMARY (INCHES)										
6 -	ANT TREE 23.5 , PALM, LIVE OAK)	10.0"	NT TREE** - 23.5" ErRY, CEDAR, ASH, OWN)	HERITAGE 3:1 >23.5 (OAK, ELM, PECAN, PALM, LIVE OAK)		HERITAGE 1:1 >23.5" (MESQUITE, HACKBERRY, CEDAR, ASH, UNKNOWN)		OTHER TREES (CHINABERRY, HUISACHE, MULBERRY, TALLOW)		DEAD TREES
REMOVE	REMAIN	REMOVE	REMAIN	REMOVE	REMAIN	REMOVE	REMA 1N	REMOVE	REMAIN	REMOVE
1841	294	2971	575	218	166	141	140	176	97	82
TOTAL										
2135 3546		384		281		273		82		

TREE SUMMARY (NUMBERS)										
SIGNIFIO 61- (OAK, ELM, PECAN	CANT TREE 23.5' , Palm, Live Oak)	SIGNIFICA 10.0" (MESQUITE, HACKB UNKN	SJGNIFICANT TREE** HERITAGE 3:1 10.0" - 23.5" >23.5 (MESQUITE, HACKBERY, CEDAR, ASH, (OAK, ELM, PECAN, PALM, LIVE OAK) UNKNOWN)		HERITAGE 1+1 >23.5" (MESQUITE, HACKBERRY, CEDAR, ASH, UNKNOWN)		OTHER TREES (CHINABERRY, HUISACHE, MULBERRY, TALLOW)		DEAD TREES	
REMOVE	REMAIN	REMOVE	REMAIN	REMOVE	REMAIN	REMOVE	REMA1N	REMOVE	REMAIN	REMOVE
133	21	239	44	8	5	5 5		13	8	5
TOTAL										
154 283		13		10		21		5		



Tree Removal Plan

- Heritage: Number: 8 Inches: 218
 - Oak, Elm, Pecan, Palm, Live Oak
- Heritage: Number: 5 Inches: 141
 - Mesquite, Hackberry, Cedar, Ash, Unknown
- Medium/Large: Number: 133 Inches: 1841
 - Oak, Elm, Palm, Live Oak
- Medium/Large: Number: 239 Inches: 2971
 - Mesquite, Hackberry, Cedar, Ash, Unknown
- Non-native/invasive: Number: 13 Inches: 176
 - Chinaberry, Huisache, Mulberry, Tallow
- Dead trees: Number: 5 Inches: 82



Purpose

- Summary tree removal in project area:
- Trees / remain: Number: 83 Inches: 1272
- Trees / remove: Number: 403 Inches: 5429
- Previous Huebner-Onion Natural Park Master Plan advised removing any non-native & invasive trees
- Can replant new trees in other areas that are native using Tree Mitigation Funds



Discussion

- Continue with design and engineering?
- Abandon project and design bank stabilization only, from Poss at entrance to small pavilion to Bandera Road bridge



Fiscal Impact

 Council approved \$633,167 for design and engineering, spent \$162,000, remaining balance \$471,167



Fiscal Impact

	OPINION OF PROBABLE CONSTRU	\sim					
	Rimkus Park Low Water Crossing and Huebner Cro City of Leon Valley	ARDURRA					
		Revised Date:	1/2023				
ITEM NO.	DESCRIPTION	QUANTITY		COST			
100.1	MOBILIZATION	LS		11%	1	\$	255,552.00
101.1	PREPARING RIGHT OF WAY	LS		4%	1	\$	92,928.00
103.3	REMOVE DRIVEWAYS	SF	\$	5.00	1,600	\$	8,000.00
103.4	REMOVE MISCELLANEOUS CONCRETE	SF	\$	5.00	800	\$	4,000.00
105.1	CHANNEL EXCAVATION	CY	\$	60.00	17,020	\$	1,021,200.00
106.1	BOX CULVERT EXCAVATION AND BACKFILL	CY	\$	35.00	55	\$	1,925.00
107.1	EMBANKMENT (FINAL)(ORD COMP)(TY B)	CY	\$	50.00	83	\$	4,150.00
	FLEXIBLE BASE (6" COMPACTED DEPTH)(TYPE B)	SY	\$	20.00	100	\$	2,000.00
307.1	CONCRETE STRUCTURE (HEADWALLS)	CY	\$	2,000.00	7	\$	14,000.00
309.1	PRECAST REINFORCED CONCRETE BOX CULVERTS (3' x 2')	LF	\$	700.00	50	\$	35,000.00
503.1	PORTLAND CEMENT CONCRETE DRIVEWAY	SY	\$	100.00	190	\$	19,000.00
505.1	CONCRETE RIPRAP (5" THICK)	SY	\$	120.00	6,600	\$	792,000.00
506.0	TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS	LS		3%	1	\$	69,696.00
509.1	METAL BEAM GUARD RAIL	LF	\$	140.00	100	\$	14,000.00
515.1	TOPSOIL (4")	CY	\$	30.00	1,314	\$	39,417.00
516.1	BLOCK SODDING	SY	\$	20.00	225	\$	4,500.00
520.1	HYDROMULCHING (RESIDENTIAL OR COMMERCIAL)	SY	\$	10.00	11,600	\$	116,000.00
530.1	BARRICADES, SIGNS AND TRAFFIC HANDLING	LS		2%	1	\$	46,464.00
531.1	WB8-19 FLOOD GAUGE SIGN AND SCALE	EA	\$	1,500.00	2	\$	3,000.00
554.1	EROSION CONTROL BLANKET (BIODEGRADEABLE)	SY	\$	10.00	11,600	\$	116,000.00
9003.1	BOLLARDS, 4" DIAMETER X 42" HIGH	EA	\$	1,500.00	6	\$	9,000.00
	TREE REMOVAL (24" DIA OR BIGGER)	EA	\$	2,500.00	48	\$	120,000.00
L							
				SUBTOTAL		\$	2,787,832.00
			CON	NTINGENCY	30%	\$	836,350.00
				TOTAL		\$	3,624,182.00

*UTILITY ADJUSTMENTS/RELOCATION IS NOT INCLUDED IN THIS ESTIMATE



S.E.E. Statement

Social Equity – Reducing flood hazards benefits all citizens by reducing remediation funds after a flood event

Economic Development – Reducing the footprint of the floodplain reclaims properties and increases their overall value

Environmental Stewardship – Reducing the floodplain reduces the amount of erosion entering our waterways, which improves the quality of the water

